OhioEPA

State of Ohio Environmental Protection Agency

Street Address:
Lazarus Gov. Center
50 West Town Street, Suite 700
Columbus, OH 43215

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

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

01/11/2007

CERTIFIED MAIL

RE: Proposed Title V Significant Permit Modification Chapter 3745-77 permit

02-85-01-0001
The Quality Castings Company

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

Dear Ms. Coburn:

The proposed issuance of the Title V permit for The Quality Castings Company, has been created in Ohio EPA's State Air Resources System (STARS) on 01/11/07, 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 electronic notification of this proposed action. Please contact me at (614) 644-3631 before 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

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

cc: Northeast District Office
File, DAPC PIER

State of Ohio Environmental Protection Agency

PROPOSED TITLE V SIGNIFICANT PERMIT MODIFICATION

Original Effective Date:	Expiration Date:	Modification Effective Date: ***To be entered upon final issuance***

This document constitutes issuance of a Title V permit for Facility ID: 02-85-01-0001 to:

The Quality Castings Company
1200 North Main Street
Orrville, OH 44667-0058

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

F002 (Scrap reclaimer)
Vibrating mechanical separator used to remove metal from sand

F003 (Furnace #1)
Coreless induction furnace 3750 KW

F004 (Furnace #2)
Coreless induction furnace 3750 KW

F005 (Furnace #3)
Coreless induction furnace 3750 KW

F006 (Roadways & parking)
Roadways and parking for employees

F008 (Nobake Mold Mixing & Making Line)
Phenolic Urethane nobake mold system

F010 (Nobake Shakeout)
Shakeout of nobake molds.

F013 (Inliner Mold Line)
Green sand molding using the Osborn Inliner automatic molding machine

F015 (Hunter Mold Line)
Green sand molding using the Hunter molding machine

F016 (Hunter Pour/cool line)
Pouring and cooling area for molds made on the Hunter molding machine.

F017 (722 Mold Line)
Green sand molding using the Osborn 722 cope and drag style of molding

F018 (722 Pour/cool Line)
Pouring and cooling area for the molds made on the Osborn 722 molding machine

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

F020 (Ductile Iron Inoculation Inliner I)
Sandwich inoculation

F021 (Ductile Iron Inoculation Back Floor II)
Sandwich inoculation

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

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

F024 (Fischer Mold Line)
Green sand mold making using compression sand into cope and drag flasks

F025 (Fischer Pour and Cool Line)
Iron pouring and cooling of castings made on the Fischer Mold Line

P002 (Twelve 30" Snag Grinders)
Twelve 30" snag grinders used to grind iron castings.

P011 (Holding Furnaces #4 & #5)
Two furnaces - each 5 ton capacity used for "holding iron"

P012 (Pangborn South Tumblast Machine)
Tumblast machine used to remove sand from the castings

P013 (South Wheelabrator)
Shot blast machine used to remove sand from castings

P017 (East End Shakeout)
Shakeout system serving the 722, Hunter and Fischer mold/pour/cool lines

P021 (Tabor Cut-off Saws)
Saws used to remove gates and risers from the casting.

P025 (Scrap preheater)
Gas fired heater used to dry the scrap before it enters the melt furnaces-10 million BTU/hr

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

P027 (Simpson Muller)
Green sand muller which makes mold sand for the Osborn Inliner molding system

P029 (Holding Furnace #6)
20 ton graphite rod "holding furnace"

P030 (Laempe LL-5)
Resin based core making operation controlled with an acid scrubber.

P031 (South Laempe L-20)
Sand cores are made using an L-20 size Laempe core machine.

P032 (Laempe L-40)
Sand cores are made using an L-40 size Laempe core machine.

P033 (East Laempe L-20)
Sand cores are made using an L-20 size Laempe core machine (dual binder system).

P034 (West Laempe L-20)
Sand cores are made using an L-20 size Laempe core machine.

P036 (Inliner Pour/cool line)
Pouring and cooling area for the molds made on the Osborn Inliner automatic molding macine

P039 (Fischer Pushup/Punchout)
Removing sand and raw castings from mold by first a pushup action followed by a punchout action into shakeout

P040 (Pangborn North Tumble Blast)
Pangborn North tumble blast machine used to clean sand from iron castings with steel shot.

P901 (Inliner Shakeout)
Shakeout for the Osborn Inliner automatic molding machine

P902 (Back Floor Mold Sand Handling System)
Moves sand from P017 Shakeout through screening, cooling, preparation and mixing operations at East End Muller (previously P023) out to Hunter, Fischer, and 722 Mold Lines.

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

R001 (Core Wash Operation)
Isopropyl alcohol based core wash operation.

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:

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

Ohio Environmental Protection Agency

Laura Powell
Acting 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 (i.e., postmarked) 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 (An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the owner or operator of the affected air contaminant source or air pollution control equipment complies with the requirements of OAC rule 3745-17-07(A)(3)(c)).

In accordance with OAC rule 3745-15-06, a malfunction reportable under OAC rule 3745-15-06(B) 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 (i.e., postmarked) 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 deviation reports shall satisfy the requirements 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. Full compliance with OAC rule 3745-77-07(A)(3)(c) requires reporting of all other deviations of the federally enforceable requirements specified in the permit as required by such rule.

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 satisfies 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 (for the deviations so reported) the requirements 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:**

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; General Terms and Conditions: A.2, A.3, A.4, A.6.e, A.7, A.12, A.14, A.18, A.19, A.20, and A.22 of Part I of this Title V permit, as well as any deviations from the requirements in Section A.V or A.VI of Part III of this Title V permit**,** and any 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 (i.e., postmarked) 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. Unless otherwise specified by rule, all other deviations from federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally enforceable requirements not specifically addressed by permit or rule for the insignificant activities or emissions levels (IEU) identified in Part II.A of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

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 and 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) and OAC rule 3745-77-07(A)(13)(b))

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.

f. Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable upon final issuance of all applicable OAC Chapter 3745-35 operating permits and/or registrations for all subject emissions units located at the facility and:

   i. the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a “major source” as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or

   ii. the permittee no longer meets the definition of a “major source” as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or

   iii. a combination of i. and ii. above.

   The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.
   (Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(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 (i.e., postmarked) on or before April 30th of each year during the permit term.

ii. Compliance certifications shall include the following:

(a) An identification of each term or condition of this permit that is the basis of the certification.

(b) The permittee's current compliance status.

(c) Whether compliance was continuous or intermittent.

(d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.

(e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.

iii. Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

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

13. Permit Shield

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

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

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

14. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).
(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

15. Emergencies

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

16. Off-Permit Changes

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

a. The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.

b. The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.

c. The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).

d. The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e. The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

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

Each IEU 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 from the responsible official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the responsible official that the emissions unit was permanently shut down.

After the date on which 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 Title V permit 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.
(Authority for term: OAC rule 3745-77-01)

22. Title VI Provisions

If applicable, the permittee shall comply with the standards for recycling and reducing emissions of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

(Authority for term: OAC rule 3745-77-01(H)(11))

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 (i.e., postmarked) quarterly, 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 <u>Federally Enforceable</u> 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 (i.e., postmarked) 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; or

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; or

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. All asbestos renovation and demolition activities conducted at this facility shall be performed in accordance with the applicable requirements specified in 40 CFR Part 61 and OAC Chapter 3745-20.

2. This facility is subject to the applicable requirements specified in OAC Chapter 3745-25. In accordance with Ohio EPA Engineering Guide #64, the emission control action programs, as specified in OAC rule 3745-25-03, shall be developed and submitted within 60 days after receiving notification from Ohio EPA.

3. In order to avoid the requirements of 40 CFR Part 63, Subpart EEEEE, the permittee has voluntarily accepted a production restriction of 60,000 tons of iron produced, based on a rolling, 12 month summation.

Through this production restriction the permittee's potential to emit for hazardous air pollutants (HAPs)* will be lowered to 9.9** tons per year for the highest single HAP and to 24.9** tons per year for all HAPs combined.

* a listing of HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting the Northeast District Office of Ohio EPA.

** The potential to emit was used for emissions units not directly restricted by the production restriction.

4. To ensure that the production restriction and emission limitations are not exceeded, the permittee has agreed to accept the following record keeping requirement:

The permittee shall maintain monthly records of the rolling, 12-month summations of the production rates [i.e., the rolling, 12-month summation of production rates shall be calculated by adding the production rates for the preceding 11 calendar months plus the production rate for the current calendar month].

5. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month production restriction.

6. For units not directly restricted by the annual production restriction, the permittee shall maintain calculations of the potential to emit for each emissions unit.

Prior to the installation of any new emissions units that emit any HAPs, the permittee shall submit a revised potential to emit analysis to demonstrate that the emissions unit will not cause the facility to become a major source of HAPs.

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:

B006 - gas fired heater Inliner #3;
B007 - gas fired heater cleaning room south #6;
B008 - gas fired heater floor mold west #5;
B009 - gas heater floor mold east #4;
B010 - gas fired heater cleaning room north #7;
B011 - gas fired heater core room south #9;
B012 - gas fired heater core room north #10;
B013 - gas fired heater Pangborn #8;
B015 - emergency generator driven by diesel engine;
B016 - emergency generator driven by natural gas engine;
F001 - spent sand piles;
F009 - nobake pour/cool line;
P028 - core drying oven (north);
Z001 - core drying oven (south);
Z002 - ladle heating;
Z003 - ladle lining mixer;
Z004 - welding;
Z005 - plant heating;
Z006 - transfer ladles;
Z008 - diesel storage tank;
Z009 - heat treat furnace (south);
Z010 - heat treat furnace (north);
Z011 - Shell blower #1 (MC-3);
Z012 - Shell blower #2 (U-150 south);
Z013 - Shell blower #3 (U-150 north);
Z014 - Shell blower #4 (U-180 south);
Z015 - Shell blower #5 (U-180 north);
Z016 - Shell blower #6 (803 south);
Z017 - Shell blower #7 (803 north);
Z018 - Shell blower #8 (X-180);
Z019 - Shell blower #9 (U-360);
Z020 - compressors (electric);
Z024 - ladle preheater #1;
Z025 - ladle preheater #2;
Z026 - ladle preheater #3;
Z027 - ladle preheater #4;
Z028 - ladle preheater #5;
Z029 - ladle preheater #6;
Z030 - ladle preheater #7;
Z031 - ladle preheater #8;

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

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

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Scrap reclaimer (F002)

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Furnace #1 (F003)

Activity Description: Coreless induction furnace 3750 KW

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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.

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Furnace #2 (F004)

Activity Description: Coreless induction furnace 3750 KW

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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.

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Furnace #3 (F005)

Activity Description: Coreless induction furnace 3750 KW

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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.

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Roadways & parking (F006)

Activity Description: Roadways and parking for employees

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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.

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Nobake Mold Mixing & Making Line (F008)

Activity Description: Phenolic Urethane nobake mold system

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
phenolic urethane nobake mold system	OAC rule 3745-21-07(G)(2)	exempt, pursuant to OAC rule 3745-21-07(G)(9)(i) (See A.I.2.a.)
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to the uncaptured fugitive emissions from this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to the visible fugitive emissions from this emissions unit.
	OAC rule 3745-31-05(A)(3) (PTI 02-9648)	Particulate emissions (PE) shall not exceed 0.52 lb/hr from the bin vent stack. (See A.I.2.c.) Visible emissions of particulate matter from the bin vent stack shall not exceed 20 percent opacity, as a three-minute average. Emissions of volatile organic compounds (VOC) shall not exceed 8 lbs/hr and 40 lbs/day. (See A.I.2.b.) The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-07(G)(9)(i).

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-17-07(A)	The requirements established pursuant to OAC rule 3745-17-07(A) are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-11	The requirements established pursuant to OAC rule 3745-17-11 are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

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

2.b No record keeping and monitoring is required for the hourly VOC emissions limit because the maximum uncontrolled emission rate of VOC cannot exceed the limit.

2.c The pneumatic sand conveying, from the silo to the hopper shall be vented to the bin vent.

II. Operational Restrictions

1. The usage of phenolic urethane resin shall be limited to 347 pounds per day.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain the following records each day this emissions unit operates:

a. the company identification of the liquid organic material used;

b. the pounds of sand mixed;

c. an estimate of the daily VOC emission rate (see A.V.1.c); and

d. the usage of phenolic urethane resin, in pounds.

2. The permittee shall perform monthly* checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the bin vent serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

* Because this operation is performed infrequently, monthly visible emission checks are deemed acceptable to ensure ongoing compliance with the particulate emission limitations.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the VOC emissions exceeded 40 pounds per day, and the actual VOC emissions for each such day.

2. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the phenolic urethane resin usage exceeded 347 pounds.

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

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

5. Prior to changing resins in this system, the permittee shall send product specification sheets to the Ohio EPA, Northeast District Office.

V. Testing Requirements

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

1.a Emission Limitation:

0.52 lb/hr PE

Applicable Compliance Method:

Because there is no stack associated with the bin vent and because it vents inside the building, the permittee shall demonstrate compliance using the following equation:

E = [0.03 gr/dscf x 0.73 cf/min x 60 min/hour x 1 lb/7000 gr] + [Ti x 0.04 lb PE/ton iron]

where:

E = pounds PE per hour; and

Ti = tons of iron produced per hour.

The emission factor of 0.04 lb PE/ton iron produced is specified in Table 2.7-1 of Ohio EPA's document entitled "Reasonably Available Control Measures for Fugitive Dust Sources," dated September 1980.

1.b Emission Limitation:

Visible emissions of particulate matter from the bin vent stack shall not exceed 20 percent opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance with the visible emission limitation for this emissions unit shall be determined in accordance with test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraph (B)(3)(a) of OAC rule 3745-17-03.

V. Testing Requirements (continued)

1.c Emission Limitation:

40 lbs VOC per day

Applicable Compliance Method:

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

E = sand usage rate (in tons per day) X emission factor of 1.3 lb VOC/ton sand

where:

E = VOC emission rate (lbs/day); and

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

1.d Emission Limitation:

8 lbs VOC per hour

Applicable Compliance Method:

If required, emission testing shall be performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 18, 25 or 25A, as appropriate.

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.

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Nobake Shakeout (F010)

Activity Description: Shakeout of nobake molds.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
shakeout of nobake molds (shakeout conveyor exhaust drifts upward to roof vent)	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-31-05(A)(3) (PTI 02-3225)	Particulate emissions (PE) shall not exceed 4.16 lbs/hr and 18.2 tons per year. Visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average. Emissions of volatile organic compounds (VOC) shall not exceed 8 lbs/hr, 40 lbs/day, and 7.3 tons/yr. (See A.I.2.a.)

2. Additional Terms and Conditions

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

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the tons of iron processed through the shakeout and the hours of operation of this emissions unit.

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

2. The permittee shall perform monthly* checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

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

* Because this operation is performed infrequently and because the PTI did not require controls for this emissions unit, monthly visible emission checks are deemed acceptable to ensure ongoing compliance with the particulate emission limitations.

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 this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous six-month period.

V. Testing Requirements

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

1.a Emission Limitation:

18.2 tons of PE/year

Applicable Compliance Method:

Compliance shall be determined in accordance with the following equation:

E = Ti x 3.2 lbs PE/ton iron x 1/2000 lbs per ton

where:

E = tons PE per year; and

Ti = tons of iron per year processed through the shakeout.

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

V. Testing Requirements (continued)

1.b Emission Limitation:

4.16 lbs of PE/hr

Applicable Compliance Method:

Compliance shall be determined in accordance with the following equation:

E = Ti x 3.2 lbs PE/ton iron

where:

E = lbs PE per hour; and

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

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

1.c Emission Limitation:

8 lbs of VOC/hr

Applicable Compliance Method:

Compliance shall be determined in accordance with the following equation:

E = Ti x 1.2 lbs VOC/ton iron

where:

E = lbs VOC emitted per hour; and

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

The emission factor (1.2 lbs VOC/ton iron) is specified in US EPA reference document Factor Information Retrieval Data System, Version 6.25, SCC 30400331.

1.d Emission Limitation:

40 lbs of VOC/day

Applicable Compliance Method:

Compliance shall be determined in accordance with the following equation:

E = Ti x 1.2 lbs VOC/ton iron

where:

E = lbs VOC emitted per day; and

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

The emission factor (1.2 lbs VOC/ton iron) is specified in US EPA reference document Factor Information Retrieval Data System, Version 6.25, SCC 30400331.

V. Testing Requirements (continued)

1.e Emission Limitation:

7.3 tons of VOC/yr

Applicable Compliance Method:

Compliance shall be determined in accordance with the following equation:

E = Ti x 1.2 lbs VOC/ton iron x 1/2000 (ton/pounds)

where:

E = tons VOC emitted per year; and

Ti = tons of iron per year processed through the shakeout.

The emission factor (1.2 lbs VOC/ton iron) is specified in US EPA reference document Factor Information Retrieval Data System, Version 6.25, SCC 30400331.

1.f Emission Limitation:

Visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average.

Applicable Compliance Method:

Compliance with the visible emission limitation for this emissions unit shall be determined in accordance with Reference Method 9, if requested, as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Inliner Mold Line (F013)

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
green sand molding using the Osborn Inliner automatic molding machine	OAC rule 3745-21-07(G)	exempt (See A.I.2.a.)
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-31-05(A)(3) (PTI 02-9754)	Particulate emissions (PE) shall not exceed 0.5 pound per hour. The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-07(G) and OAC rule 3745-17-07(B).

2. Additional Terms and Conditions

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

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain the following records for all materials used in this emissions unit:

a. the identification of the chemical compound and its physical state at standard conditions; and

b. for any liquid organic materials, whether or not the material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).

2. The permittee shall maintain daily records that document the average production rate, in tons of iron per hour.

3. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which any photochemically reactive liquid organic materials were employed, an identification of said materials, and the number of pounds OC emitted each such day.

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

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

V. Testing Requirements

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

1.a Emission Limitation:

0.5 pound PE per hour

Applicable Compliance Method:

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

The emission factor (0.04 lb PE/ton iron) is specified in Table 2.7-1 of Ohio EPA's document entitled "Reasonably Available Control Measures for Fugitive Dust Sources," dated September 1980.

If required, emission testing shall be performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

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.

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Hunter Mold Line (F015)

Activity Description: Green sand molding using the Hunter molding machine

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
green sand molding using the Hunter molding machine (all emissions from this emissions unit are fugitive)	OAC rule 3745-21-07(G)(2)	exempt (See A.I.2.a.)
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-31-05(A)(3) (PTI 02-0374)	Particulate emissions (PE) shall not exceed 0.22 lb/hr. Visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average. Emissions of volatile organic compounds (VOC) shall not exceed 6 lbs/hr. The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-07(G)(2).

2. Additional Terms and Conditions

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

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain the following records for all materials used in this emissions unit:

a. the identification of the chemical compound and its physical state at standard conditions; and

b. for any liquid organic materials, whether or not the material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).

2. The permittee shall maintain the following records each month for this emissions unit:

a. the company identification of the mold release used;

b. the total amount of mold release used, in gallons;

c. the VOC content of the mold release, in pounds of VOC/pound of mold release;

d. the number of hours of operation;

e. an estimate of the total VOC emission rate, in pounds, calculated as (b) x (the density of the mold release) x (c); and

f. an estimate of the average hourly VOC emission rate, calculated as (e/d).

3. The permittee shall maintain daily records of the amount of iron produced that will employ the molds from the Hunter mold line.

4. The permittee shall perform monthly* checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the 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.

* Because this operation is performed infrequently, monthly visible emission checks are deemed acceptable to ensure ongoing compliance with the particulate emission limitations.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which any photochemically reactive materials were employed.

2. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each month during which the average hourly VOC emissions exceeded 6 pounds per hour, and the actual average hourly VOC emissions for each such month.

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

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

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:

0.22 lb PE/hr

Applicable Compliance Method:

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

E = Ti x 0.04 lb PE/ton iron

where:

E = maximum lbs PE per hour;

Ti = maximum iron production rate for the Hunter mold line; and

0.04 lb PE/ton iron is an emission factor in lb PE per ton iron produced (specified in Table 2.7-1 of Ohio EPA's document entitled "Reasonably Available Control Measures for Fugitive Dust Sources," dated September 1980).

1.b Emission Limitation:

Visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average.

Applicable Compliance Method:

Reference Method 9, if requested, as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

1.c Emission Limitation:

6 lbs VOC/hr

Applicable Compliance Method:

Compliance with the VOC emission limitation shall be based on the record keeping requirements specified in section A.III.2 of these terms.

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Hunter Pour/cool line (F016)

Activity Description: Pouring and cooling area for molds made on the Hunter molding machine.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
pouring and cooling area for molds made on the Hunter molding machine (all emissions from this emissions unit are fugitive)	OAC rule 3745-18-06(E)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-31-05(A)(3) (PTI 02-3225)	1.8 lbs particulate emissions (PE) per hour and 7.9 tons/yr; 0.56 lb volatile organic compounds (VOC) per hour and 2.5 tons/yr; 0.08 lb sulfur dioxide (SO2) per hour and 0.35 ton/yr Visible particulate emissions shall not exceed five percent (5%) opacity, as a six-minute average.

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC rule 3745-77-07(A)(3)(a)(ii), the following monitoring and record keeping requirements are as stringent as or more stringent than the monitoring and record keeping requirements contained in permit-to-install 02-13225, issued on September 1, 1999: A.III.2, A.III.3 and A.III.4. The monitoring and record keeping requirements contained in the above-referenced permit-to-install are subsumed into the monitoring and record keeping requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying monitoring and record keeping requirements in the permit-to-install.

2. The permittee shall record each day the hours this emissions unit was operated.

3. At the end of each month, the permittee shall record the following information for each day to determine the emission rates of PE, VOC, and SO2:

a. the total metal production, in tons;

b. the hours this emissions unit was in operation;

c. the amount of iron poured, in tons;

d. the hourly PE rate, in lbs PE/hour, calculated as [(c) X 0.45 lb PE/ton iron poured] / (b);

e. the hourly SO2 emission rate, in lbs SO2/hour, calculated as [(c) x 0.02 lb/ton iron poured]/(b); and

f. the hourly VOC emission rate, in lbs VOC/hour, calculated as [(c) x 0.14 lbs/ton iron poured]/(b).

0.45 = emission factor in lbs PE per ton of iron poured (from emissions testing performed at this facility on January 18, 1996, for emissions unit P036
0.02 = emission factor in lb SO2/ton iron poured is specified in US EPA reference document Factor Information Retrieval Data System, Version 6.25 SCC 30400320
0.14 = emission factor in lbs VOC per ton iron poured (from SCC emission factor 30400320)

4. The permittee shall perform monthly* checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

* Because this operation is performed infrequently, monthly visible emission checks are deemed acceptable to ensure ongoing compliance with the particulate emission limitations.

IV. Reporting Requirements

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

2. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each month during which the average hourly PE exceeded 1.8 pounds, and the actual average hourly PE for each such month.

IV. Reporting Requirements (continued)

3. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each month during which the average hourly VOC emissions exceeded 0.56 pound, and the actual average hourly VOC emissions for each such month.

4. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each month during which the average hourly SO2 emissions exceeded 0.08 pound, and the actual average hourly SO2 emissions for each such month.

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

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

V. Testing Requirements

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

1.a Emission Limitation:

Visible particulate emissions shall not exceed five percent (5%) opacity, as a six-minute average.

Applicable Compliance Method:

Reference Method 9, if requested, as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraph (B)(3)(b) of OAC rule 3745-17-03.

1.b Emission Limitation:

1.8 lbs PE/hr

Applicable Compliance Method:

Compliance may be determined based upon the record keeping requirements specified in section A.III.3. If required, emission testing shall be performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

1.c Emission Limitation:

7.9 tons PE per year

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable particulate emission limitation (1.8 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

1.d Emission Limitation:

0.56 lb VOC per hour

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping requirements specified in section A.III.3.

V. Testing Requirements (continued)

1.e Emission Limitation:

2.5 tons VOC per year

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable VOC emission limitation (0.56 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

1.f Emission Limitation:

0.08 lbs SO2 per hour

Applicable Compliance Method:

Compliance shall be determined based upon the record keeping requirements specified in section A.III.3.

1.g Emission Limitation:

0.35 tons SO2 per year

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable SO2 emission limitation (0.08 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

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.

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: 722 Mold Line (F017)

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
green sand molding using the Osborn 722 mold making system (all emissions from this emissions unit are fugitive)	OAC rule 3745-21-07(G)(2)	exempt (See A.I.2.a.)
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-31-05(A)(3) (PTI 02-0374)	Particulate emissions (PE) shall not exceed 0.40 lb/hr. Visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average. Emissions of volatile organic compounds (VOC) shall not exceed 13.5 lbs/hr, as an average over each day, and 22.5 tons/yr, as a rolling 12-month summation. The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-07(G)(2).

2. Additional Terms and Conditions

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

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

1. Pursuant to OAC rule 3745-77-07 (A)(3)(a)(ii), the following record keeping requirements are as stringent as or more stringent than the record keeping requirements contained in permit-to-install 02-10374, issued on December 18,1996: A.III.2, A.III.3, A.III.4 and A.III.5. The reporting requirements contained in the above - referenced permit-to-install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the permit-to-install.

2. The permittee shall maintain the following records on all materials used in this emissions unit:

a. the identification of the chemical compound and its physical state at standard conditions; and

b. for any liquid organic materials, whether or not the material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).

3. The permittee shall maintain the following records each month for this emissions unit:

a. the company identification of the mold release used;

b. the total amount of mold release used, in gallons;

c. the VOC content of the mold release, in pounds of VOC/pound of mold release;

d. the number of hours of operation;

e. an estimate of the total VOC emission rate, in pounds, calculated as (b) x (the density of the mold release) x (c); and

f. an estimate of the average hourly VOC emission rate, calculated as (e/d).

4. The permittee shall maintain monthly records that list the following information for this emissions unit:

a. tons of iron poured;

b. the rolling, 12-month summation of the tons of iron poured;

c. the number of hours of operation for this emissions unit;

d. the average hourly PE emissions, in lbs PE/hour, calculated as [(a) / (c)] x 0.04 lb PE/ton iron;

e. the VOC emissions (tons); and

f. the rolling, 12-month summation of the VOC emissions (tons).

0.04 lb PE/ton iron is an emission factor in lbs PE per ton iron specified in Table 2.7-1 of Ohio EPA's document entitled "Reasonably Available Control Measures for Fugitive Dust Sources," dated September 1980.

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

5. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. Pursuant to OAC rule 3745-77-07 (A)(3)(a)(ii), the following reporting requirements are as stringent as or more stringent than the reporting requirements contained in permit-to-install 02-10374 modification, issued on December 18, 1996: A.IV.2, A.IV.3, A.IV.4, A.IV.5, A.IV.6 and A.IV.7. The reporting requirements contained in the above - referenced permit-to-install are subsumed into the reporting requirements of this operating permit, so that compliance with these requirements constitutes compliance with the underlying reporting requirements in the permit-to-install.

2. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which any photochemically reactive materials were employed.

3. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the average hourly VOC emission rate of 13.5 pounds was exceeded, and the actual average hourly VOC emission rate for each such day.

4. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month production rate limitation of 30,000 tons metal, and the actual rolling, 12-month production rate for each such exceedance.

5. The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the rolling, 12-month VOC emission limitation of 22.5 tons, and the actual rolling, 12-month VOC emission rate for each such exceedance.

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

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

V. Testing Requirements

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

1.a Emission Limitation:

0.40 lb PE/hr

Applicable Compliance Method:

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

V. Testing Requirements (continued)

1.b Emission Limitation:

Visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average.

Applicable Compliance Method:

Reference Method 9, if requested, as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

1.c Emission Limitation:

13.5 lbs VOC/hr

Applicable Compliance Method:

Compliance with the VOC emission limitation shall be based on the record keeping requirements specified in section A.III.3 of these terms.

1.d Emission Limitation:

22.5 tons VOC/yr, as a rolling 12-month summation

Applicable Compliance Method:

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: 722 Pour/cool Line (F018)

Activity Description: Pouring and cooling area for the molds made on the Osborn 722 molding machine

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
pouring and cooling area for the molds made on the Osborn 722 molding machine (all emissions from this emissions unit are fugitive)	OAC rule 3745-18-06(E)(2)	Emissions of sulfur dioxide (SO2) shall not exceed 481.5 lbs/hr. (See A.I.2.a.)
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-31-05(A)(3) (PTI 02-9748)	Particulate emissions (PE) shall not exceed 4.0 lbs/hr and 17.6 TPY. Visible particulate emissions shall not exceed five percent (5%) opacity, as a six-minute average. Emissions of volatile organic compounds (VOC) shall not exceed 20 lbs/day and 3.7 TPY. The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-18-06(E)(2), and OAC rule 3745-21-07(G).

2. Additional Terms and Conditions

2.a No record keeping and monitoring is required for the SO2 emissions limit because the maximum uncontrolled emission rate of SO2 cannot exceed the limit.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall record daily the hours this emissions unit was operated.

2. At the end of each month, the permittee shall record the following information for each day to determine the emission rates of PE, VOC and SO2:

a. the total metal production, in tons;

b. the hours this emissions unit was in operation;

c. the amount of iron poured, in tons;

d. the hourly PE rate, in lbs PE/hour, calculated as [(c) X 0.45 lb PE/ton iron poured] / (b);

e. the hourly SO2 emission rate, in lbs SO2/hour, calculated as [(c) x 0.02 lb/ton iron poured]/(b); and

f. the daily VOC emission rate, in lbs VOC/day, calculated as [(c) x 0.14 lb/ton iron poured].

0.45 = emission factor in lbs PE per ton of iron poured (from emissions testing performed at this facility on January 18, 1996, for emissions unit P036
0.02 = emission factor in lb SO2/ton iron poured is specified in US EPA reference document Factor Information Retrieval Data System, Version 6.25 SCC 30400320
0.14 = emission factor in lbs VOC per ton iron poured (from SCC emission factor 30400320)

3. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each month during which the average hourly PE exceeded 4.0 pounds, and the actual average PE rate for each such month.

2. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each month during which the daily VOC emissions exceeded 20 pounds, and the actual VOC emissions for each such month.

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

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

V. Testing Requirements

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

1.a Emission Limitation:

481.5 lbs SO2/hour

Applicable Compliance Method:

Compliance shall be demonstrated by multiplying the emission factor of 0.02 lb SO2/ton of iron by the maximum amount of metal that can be poured in an hour. 0.02 lb SO2/ton iron is the emission factor specified in US EPA reference document Factor Information Retrieval Data System, Version 6.25, SCC 30400320.

1.b Emission Limitation:

4.0 lbs PE/hr

Applicable Compliance Method:

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

1.c Emission Limitation:

Visible particulate emissions shall not exceed five percent (5%) opacity, as a six-minute average.

Applicable Compliance Method:

Reference Method 9, if requested, as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraph (B)(3)(b) of OAC rule 3745-17-03.

1.d Emission Limitation:

20 lbs VOC/day

Applicable Compliance Method:

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

1.e Emission Limitation:

17.5 tons PE per year

Applicable Compliance Method:

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

To determine compliance, the following equation shall be used:

E = (I x 0.45) x 1/2000

where:

E = the tons PE emitted per year;
I = tons of iron poured per year; and
0.45 = emission factor in lbs PE per ton of iron poured (from emissions testing performed at this facility on January 18, 1996, for emissions unit P036).

V. Testing Requirements (continued)

1.f Emission Limitation:

3.7 tons VOC per year

Applicable Compliance Method:

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

To determine compliance the following equation shall be used:

E = I x 0.14 x 1/2000

where:

E = tons VOC emitted per year;
I = tons of iron poured per year; and
0.14 = emission factor in lbs VOC per ton iron poured (from SCC emission factor 30400320).

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.

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Nobake Core Line including mixer (F019)

Activity Description: Phenolic Urethane nobake core production

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
phenolic urethane nobake core production (all emissions from this emissions unit are fugitive)	OAC rule 3745-21-07(G)(9)(i)	exempt, pursuant to OAC rule 3745-21-07(G)(9)(i) (See A.I.2.a.)
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-31-05(A)(3) (PTI 02-9755)	Particulate emissions (PE) shall not exceed 0.75 lb/hr and 3.3 TPY. Visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average. Emissions of volatile organic compounds (VOC) shall not exceed an average of 8 lbs/hr, as an average over each day, 40 lbs/day, and 7.3 TPY. The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-07(G).

2. Additional Terms and Conditions

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

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain the following records each day this emissions unit operates:

a. the company identification of the liquid organic materials used;

b. the amount of sand mixed, in pounds;

c. the number of hours of operation;

d. the VOC emission factor for the core release being employed, in lbs VOC/ton of sand;

e. an estimate of the daily VOC emission rate, in pounds VOC/day, calculated as (b) x (1.17 + X* lb VOC/ton sand);

f. an estimate of the average hourly VOC emission rate (pounds/hour), calculated as (e/c); and

g. the average hourly PE emissions, in lbs PE/hour, calculated as (b) x 0.38 lb PE/ton sand / (c).

0.38 lb PE/ton sand is the sum of two emission factors: core making (0.35) and mechanical core sand unloading (0.03), both specified in Table 2.7-1 of Ohio EPA's document entitled "Reasonably Available Control Measures for Fugitive Dust Sources," dated September 1980.

*The emission factor for VOC = 1.17 lb VOC/ton sand (resin) + X lb VOC/ton sand (core release, where X is the emission factor for the core release being employed) = 1.17 + X lbs VOC per ton of sand for phenolic urethane nobake binder systems (based on emissions data obtained by the 1997 OCMA study).

2. The permittee shall perform monthly* checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the 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.

* Due to the nature of the operation of this unit (sand is combined with resin and catalyst additions yielding minimal or no visible emissions), monthly visible emission checks are deemed acceptable to ensure ongoing compliance with the particulate emission limitations.

IV. Reporting Requirements

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

IV. Reporting Requirements (continued)

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

3. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the average hourly PE emissions exceeded 0.75 pound, and the actual average hourly PE emissions.

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

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

V. Testing Requirements

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

1.a Emission Limitation:

0.75 lb PE/hr

Applicable Compliance Method:

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

1.b Emission Limitation:

Visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average.

Applicable Compliance Method:

Reference Method 9, if requested, as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

1.c Emission Limitation:

40 lbs VOC per day

Applicable Compliance Method:

Compliance is based upon the record keeping requirements specified in section A.III.1.

1.d Emission Limitation:

8 lbs VOC per hour

Applicable Compliance Method:

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

V. Testing Requirements (continued)

1.e Emission Limitation:

3.3 TPY PE

Applicable Compliance Method:

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

To determine compliance the following equation shall be used:

E = I x 0.38 x 1/2000

where:

E = tons PE emitted per year;
I = tons of sand used per year; and
0.38 lb PE/ton sand is the sum of two emission factors: core making (0.35) and mechanical core sand unloading (0.03), both specified in Table 2.7-1 of Ohio EPA's document entitled "Reasonably Available Control Measures for Fugitive Dust Sources," dated September 1980.

1.f Emission Limitation:

7.3 TPY VOC

Applicable Compliance Method:

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

To determine compliance the following equation shall be used:

E = I x 0.14 x 1/2000

where:

E = tons VOC emitted per year;
I = tons of sand poured per year; and
0.14 = emission factor in lbs VOC per ton sand poured (from SCC emission factor 30400320).

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.

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Ductile Iron Inoculation Inliner I (F020)

Activity Description: Sandwich inoculation

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
sandwich inoculation process for inliner controlled by a baghouse	OAC rule 3745-31-05(A)(3) (PTI 02-20474)	0.010 gr/dscf and 4.29 lbs/hr of particulate emissions (PE) from the baghouse serving this emissions 18.79 TPY of PE from the baghouse stack 15.77 TPY of fugitive emissions Visible particulate emissions from the baghouse stack shall not exceed five percent (5%) opacity, as a six-minute average. See section A.I.2.a.
	OAC rules 3745-17-07(A), 3745-17-07(B), 3745-17-08(B), and 3745-17-11(B)	The requirements specified in these rules are less stringent than those established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a The collection efficiency of the air pollution capture hoods shall be sufficient to minimize or eliminate visible emissions of fugitive dust at all points of capture. The visible emissions of fugitive dust from the building that encloses this emissions unit shall not exceed five percent (5%) opacity, as a six-minute average.

2.b The annual emission limitations above are based on the potential to emit for this unit. Therefore, no monitoring and record keeping requirements are necessary to demonstrate compliance with these limits.

2.c This emissions unit is operationally united with P002 (twelve snag grinders), P012 (Pangborn South tumblast machine), P013 (South Wheelabrator shotblast machine), P026 (North Wheelabrator shotblast machine), and P040 (Pangborn North tumble blast machine); and all these emissions units are controlled by a common baghouse.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

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

2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from 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. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

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

The quarterly deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible 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 Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous six-month period.

IV. Reporting Requirements (continued)

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

V. Testing Requirements

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

1.a Emission Limitation:

0.010 gr/dscf and 4.29 lbs/hr of PE from the baghouse serving this emissions unit

Applicable Compliance Method:

Compliance with the above PE limitations shall be determined by stack testing as specified in section A.V.2 of these terms and conditions.

The hourly limit of 4.29 pounds per hour is based on a grain loading limit of 0.010 gr/dscf and the gas flow rate for the baghouse of 50,000 SCFM.

1.b Emission Limitation:

18.79 TPY of PE from the baghouse stack

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable particulate emission limitation (4.29 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

1.c Emission Limitation:

15.77 TPY of fugitive emissions

Applicable Compliance Method:

Compliance with the annual fugitive emission limitation shall be determined using the following equation:

A = EF x P x (1 - CE) x 8,760 hrs/yr / 2,000 lbs/ton

where:

A = annual fugitive emission rate (TPY);
EF = Emission factor of 4 lbs/ton of iron processed from FIRE Version 6.25, SCC 3-04-003-10;
P = maximum hourly process weight rate (9 tons/hr); and
CE = estimated fractional capture efficiency (0.90).

1.d Emission Limitation:

Visible particulate emissions from the baghouse stack shall not exceed five percent (5%) opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance with the above visible emission limitation shall be determined in accordance with Method 9 of 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

1.e Emission Limitation:

The visible emissions of fugitive dust from the building that encloses this emissions unit shall not exceed five percent (5%) opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance with the above visible emission limitation shall be determined in accordance with Method 9 of 40 CFR Part 60, Appendix A.

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

a. The emission testing shall be conducted within 12 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the mass emission limit for particulate emissions and to determine the visible particulate emissions from the baghouse serving this emissions unit.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1 through 5 and Method 9 of 40 CFR Part 60, Appendix A.

d. The test(s) shall be conducted while this emissions unit and emissions units P002, P012, P013, P026, and P040 are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Ductile Iron Inoculation Back Floor II□□ (F021)

Activity Description: Sandwich inoculation

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
sandwich inoculation process controlled by a baghouse	OAC rule 3745-31-05(A)(3) (PTI 02-20346)	0.010 gr/dscf and 6.0 lbs/hr of particulate emissions (PE) from the baghouse serving this emissions unit and emissions units P021, P039, and P902 26.28 TPY of PE from the baghouse stack 8.76 TPY of fugitive emissions Visible particulate emissions from the baghouse stack shall not exceed five percent (5%) opacity, as a six-minute average. See section A.I.2.a.
	OAC rules 3745-17-07(A), 3745-17-07(B), 3745-17-08(B), and 3745-17-11(B)	The requirements specified in these rules are less stringent than those established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a The collection efficiency of the air pollution capture hoods shall be sufficient to minimize or eliminate visible emissions of fugitive dust at all points of capture. The visible emissions of fugitive dust from the building that encloses this emissions unit shall not exceed five percent (5%) opacity, as a six-minute average.

2.b The annual emission limitations above are based on the potential to emit for this unit. Therefore, no monitoring and record keeping requirements are necessary to demonstrate compliance with these limits.

2.c This emissions unit is operationally united with P021 (Tabor cut-off saw), P039 (Fischer Pushup/Punchout), and P902 (Back floor mold sand handling system); and all these emissions units are controlled by a common baghouse.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

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

2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from 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. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

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

The quarterly deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible 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 Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous six-month period.

IV. Reporting Requirements (continued)

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

V. Testing Requirements

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

1.a Emission Limitation:

0.010 gr/dscf and 6.0 lbs/hr of PE from the baghouse serving this emissions unit and emissions units P021, P039, and P902

Applicable Compliance Method:

Compliance with the above PE limitations shall be determined by stack testing as specified in section A.V.2 of these terms and conditions.

The hourly limit of 6.0 pounds per hour is based on a grain loading limit of 0.010 gr/dscf and the gas flow rate for the baghouse of 70,000 SCFM.

1.b Emission Limitation:

26.28 TPY of PE from the baghouse stack

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable particulate emission limitation (6.0 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

1.c Emission Limitation:

8.76 TPY of fugitive emissions

Applicable Compliance Method:

Compliance with the annual fugitive emission limitation shall be determined using the following equation:

A = EF x P x (1 - CE) x 8,760 hrs/yr / 2,000 lbs/ton

where:

A = annual fugitive emission rate (TPY);
EF = Emission factor of 4 lbs/ton of iron processed from FIRE Version 6.25, SCC 3-04-003-10;
P = maximum hourly process weight rate (5 tons/hr); and
CE = estimated fractional capture efficiency (0.90).

V. Testing Requirements (continued)

1.d Emission Limitation:

Visible particulate emissions from the baghouse stack shall not exceed five percent (5%) opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance with the above visible emission limitation shall be determined in accordance with Method 9 of 40 CFR Part 60, Appendix A.

1.e Emission Limitation:

The visible emissions of fugitive dust from the building that encloses this emissions unit shall not exceed five percent (5%) opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance with the above visible emission limitation shall be determined in accordance with Method 9 of 40 CFR Part 60, Appendix A.

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 12 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the mass emission limit for particulate emissions and to determine the visible particulate emissions from the baghouse serving this emissions unit.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1 through 5 and Method 9 of 40 CFR Part 60, Appendix A.

d. The test(s) shall be conducted while this emissions unit and emissions units P021, P039, and P902 are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Core Sand Receiving and Transfer (F022)

Activity Description: Loading and unloading sand for core making

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
five core sand silos with bucket elevator and belt transfer	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Mold Sand Receiving and Transfer (F023)

Activity Description: Unloading mold sand from trucks and transferring storage hopper/silo

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
loading and unloading sand and mold making (silos are vented through bin vents on silos)	OAC rule 3745-17-07(A)	In accordance with paragraph (A)(3)(h) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(A) shall not apply to this emissions unit.
	OAC rule 3745-17-11(A)	exempt (See A.I.2.a.)
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.

2. Additional Terms and Conditions

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

2.b The PE from the silos shall be vented to the bin vents serving the silos.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Fischer Mold Line (F024)

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
Fischer mold making line (all emissions from this emissions unit are fugitive)	OAC rule 3745-31-05(A)(3) (PTI 02-20457)	0.40 lb/hr of particulate matter (PM)/particulate matter less than 10 microns in diameter (PM10) 7.40 lbs/hr of organic compounds (OC) Visible emissions of fugitive dust shall not exceed five percent (5%) opacity, as a six-minute average.
	OAC rule 3745-31-05(C) (PTI 02-20457)	0.38 TPY of PM/PM10 per rolling, 12-month period 3.70 TPY of OC per rolling, 12-month period
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-21-07(G)	This emissions unit is exempt from the requirements of this rule pursuant to OAC rule 3745-21-07(G)(9). See section A.I.2.a.

2. Additional Terms and Conditions

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

2. Additional Terms and Conditions (continued)

2.b The hourly emission limitations are based on this emissions unit's potential to emit. Therefore, no record keeping/reporting requirements are necessary to determine compliance with these limits.

II. Operational Restrictions

1. The maximum annual iron production for this emissions unit shall not exceed 19,000 TPY, based upon a rolling, 12-month summation. The maximum annual OC emissions shall not exceed 3.70 TPY, based upon a rolling, 12-month summation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the following information:

a. the metal production rate for each month; and

b. the rolling, 12-month summation of the metal production rates.

2. The permittee shall maintain monthly records of the following information:

a. the name and identification of each liquid organic material employed in this emissions unit; and

b. a determination whether the material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).

3. The permittee shall maintain the following records each month for this emissions unit:

a. the company identification of the mold release used;

b. the total amount of mold release used, in gallons;

c. the OC content of the mold release, in pounds of OC/pound of mold release;

d. the number of hours of operation;

e. an estimate of the total OC emission rate, in pounds, calculated as (b) x (the density of the mold release) x (c);

f. an estimate of the average hourly OC emission rate, calculated as (e/d); and

g. the rolling, 12-month summation of OC emissions.

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

4. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from 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 deviation (excursion) reports that identify all exceedances of the rolling, 12-month metal production rate restriction and of the rolling, 12-month OC emission limitation.

2. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each month during which a photochemically reactive material was employed.

3. The permittee shall submit quarterly deviation (excursion) reports that include an identification of each day during which the average hourly OC emissions exceeded the emissions limitation of 7.40 pounds, and the actual average hourly OC emissions.

4. Quarterly deviation (excursion) reports shall be submitted in accordance with the General Terms and Conditions of this permit.

5. 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 Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous six-month period.

V. Testing Requirements

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

1.a Emission Limitation:

0.40 lb/hr of PM/PM10

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined using an emission factor of 0.04 lb of PE/ton of iron specified in Table 2.7-1 of Ohio EPA's document entitled "Reasonably Available Control Measures for Fugitive Dust Sources," dated September 1980 and the maximum hourly production rate of 10 tons/hr.

V. Testing Requirements (continued)

1.b Emission Limitation:

7.40 lbs/hr of OC

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined by the record keeping requirements specified in section A.III.3 of these terms and conditions.

1.c Emission Limitation:

0.38 TPY of PM/PM10 per rolling, 12-month period
3.70 TPY of OC per rolling, 12-month period

Applicable Compliance Method:

The annual emission limitations were established by multiplying the maximum annual iron production rate of 19,000 tons by the respective emission factors referenced in sections A.V.1.a and A.V.1.b and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with this annual iron production rate, compliance with the emission limitations will be assumed. Compliance with the annual production rate shall be demonstrated by the monitoring and record keeping in section A.III.1.

1.d Emission Limitation:

Visible emissions of fugitive dust shall not exceed five percent (5%) opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be determined using Method 9 of 40 CFR, Part 60, Appendix A.

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.

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Fischer Pour and Cool Line (F025)

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
Fischer Pour and Cool Line	OAC rule 3745-31-05(A)(3) (PTI 02-20457)	5.10 lbs/hr of particulate matter (PM)/particulate matter less than 10 microns in diameter (PM10) 1.40 lbs/hr of organic compounds (OC) 29.90 lbs/hr of carbon dioxide (CO) Visible emissions of fugitive dust shall not exceed five percent (5%) opacity, as a six-minute average.
	OAC rule 3745-31-05(C) (PTI 02-20457)	4.85 TPY of PM/PM10 per rolling, 12-month period 1.33 TPY of OC per rolling, 12-month period 28.41 TPY of CO per rolling, 12-month period 1.21 TPY of total hazardous air pollutants (HAPs) per rolling, 12-month period
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

2. Additional Terms and Conditions

2.a The hourly emission limitations are based on this emissions unit's potential to emit. Therefore, no record keeping/reporting requirements are necessary to determine compliance with these limits.

II. Operational Restrictions

1. The production of ductile iron through in-mold inoculation shall not be performed in this emissions unit.

2. The maximum annual iron production for this emissions unit shall not exceed 19,000 TPY, based upon a rolling, 12-month summation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the following information:

a. the metal production rate for each month; and

b. the rolling, 12-month summation of the metal production rates.

2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from 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 include an identification of each month during which the rolling, 12-month iron production rate exceeded the operational restriction of 19,000 tons of iron, and the actual rolling 12-month production rate.

2. Quarterly deviation (excursion) reports shall be submitted in accordance with the General Terms and Conditions of this permit.

3. The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive 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 Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous six-month period.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:

5.10 lbs/hr of PM/PM10

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined using an emission factor of 0.45 lb per ton of iron poured (from emissions testing performed at this facility on January 18, 1996, for emissions unit P036) and the maximum hourly production rate of 10 TPH.

1.b Emission Limitation:

1.40 lbs/hr of OC

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined using an emission factor of 0.14 lb/ton from FIRE version 6.25 SCC 3-04-003-20 and the maximum hourly production rate of 10 TPH.

1.c Emission Limitation:

29.90 lbs/hr of CO

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined using an emission factor of 2.99 lbs/ton from testing of a similar source at GM's Saginaw MI foundry and the maximum hourly production rate of 10 TPH.

1.d Emission Limitation:

4.85 TPY of PM/PM10 per rolling, 12-month period
1.33 TPY of OC per rolling, 12-month period
28.41 TPY of CO per rolling, 12-month period

Applicable Compliance Method:

The annual emission limitations were established by multiplying the maximum annual iron production rate of 19,000 tons by the respective emission factors referenced in sections A.V.1.a through A.V.1.c and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with this annual iron production rate, compliance with the emission limitations will be assumed. Compliance with the annual production rate shall be demonstrated by the monitoring and record keeping in section A.III.1.

V. Testing Requirements (continued)

1.e Emission Limitation:

1.21 TPY of total HAPs per rolling, 12-month period

Applicable Compliance Method:

The annual emission limitation was established by multiplying the maximum annual iron production rate of 19,000 tons by the emission factors below and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with this annual iron production rate, compliance with the emission limitation will be assumed. Compliance with the annual production rate shall be demonstrated by the monitoring and record keeping in section A.III.1.

Emission Factors from "Foundry Process Emission Factors: Baseline Emissions from Automotive Foundries in Mexico," McClellan Air Force Base, California, January, 1999.

Acetaldehyde = 4.72E-03 lb/ton
AcetopheNone = 7.90E-04 lb/ton
Benzene = 4.88E-02 lb/ton
Cumene = 2.05E-04 lb/ton
Dibenzofurans = 5.39E-05 lb/ton
Ethylbenzene = 2.48E-03 lb/ton
Formaldehyde = 2.93E-03 lb/ton
Xylenes = 1.02E-02 lb/ton
Naphthalene = 4.14E-03 lb/ton
Nitrobenzene = 2.01E-05 lb/ton
o-Cresol = 1.52E-03 lb/ton
o-Xylenes = 5.20E-03 lb/ton
Phenol = 9.10E-03 lb/ton
Propanol = 5.68E-05 lb/ton
Styrene = 9.09E-04 lb/ton
Toluene = 2.59E-02 lb/ton
Antimony = 6.21E-05 lb/ton
Arsenic = 1.14E-05 lb/ton
Cadmium = 5.25E-05 lb/ton
Chromium = 3.79E-04 lb/ton
Cobalt = 5.30E-03 lb/ton
Lead = 4.80E-04 lb/ton
Manganese = 3.16E-03 lb/ton
Nickel = 4.32E-04 lb/ton
Selenium = 2.46E-05 lb/ton
Total HAPs = 0.127 lb/ton

1.f Emission Limitation:

Visible emissions of fugitive dust shall not exceed five percent (5%) opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be determined using Method 9 of 40 CFR Part 60, Appendix A.

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.

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Twelve 30" Snag Grinders (P002)

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
twelve 30" snag grinders used to grind iron castings, all of which shall be vented to a 50,000 acfm baghouse located in the cleaning room	OAC rule 3745-17-11(A)	The requirements established pursuant to OAC rule 3745-17-11(B) are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3) for emissions units F020, P026, and P040.
	OAC rule 3745-17-07(A)	The requirements specified in OAC rule 3745-17-07(A) are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3) for emissions units F020 and P040.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-31-05(A)(3) (PTI 02-0103)	The requirements established pursuant to OAC rule 3745-31-05(A)(3) for this emissions unit are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3) for emissions units F020, P026, and P040.

2. Additional Terms and Conditions

2.a This emissions unit is operationally united with F020 (sandwich inoculation process for inliner), P012 (Pangborn South Tumblast machine), P013 (South Wheelabrator shotblast machine), P026 (North Wheelabrator shotblast machine), and P040 (Pangborn North tumble blast machine); and all these emissions units are controlled by a common baghouse.

2.b PE emissions from all twelve 30" snag grinders shall be vented to the baghouse serving F020, P026, and P040.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

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

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

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

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

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

V. Testing Requirements

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

1.a Emission Limitation:

0.010 gr/dscf and 4.29 lbs/hr of PE from the baghouse serving emissions units F020, P026, and P040

Applicable Compliance Method:

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

V. Testing Requirements (continued)

1.b Emission Limitation:

Visible particulate emissions from the baghouse serving F020 and P040 shall not exceed five percent (5%) opacity, as a six-minute average.

Applicable Compliance Method:

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

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

a. The emission testing shall be conducted within 12 months after issuance of the permit and within 12 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the mass emission limits for particulate emissions and to determine the visible particulate emissions.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1 through 5 and Method 9 of 40 CFR Part 60, Appendix A.

d. The test(s) shall be conducted while this emissions unit and emissions units F020, P012, P013, P026, and P040 are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Holding Furnaces #4 & #5 (P011)

Activity Description: Two furnaces - each 5 ton capacity used for "holding iron"

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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.

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

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: Pangborn South Tumblast Machine (P012)

Activity Description: Tumblast machine used to remove sand from the castings

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
tumblast machine used to remove sand from the castings, and which is vented to a baghouse	OAC rule 3745-17-07(A)(1)	The requirements specified in OAC rule 3745-17-07(A) are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3) for emissions units F020 and P040.
	OAC rule 3745-17-11(B)	The requirements established pursuant to OAC rule 3745-17-11(B) are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3) for emissions units F020, P026, and P040. See A.I.2.a and A.I.2.b.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

2. Additional Terms and Conditions

2.a This emissions unit is operationally united with F020 (sandwich inoculation process for inliner), P002 (twelve snag grinders), P013 (South Wheelabrator shotblast machine), P026 (North Wheelabrator shotblast machine), and P040 (Pangborn North tumble blast machine); and all these emissions units are controlled by a common baghouse.

2.b PE from the tumblast machine shall be vented to the baghouse serving emissions units P026 and P040.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

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

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. the total duration of any visible emission incident; and
c. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

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

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

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

V. Testing Requirements

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

1.a Emission Limitation:

0.010 gr/dscf and 4.29 lbs/hr of PE from the baghouse serving emissions units F020, P026, and P040.

Applicable Compliance Method:

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

1.b Emission Limitation:

Visible particulate emissions from the baghouse serving F020 and P040 shall not exceed five percent (5%) opacity, as a six-minute average.

Applicable Compliance Method:

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

V. Testing Requirements (continued)

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

a. The emission testing shall be conducted within 12 months after issuance of the permit and within 12 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the mass emission limits for particulate emissions and to determine the visible particulate emissions.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1 through 5 and Method 9 of 40 CFR Part 60, Appendix A.

d. The test(s) shall be conducted while this emissions unit and emissions units F020, P002, P013, P026, and P040 are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: South Wheelabrator (P013)

Activity Description: Shot blast machine used to remove sand from castings

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
shotblast which is used to remove sand from the castings, equipped with a baghouse	OAC rule 3745-17-07(A)(1)	The requirements specified in OAC rule 3745-17-07(A) are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3) for emissions units F020 and P040.
	OAC rule 3745-17-11(B)	The requirements established pursuant to OAC rule 3745-17-11(B) are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3) for emissions units F020, P026, and P040. See A.I.2.a and A.I.2.b.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

2. Additional Terms and Conditions

2.a This emissions unit is operationally united with F020 (sandwich inoculation process for inliner), P002 (twelve snag grinders), P012 (Pangborn South tumblast machine), P026 (North Wheelabrator shotblast machine) and P040 (Pangborn North tumble blast machine); and all these emissions units are controlled by a common baghouse.

2.b PE from the shot blast machine shall be vented to the baghouse serving F020, P026, and P040.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

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

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. the total duration of any visible emission incident; and
c. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

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

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

V. Testing Requirements

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

1.a Emission Limitation:

Visible particulate emissions from the baghouse serving emissions units F020 and P040 shall not exceed five percent (5%) opacity, as a six-minute average.

Applicable Compliance Method:

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

1.b Emission Limitation:

0.010 gr/dscf and 4.29 lbs/hr of PE from the baghouse serving emissions units F020, P026, and P040.

Applicable Compliance Method:

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

V. Testing Requirements (continued)

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

a. The emission testing shall be conducted within 12 months after issuance of the permit and within 12 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the mass emission limit for particulate emissions and to determine the visible particulate emissions.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1 through 5 and Method 9 of 40 CFR Part 60, Appendix A.

d. The test(s) shall be conducted while this emissions unit and emissions units F020, P002, P012, P026, and P040 are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: East End Shakeout (P017)

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

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

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

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.

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Tabor Cut-off Saws (P021)

Activity Description: Saws used to remove gates and risers from the casting.

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
three saws (two pre-1974 "old" and one post-1974 "new") used to remove the gating system from castings, equipped with a baghouse (70,000 cfm ETA Engineering)	OAC rule 3745-17-07(A)(1)	The requirements specified in OAC rule 3745-17-07(A) are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3) for emissions units F021, P039, and P902.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
"new" saw used to remove the gating system from castings, equipped with a baghouse (70,000 cfm ETA Engineering)	OAC rule 3745-31-05(A)(3) (PTI 02-3070)	The requirements established pursuant to OAC rule 3745-31-05(A)(3) for this emissions unit are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3) for emissions units F021, P039, and P902.
two saws ("old") used to remove the gating system from castings, equipped with a baghouse (70,000 cfm ETA Engineering)	OAC rule 3745-17-11(B)	The requirements established pursuant to OAC rule 3745-17-11(B) are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3) for emissions units F021, P039, and P902.

2. Additional Terms and Conditions

2.a This emissions unit is operationally united with F021 (sandwich inoculation process), P039 (Fischer Pushup/Punchout), and P902 (Back floor mold sand handling system); and all these emissions units are controlled by a common baghouse.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

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

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

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

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

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

V. Testing Requirements

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

1.a Emission Limitation:

0.010 gr/dscf and 6.0 lbs/hr of PE from the baghouse serving emissions units F021, P039, and P902.

Applicable Compliance Method:

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

1.b Emission Limitation:

Visible particulate emissions from the baghouse serving emissions units F021, P039, and P902 shall not exceed five percent (5%) opacity as a six-minute average.

Applicable Compliance Method:

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

V. Testing Requirements (continued)

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 12 months prior to permit expiration. (The last emissions testing on this emissions unit which demonstrated compliance was last conducted on April 4, 2001.)

b. The emission testing shall be conducted to demonstrate compliance with the mass emission limits for particulate emissions and to determine the visible particulate emissions.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1 through 5 of 40 CFR Part 60, Appendix A. Method 9 readings shall be performed during each test run.

d. The test(s) shall be conducted while the emissions unit and emissions units F021, P039, and P902 are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Scrap preheater (P025)

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

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

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: North Wheelabrator (P026)

Activity Description: Shot blast machine used to remove sand from castings.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
shot blast machine used to remove sand from castings, equipped with a baghouse	OAC rule 3745-17-11(B)	The requirements established pursuant to OAC rule 3745-17-11(B) are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3). (See A.I.2.a.)
	OAC rule 3745-17-07(A)	The requirements specified in OAC rule 3745-17-07(A) are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3) for emissions units F020 and P040.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-31-05(A)(3) (PTI 02-1952)	Particulate emissions (PE) from the baghouse shall not exceed 0.010 gr/dscf of exhaust gases, 0.5 lb/hr and 2.2 tons/year. Fugitive particulate emissions shall not exceed 3.1 tons per year. Visible emissions of fugitive dust shall not exceed 20 percent opacity, as a 3-minute average.

2. Additional Terms and Conditions

2.a. This emissions unit is operationally united with F020 (sandwich inoculation for inliner), P002 (twelve snag grinders), P012 (Pangborn South tumblast machine), P013 (South Wheelabrator shotblast machine), P040 (Pangborn North tumble blast machine), and all these emissions units are controlled by a common baghouse.

2.b. PE from this shot blast machine shall be vented to the baghouse serving F020, P026, and P040.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

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

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

3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

4. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

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

IV. Reporting Requirements (continued)

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

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

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

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

V. Testing Requirements

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

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

2.a Emission Limitation:

Visible particulate emissions from the baghouse serving F020 and P040 shall not exceed five percent (5%) opacity, as a six-minute average.

Applicable Compliance Method:

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

2.b Emission Limitation:

0.010 gr/dscf and 0.5 pound per hour from the baghouse

Applicable Compliance Method:

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

2.c Emission Limitation:

2.2 tons per year of PE from the stack

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable particulate emission limitation (0.5 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

V. Testing Requirements (continued)

2.d Emission Limitation:

3.1 tons per year of fugitive PE emissions

Applicable Compliance Method:

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

E = Ti x 7 lbs PE/ton iron x (1-0.98) x 1tn/2000 lbs

where:

E = tons PE per year;

Ti = tons of iron processed per year; and

0.98 = the assumed overall control efficiency of the baghouse.

The emission factor of 7 lbs PE/ton iron was provided by the NEDO.

2.e Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average.

Applicable Compliance Method:

Reference Method 9, if requested, as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

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

a. The emission testing shall be conducted within 12 months after issuance of the permit and within 12 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the mass emission limit for particulate emissions and to determine the visible particulate emissions.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1 through 5 and Method 9 of 40 CFR Part 60, Appendix A.

d. The test(s) shall be conducted while this emissions unit and emissions units F020, P002, P012, P013, and P040 are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

V. Testing Requirements (continued)

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Simpson Muller (P027)

Activity Description: Green sand muller which makes mold sand for the Osborn Inliner molding system

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
green sand muller which makes mold sand for the Osborn Inliner molding system, equipped with a mechanically aided wet scrubber	OAC rule 3745-17-11(B)	Particulate emissions (PE) shall not exceed 10.38 pounds per hour. See A.I.2.a. and A.I.2.b.
	OAC rule 3745-17-07(A)	Visible particulate emissions from the stack shall not exceed 20 percent opacity, as a six-minute average, except as provided by the rule.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

2. Additional Terms and Conditions

2.a. The allowable PE rate is from Figure II and is based upon the uncontrolled mass rate of emissions (71.4 lbs/hr) as reported for the emissions test conducted on October 8, 2003.

2.b PE from the muller shall be vented to the scrubber.

II. Operational Restrictions

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

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

III. Monitoring and/or Record Keeping Requirements

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

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

a. the pressure drop across the scrubber, in inches of water, on a continuous basis;

b. the scrubber water flow rate, in gallons per minute, once per operating shift; and

c. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

a. the static pressure drop across the scrubber; and

b. the scrubber water flow rate.

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

V. Testing Requirements

1. Compliance with the emission limitation(s) 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 shall not exceed 20 percent opacity, as a six-minute average.

Applicable Compliance Method:

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

1.b Emission Limitation:

10.38 pounds of PE/hour

Applicable Compliance Method:

Compliance shall be demonstrated through emission testing and procedures specified in section A.V.2 of these terms and conditions.

V. Testing Requirements (continued)

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

a. The emission testing shall be conducted within 12 months after issuance of this permit and within 12 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the mass emission limit for particulate emissions and to determine the visible particulate emissions.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: Methods 1 through 5 and Method 9 of 40 CFR Part 60, Appendix A.

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

A particulate emissions test also shall be conducted at the inlet of the control device to determine the uncontrolled mass rate of emissions for the emissions unit, for purposes of applying Figure II of OAC rule 3745-17-11. For this testing, Methods 1 through 5 of 40 CFR Part 60, Appendix A shall be employed.

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Holding Furnace #6 (P029)

Activity Description: 20 ton graphite rod "holding furnace"

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
20-ton graphite rod holding furnace	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-31-05(A)(3) (PTI 02-9649)	Fugitive particulate emissions (PE) shall not exceed 4.26 pounds per hour. Visible PE shall not exceed 20 percent opacity, as a three-minute average.

2. Additional Terms and Conditions

None

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible fugitive emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the location and color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

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

V. Testing Requirements

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

1.a Emission Limitation:

Visible emissions of fugitive dust shall not exceed 20 percent opacity, as a three-minute average.

Applicable Compliance Method:

Reference Method 9, if requested, as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

1.b Emission Limitation:

4.26 lbs PE per hour

Applicable Compliance Method:

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

E = maximum iron throughput (in tons per hour) X 0.056 (lb/ton)

where:

E = PE (lbs/hr).

The emission factor (0.056 lb PE/ton iron) is specified in US EPA reference document AP-42, Compilation of Emission Factors, Section 12.5, Table 12.5-1 (1/95).

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

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 LL-5 (P030)

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
Laempe LL-5 core making process using a binder system with n,n-dimethyl isoproylamine (DMIPA) catalyst DMIPA is controlled by an acid scrubber.	OAC rule 3745-31-05(A)(3) (PTI 02-19387)	Particulate emissions (PE) from all stacks associated with this emissions unit shall not exceed 0.01 lb/hr and 0.02 TPY. Fugitive PE from this emissions unit shall not exceed 0.77 TPY. Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 0.96 lb/hr and 4.19 TPY. Visible PE from any stack serving this emissions unit shall not exceed five percent (5%) opacity, as a six-minute average. Visible emissions of fugitive dust from this emissions unit shall not exceed five percent (5%) opacity, as a three-minute average.
	OAC rule 3745-17-11(B)(1)	The emission limitation established in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)(1)	The visible emission limitation specified in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-21-07(G)(2)	See A.2.a below.

2. Additional Terms and Conditions

2.a This emissions unit is exempt from this rule as no photochemically reactive liquid organic materials are employed.

II. Operational Restrictions

1. The pH of the scrubbing liquor shall be maintained between 0.0 and 4.5.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to continuously monitor the pH of the scrubber liquor while the emissions unit is in operation. The pH monitor shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

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

a. the pH of the scrubber liquor; and

b. a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the scrubber serving this emissions unit, the bin vent serving this emissions unit, and for any visible fugitive particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

1. The permittee shall submit quarterly pH deviation (excursion) reports that identify all periods of time during which the scrubber liquor pH did not comply with the pH requirement specified above.

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

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:

PE from all stacks associated with this emissions unit shall not exceed 0.01 lb/hr and 0.02 TPY.

Applicable Compliance Method:

Compliance with the hourly and annual PE limitations shall be determined using an emission factor of 0.72 lb/ton of sand processed from Table 11.12-2 of the document entitled AP-42 "Compilation of Air Pollutant Emission Factors," Fifth Edition, dated 10/01.

1.b Emission Limitation:

Fugitive PE from this emissions unit shall not exceed 0.77 TPY.

Applicable Compliance Method:

Compliance with the annual fugitive PE limitation shall be determined using an emission factor of 0.35 lb/ton from Table 2.7-1 of the Ohio EPA document entitled "Reasonably Available Control Measures for Fugitive Dust Sources," dated September, 1980.

1.c Emission Limitation:

VOC emissions from this emissions unit shall not exceed 0.96 lb/hr and 4.19 TPY.

Applicable Compliance Method:

The hourly and annual VOC emission limitations are based upon the potential to emit for this emissions unit and are based on the following emission factors and information:

Scrubber capture efficiency = 90% (catalyst gas only);
Scrubber control efficiency = 98% (catalyst gas only);
Overall removal efficiency = 88.2% (catalyst gas only);
Binder = 0.72 lb/ton (based on manufacturer supplied data);
Catalyst = 1.56 lbs/ton (based on man. supplied data and max. usage); and
Core release = 1.01 lbs/ton (based on man. supplied data and max. usage).

1.d Emission Limitation:

Visible PE from any stack serving this emissions unit shall not exceed five percent (5%) opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance with the above visible emission limitation shall be determined using Method 9 of 40 CFR Part 60, Appendix A.

1.e Emission Limitation:

Visible emissions of fugitive dust from this emissions unit shall not exceed five percent (5%) opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance with the above visible emission limitation shall be determined using Method 9 of 40 CFR, Part 60, Appendix A, except that the data reduction and average opacity calculation shall be based upon sets of twelve consecutive visible particulate emission observations recorded at fifteen-second intervals.

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.

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: South Laempe L-20 (P031)

Activity Description: Sand cores are made using an L-20 size Laempe core machine.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
South Laempe L-20 core making process using a binder system with n-dimethyl isoproylamine (DMIPA) catalyst DMIPA is controlled by an acid scrubber.	OAC rule 3745-31-05(A)(3) (PTI 02-20073)	Fugitive particulate emission (PE) from this emissions unit shall not exceed 0.70 TPY. Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 1.72 lbs/hr and 4.28 TPY. Visible emissions of fugitive dust from this emissions unit shall not exceed five percent (5%) opacity, as a three-minute average.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-21-07(G)(2)	exempt See A.I.2.a below.

2. Additional Terms and Conditions

2.a The permittee shall not employ any photochemically reactive liquid organic materials in this emissions unit.

II. Operational Restrictions

1. The pH of the scrubbing liquor shall be maintained between 0.0 and 4.5.

II. Operational Restrictions (continued)

2. In order to avoid exceeding the above annual emission limitations, annual production from this emissions unit, in terms of sand processed, shall not exceed 4,000 tons per year, as a rolling, 12-month summation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to continuously monitor the pH of the scrubber liquor while the emissions unit is in operation and the DMIPA catalyst system is being used. The pH monitor shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day that this emissions unit operates:

a. the pH of the scrubber liquor; and

b. a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the scrubber serving this emissions unit and for any visible fugitive particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

3. The permittee shall maintain monthly records of the following information:

a. the total production rate, in terms of sand processed, in tons per month; and

b. the rolling, 12-month summations of the monthly total production rate, in terms of sand processed.

IV. Reporting Requirements

1. The permittee shall submit quarterly pH deviation (excursion) reports that identify all periods of time during which the scrubber liquor pH did not comply with the pH requirement specified above.

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

3. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month production restriction.

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:

Fugitive PE from this emissions unit shall not exceed 0.70 TPY.

Applicable Compliance Method:

Compliance with the annual fugitive PE limitation shall be determined using an emission factor of 0.35 lb/ton from Table 2.7-1 of the Ohio EPA document entitled "Reasonably Available Control Measures for Fugitive Dust Sources," dated September, 1980.

1.b Emission Limitation:

VOC emissions from this emissions unit shall not exceed 1.72 lbs/hr and 4.28 TPY.

Applicable Compliance Method:

The hourly VOC emission limitation is based upon the potential to emit for this emissions unit. The annual VOC emission limitation is based on the production restriction of 4,000 tons of sand per year. Therefore, as long as compliance with the operational and production restriction is maintained, compliance with the annual emission limitation is assumed. Compliance with the production restriction is based upon the record keeping in section A.III.3 of these terms and conditions.

1.c Emission Limitation:

Visible emissions of fugitive dust from this emissions unit shall not exceed five percent (5%) opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance with the above visible emission limitation shall be determined using Method 9 of 40 CFR, Part 60, Appendix A, except that the data reduction and average opacity calculation shall be based upon sets of twelve consecutive visible particulate emission observations recorded at fifteen-second intervals.

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.

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Laempe L-40 (P032)

Activity Description: Sand cores are made using an L-40 size Laempe core machine.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
Laempe L-40 core making process using a binder system with n,n-dimethyl isoproylamine (DMIPA) catalyst DMIPA is controlled by an acid scrubber.	OAC rule 3745-31-05(A)(3) (PTI 02-21983)	Particulate emissions (PE) from all stacks associated with this emissions unit shall not exceed 0.02 lb/hr and 0.03 TPY. Fugitive PE from this emissions unit shall not exceed 1.40 TPY. Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 3.21 lbs/hr and 8.57 TPY. Visible PE from any stack serving this emissions unit shall not exceed five percent (5%) opacity, as a six-minute average. Visible emissions of fugitive dust from this emissions unit shall not exceed five percent (5%) opacity, as a three-minute average.
	OAC rule 3745-17-11(B)(1)	The emission limitation established in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)(1)	The visible emission limitation specified in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-21-07(G)	exempt See A.I.2.a below.

2. Additional Terms and Conditions

2.a The permittee shall not employ any photochemically reactive liquid organic materials in this emissions unit.

II. Operational Restrictions

1. The pH of the scrubbing liquor shall be maintained between 0.0 and 4.5.

2. In order to avoid exceeding the above annual emission limitations, annual production from this emissions unit, in terms of sand processed, shall not exceed 8,000 tons per year, as a rolling, 12-month summation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to continuously monitor the pH of the scrubber liquor while the emissions unit is in operation and the DMIPA catalyst system is being used. The pH monitor shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day that this emissions unit operates:

a. the pH of the scrubber liquor; and

b. a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the scrubber serving this emissions unit, the bin vent serving this emissions unit, and for any visible fugitive particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

3. The permittee shall maintain monthly records of the following information:

a. the total production rate, in terms of sand processed, in tons per month; and

b. the rolling, 12-month summations of the monthly total production rate, in terms of sand processed.

IV. Reporting Requirements

1. The permittee shall submit quarterly pH deviation (excursion) reports that identify all periods of time during which the scrubber liquor pH did not comply with the pH requirement specified above.

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 scrubber serving this emissions unit, the bin vent serving this emissions unit, and for any visible fugitive particulate emissions from this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous six-month period.

3. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month production restriction.

V. Testing Requirements

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

1.a Emission Limitation:

PE from all stacks associated with this emissions unit shall not exceed 0.02 lb/hr and 0.03 TPY.

Applicable Compliance Method:

Compliance with the hourly and annual PE limitations shall be determined using an emission factor of 0.72 lb/ton of sand processed from Table 11.12-2 of the document entitled AP-42 "Compilation of Air Pollutant Emission Factors," Fifth Edition, dated 10/01.

1.b Emission Limitation:

Fugitive PE from this emissions unit shall not exceed 1.40 TPY.

Applicable Compliance Method:

Compliance with the annual fugitive PE limitation shall be determined using an emission factor of 0.35 lb/ton from Table 2.7-1 of the Ohio EPA document entitled "Reasonably Available Control Measures for Fugitive Dust Sources," dated September, 1980.

1.c Emission Limitation:

VOC emissions from this emissions unit shall not exceed 3.21 lbs/hr and 8.57 TPY.

Applicable Compliance Method:

The hourly VOC emission limitation is based upon the potential to emit for this emissions unit. The annual VOC emission limitation is based on the production restriction of 8,000 tons of sand per year. Therefore, as long as compliance with the production restriction is maintained, compliance with the annual emission limitation is assumed. Compliance with the production restriction is based upon the record keeping in section A.III.3 of these terms and conditions.

1.d Emission Limitation:

Visible PE from any stack serving this emissions unit shall not exceed five percent (5%) opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance with the above visible emission limitation shall be determined using Method 9 of 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

1.e Emission Limitation:

Visible emissions of fugitive dust from this emissions unit shall not exceed five percent (5%) opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance with the above visible emission limitation shall be determined using Method 9 of 40 CFR Part 60, Appendix A, except that the data reduction and average opacity calculation shall be based upon sets of twelve consecutive visible particulate emission observations recorded at fifteen-second intervals.

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
Laempe L-40 core making process using a binder system with n,n-dimethyl isoproylamine (DMIPA) catalyst DMIPA is controlled by an acid scrubber.	Air Toxics Policy	See section B.VI.1 below.

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the increase in emissions due to the modification(s) to the emissions unit was less than 1 ton per year of each toxic pollutant that has a listed Threshold Limit Value (TLV), as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices").

Part III - Terms and Conditions for Emissions Units

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

Activity Description: Sand cores are made using an L-20 size Laempe core machine (dual binder system).

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
East Laempe L-20 core making process using binder system with methyl formate catalyst and modified to also use binder system with n,n-dimethyl isoproylamine (DMIPA) catalyst	OAC rule 3745-31-05(A)(3) (PTI 02-20394)	Particulate emissions (PE) from all stacks associated with this emissions unit shall not exceed 0.02 lb/hr and 0.02 TPY. Fugitive PE from this emissions unit shall not exceed 0.70 TPY. Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 24.42 lbs/hr and 24.42 TPY. Visible PE from any stack serving this emissions unit shall not exceed five percent (5%) opacity, as a six-minute average. Visible emissions of fugitive dust from this emissions unit shall not exceed five percent (5%) opacity, as a three-minute average.
	OAC rule 3745-31-05(C) (PTI 02-20394)	24.42 tons of VOC per rolling, 12-month period 5.60 tons of hazardous air pollutants (HAPs) per rolling, 12-month period 0.72 TPY of particulate matter less than 10 microns in diameter (PM-10) per rolling, 12-month period
	OAC rule 3745-17-11(B)(1)	The emission limitation established in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(A)(3).

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-17-07(A)(1)	The visible emission limitation specified in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-21-07(G)(2)	See A.I.2.a below.

2. Additional Terms and Conditions

2.a This emissions unit is exempt from this rule while using the methyl formate catalyst system or the DMIPA catalyst system as no photochemically reactive liquid organic materials are employed.

II. Operational Restrictions

1. The pH of the scrubbing liquor shall be maintained between 0.0 and 4.5.

2. Annual production from this emissions unit, in terms of sand processed, shall not exceed 4,000 tons per year, based on a rolling, 12-month summation of the monthly production rates.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to continuously monitor the pH of the scrubber liquor while the emissions unit is in operation and the DMIPA catalyst system is being used. The pH monitor shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall collect and record the following information each day that the DMIPA catalyst system is used:

a. the pH of the scrubber liquor; and

b. a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

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

2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the scrubber serving this emissions unit, the bin vent serving this emissions unit, and for any visible fugitive particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

3. The permittee shall maintain monthly records of the following information:

a. the total production rate, in terms of sand processed, in tons per month; and

b. the rolling, 12-month summations of the monthly total production rate, in terms of sand processed.

IV. Reporting Requirements

1. The permittee shall submit quarterly pH deviation (excursion) reports that identify all periods of time during which the scrubber liquor pH did not comply with the pH requirement specified above.

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

3. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month production restriction.

V. Testing Requirements

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

1.a Emission Limitation:

PE from all stacks associated with this emissions unit shall not exceed 0.02 lb/hr and 0.02 TPY.

Applicable Compliance Method:

Compliance with the hourly and annual PE limitations shall be determined using an emission factor of 0.72 lb/ton of sand processed from Table 11.12-2 of the document entitled AP-42 "Compilation of Air Pollutant Emission Factors," Fifth Edition, dated 10/01.

1.b Emission Limitation:

Fugitive PE from this emissions unit shall not exceed 0.70 TPY.

Applicable Compliance Method:

Compliance with the annual fugitive PE limitation shall be determined using an emission factor of 0.35 lb/ton from Table 2.7-1 of the Ohio EPA document entitled "Reasonably Available Control Measures for Fugitive Dust Sources," dated September, 1980.

V. Testing Requirements (continued)

1.c Emission Limitation:

VOC emissions from this emissions unit shall not exceed 24.42 lbs/hr and 24.42 TPY.

Applicable Compliance Method:

The hourly VOC emission limitation is based upon the potential to emit for this emissions unit. The annual VOC emission limitation is based on the production restriction of 4,000 tons of sand per year. Therefore, as long as compliance with the production restriction is maintained, compliance with the annual emission limitation is assumed. Compliance with the production restriction is based upon the record keeping in section A.III.3 of these terms and conditions.

1.d Emission Limitation:

Visible PE from any stack serving this emissions unit shall not exceed five percent (5%) opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance with the above visible emission limitation shall be determined using Method 9 of 40 CFR, Part 60, Appendix A.

1.e Emission Limitation:

Visible emissions of fugitive dust from this emissions unit shall not exceed five percent (5%) opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance with the above visible emission limitation shall be determined using Method 9 of 40 CFR, Part 60, Appendix A, except that the data reduction and average opacity calculation shall be based upon sets of twelve consecutive visible particulate emission observations recorded at fifteen-second intervals.

1.f Emission Limitations:

24.42 tons of VOC per rolling, 12-month period; 5.60 tons of HAPs per rolling, 12-month period; and 0.72 TPY of PM-10 per rolling, 12-month period

Applicable Compliance Method:

The annual emission limitations were established using the maximum annual production rate of 4,000 tons and the following emission factors:

12.21 lbs of VOC/ton of sand (supplied by manufacturer's of catalyst, core release and binder)

2.8 lbs of HAPs (methanol)/ton of sand (supplied by manufacturer of catalyst)

0.35 lb/ton of PM10, from Table 2.7-1 of the Ohio EPA document entitled "Reasonably Available Control Measures for Fugitive Dust Sources," dated September, 1980 (core making)

0.72 lb/ton of PM10, from Table 11.12-2 of the document entitled AP-42 "Compilation of Air Pollutant Emission Factors," Fifth Edition, dated 10/01. (sand transfer used in conjunction with a 99% control efficiency for fabric filter.

Therefore, provided compliance is shown with this annual production restriction, compliance with the emission limitations will be assumed. Compliance with the annual production restriction shall be demonstrated by the monitoring and record keeping in section A.III.3 of this permit.

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
East Laempe L-20 core making process using binder system with methyl formate catalyst and modified to also use binder system with DMIPA catalyst	none	none

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was performed and the predicted 1-hour maximum ground-level concentration was less than 80 percent of the MAGLC. Therefore, the air toxic demonstration is not part of this final permit. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any air toxic to increase may require the permittee to apply for and obtain a new permit to install.

Part III - Terms and Conditions for Emissions Units

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

Activity Description: Sand cores are made using an L-20 size Laempe core machine.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
West Laempe L-20 core making process using a binder system with n,n-dimethyl isoproylamine (DMIPA) catalyst DMIPA is controlled by an acid scrubber and the sand hopper vent is controlled by a fabric filter.	OAC rule 3745-31-05(A)(3) (PTI 02-21983)	Particulate emissions (PE) from all stacks associated with this emissions unit shall not exceed 0.01 lb/hr and 0.02 TPY. Fugitive PE from this emissions unit shall not exceed 0.70 TPY. Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 1.72 lbs/hr and 4.28 TPY. Visible PE from any stack serving this emissions unit shall not exceed five percent (5%) opacity, as a six-minute average. Visible emissions of fugitive dust from this emissions unit shall not exceed five percent (5%) opacity, as a three-minute average.
	OAC rule 3745-17-11(B)(1)	The emission limitation established in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)(1)	The visible emission limitation specified in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-21-07(G)(2)	exempt See A.I.2.a below.

2. Additional Terms and Conditions

2.a The permittee shall not employ any photochemically reactive liquid organic materials in this emissions unit.

II. Operational Restrictions

1. The pH of the scrubbing liquor shall be maintained between 0.0 and 4.5.

2. In order to avoid exceeding the above annual emission limitations, annual production from this emissions unit, in terms of sand processed, shall not exceed 4,000 tons per year, as a rolling, 12-month summation.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to continuously monitor the pH of the scrubber liquor while the emissions unit is in operation. The pH monitor shall be calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

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

a. the pH of the scrubber liquor; and

b. a log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the scrubber serving this emissions unit, the bin vent serving this emissions unit, and for any visible fugitive particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

3. The permittee shall maintain monthly records of the following information:

a. the total production rate, in terms of sand processed, in tons per month; and

b. the rolling, 12-month summations of the monthly total production rate, in terms of sand processed.

IV. Reporting Requirements

1. The permittee shall submit quarterly pH deviation (excursion) reports that identify all periods of time during which the scrubber liquor pH did not comply with the pH requirement specified above.

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 scrubber serving this emissions unit, the bin vent serving this emissions unit, and for any visible fugitive particulate emissions from this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous six-month period.

3. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month production restriction.

V. Testing Requirements

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

1.a Emission Limitation:

PE from all stacks associated with this emissions unit shall not exceed 0.01 lb/hr and 0.02 TPY.

Applicable Compliance Method:

Compliance with the hourly and annual PE limitations shall be determined using an emission factor of 0.72 lb/ton of sand processed from Table 11.12-2 of the document entitled AP-42 "Compilation of Air Pollutant Emission Factors," Fifth Edition, dated 10/01.

1.b Emission Limitation:

Fugitive PE from this emissions unit shall not exceed 0.70 TPY.

Applicable Compliance Method:

Compliance with the annual fugitive PE limitation shall be determined using an emission factor of 0.35 lb/ton from Table 2.7-1 of the Ohio EPA document entitled "Reasonably Available Control Measures for Fugitive Dust Sources," dated September, 1980.

1.c Emission Limitation:

VOC emissions from this emissions unit shall not exceed 1.72 lb/hr and 4.28 TPY.

Applicable Compliance Method:

The hourly VOC emission limitation is based upon the potential to emit for this emissions unit. The annual VOC emission limitation is based on the production restriction of 4,000 tons of sand per year. Therefore, as long as compliance with the production restriction is maintained, compliance with the annual emission limitation is assumed. Compliance with the production restriction is based upon the record keeping in section A.III.3 of these terms and conditions.

1.d Emission Limitation:

Visible PE from any stack serving this emissions unit shall not exceed five percent (5%) opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance with the above visible emission limitation shall be determined using Method 9 of 40 CFR Part 60, Appendix A.

V. Testing Requirements (continued)

1.e Emission Limitation:

Visible emissions of fugitive dust from this emissions unit shall not exceed five percent (5%) opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance with the above visible emission limitation shall be determined using Method 9 of 40 CFR Part 60, Appendix A, except that the data reduction and average opacity calculation shall be based upon sets of twelve consecutive visible particulate emission observations recorded at fifteen-second intervals.

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
West Laempe L-20 core making process using a binder system with n,n-dimethyl isoproylamine (DMIPA) catalyst DMIPA is controlled by an acid scrubber and the sand hopper vent is controlled by a fabric filter.	Air Toxics Policy	See section B.VI. below.

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the increase in emissions due to the modification(s) to the emissions unit was less than 1 ton per year of each toxic pollutant that has a listed Threshold Limit Value (TLV), as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices").

Part III - Terms and Conditions for Emissions Units

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

Activity Description: Pouring and cooling area for the molds made on the Osborn Inliner automatic molding macine

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
pouring and cooling area for the molds made on the Osborn Inliner automatic molding machine	OAC rule 3745-18-06(E)(2)	Emissions of sulfur dioxide (SO2) shall not exceed 782 pounds per hour. (See A.I.2.c.)
	OAC rule 3745-17-07(A)	In accordance with paragraph (A)(3)(h) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(A) shall not apply to this emissions unit.
	OAC rule 3745-17-11(B)(1)	See A.I.2.a.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-31-05(A)(3) (PTI 02-9754)	Fugitive and stack particulate emissions (PE), combined, shall not exceed 9.9 pounds per hour. Visible fugitive and/or stack particulate emissions shall not exceed 20 percent opacity, as a six-minute average. Fugitive and stack volatile organic compound (VOC) emissions, combined, shall not exceed 2.8 pounds per hour. See A.I.2.b. The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-18-06(E)(2).

2. Additional Terms and Conditions

2.a In accordance with OAC 3745-17-11(A)(2)(a)(ii), "Figure II" of OAC rule 3745-17-11 shall not apply to this emissions unit because the uncontrolled particulate emissions are less than 10 pounds per hour. Based on the results of emissions testing conducted on January 18, 1996 and a maximum iron pour rate of 20 tons per hour, the maximum uncontrolled particulate matter emission rate is 9 pounds per hour. In accordance with OAC 3745-17-11(A)(2)(b)(ii), "Table I" of OAC rule 3745-17-11 shall not apply to this emissions unit because it is located in Wayne County.

2.b The pouring and cooling emissions are captured in hooding and vented outside the building through six (6) stacks. The collection efficiency of the capture hoods shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at all points of capture. The permittee shall maintain all hood and enclosures in good operating condition. Additional capture hooding or enclosures shall be installed if required by the Ohio EPA.

2.c No record keeping and monitoring is required for the SO2 emission limit because the maximum uncontrolled emission rate of SO2 cannot exceed the limit.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

1. At the end of each month, the permittee shall record the following information for each day to determine the emission rates of PE, VOC, and SO2:

a. the total metal production, in tons;

b. the hours this emissions unit was in operation;

c. the amount of iron poured, in tons;

d. the hourly PE rate, in lbs PE/hour, calculated as [(c) X 0.45 lb PE/ton iron poured] / (b);

e. the hourly SO2 emission rate, in lbs SO2/hour, calculated as [(c) x 0.02 lb/ton iron poured]/(b); and

f. the hourly VOC emission rate, in lbs VOC/hour, calculated as [(c) x 0.14 lbs/ton iron poured]/(b).

0.45 = emission factor in lbs PE per ton of iron poured (from emissions testing performed at this facility on January 18, 1996, for emissions unit P036
0.02 = emission factor in lb SO2/ton iron poured is specified in US EPA reference document Factor Information Retrieval Data System, Version 6.25 SCC 30400320
0.14 = emission factor in lbs VOC per ton iron poured (from SCC emission factor 30400320)

2. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stacks serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

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

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

3. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

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

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day during which the average hourly VOC emissions exceeded 2.8 pounds per hour, and the actual average hourly VOC emissions for each such day.

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

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

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

V. Testing Requirements

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

1.a Emission Limitation:

782 lbs of SO_2/hr

Applicable Compliance Method:

Compliance shall be determined in accordance with the following methods:

Compliance shall be demonstrated by multiplying the maximum production rate (tons iron/hour) by 0.02 lb SO_2/ton iron.

The emission factor (0.02 lb SO_2/ton iron) is specified in US EPA reference document Factor Information Retrieval Data System, Version 6.25, SCC 30400320.

V. Testing Requirements (continued)

1.b Emission Limitation:

Visible fugitive and/or stack particulate emissions shall not exceed 20 percent opacity, as a six-minute average.

Applicable Compliance Method:

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

1.c Emission Limitation:

2.8 lbs of VOC/hr

Applicable Compliance Method:

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

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

E = daily iron production rate (in tons per day) X 0.14 lb VOC/ton iron

where:

E = VOC emission rate (lbs/day); and

0.14 lb VOC/ton iron is an emission factor specified in US EPA reference document Factor Information Retrieval Data System, Version 6.25, SCC 30400320.

1.d Emission Limitation:

9.9 lbs of PE/hr

Applicable Compliance Method:

Compliance shall be determined in accordance with the following methods:

Compliance may be demonstrated by multiplying the maximum production rate (tons iron/hour) by 0.45 lb PE/ton iron.

The emission factor (0.45 lb PE/ton iron) was determined during a December 12, 1995, emissions test of 5 of the 6 stacks at the facility.

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Fischer Pushup/Punchout (P039)

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
Fischer Pushup/Punchout, vented to a baghouse	OAC rule 3745-31-05(A)(3) (PTI 02-20457)	0.010 gr/dscf, 6.0 lbs/hr of particulate matter (PM)/particulate matter less than 10 microns in diameter (PM10) from the baghouse stack serving this emissions unit and emissions units F021, P021 and P902. 0.30 TPY of fugitive PM emissions 0.21 TPY of fugitive PM10 emissions 12.00 lbs/hr of organic compounds (OC) 10.00 lbs/hr of carbon dioxide (CO) Visible emissions of fugitive dust shall not exceed five percent (5%) opacity, as a six-minute average. Visible PE from the baghouse stack serving this emissions unit shall not exceed five percent (5%) opacity, as a six-minute average.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
	OAC rule 3745-31-05(C) (PTI 02-20457)	26.28 TPY of PM/PM10 per rolling, 12-month period from the baghouse stack serving this emissions unit and emissions units F021, P021 and P902. 0.21 TPY of PM10 per rolling, 12-month period (fugitive) 11.40 TPY of OC per rolling, 12-month period 9.50 TPY of CO per rolling, 12-month period
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-17-11(B)	The emission limitation established in this rule is less stringent than the limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)	The visible emission limitation specified in this rule is less stringent that the visible emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a The hourly emission limitations are based on this emissions unit's potential to emit. Therefore, no record keeping/reporting requirements are necessary to determine compliance with these limits.

II. Operational Restrictions

1. The maximum annual iron production for this emissions unit shall not exceed 19,000 TPY, based upon a rolling, 12-month summation of the production rates.

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

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain monthly records of the following information:

a. the metal production rate for each month; and

b. the rolling, 12-month summation of the metal production rates.

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

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

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

4. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from 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 include an identification of each month during which the rolling, 12-month iron production rate exceeded the operational restriction of 19,000 tons of iron, and the actual rolling, 12-month production rate.

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

3. Quarterly deviation (excursion) reports shall be submitted in accordance with the General Terms and Conditions of this permit.

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

5. 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 Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous six-month period.

V. Testing Requirements

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

1.a Emission Limitation:

0.010 gr/dscf, 6.0 lbs/hr of PM/PM10 from the baghouse stack serving this emissions unit and emissions units F021, P021, and P902.

Applicable Compliance Method:

Compliance with the hourly and grain loading emission limits shall be determined by stack testing as specified in section A.V.2 of these terms and conditions.

The hourly limit of 6.0 lbs/hr is based on a grain loading limit of 0.010 gr/dscf and the gas flow rate for the baghouse of 70,000 scfm.

1.b Emission Limitation:

0.30 TPY of fugitive PM and 0.21 TPY of fugitive PM10

Applicable Compliance Method:

Compliance with the annual fugitive emission limitations shall be determined using the following equation:

A = EF x P x (1 - CE) x / 2,000 lbs/ton

where:

A = annual fugitive emission rate (TPY);
EF = emission factor of 3.20 lbs of PM/ton from FIRE ver 6.25 SCC 3-04-003-31;
= emission factor of 2.24 lbs of PM10/ton from FIRE ver 6.25 SCC 3-04-003-31;
P = maximum annual process weight rate (19,000 TPY); and
CE = fractional capture efficiency of baghouse = 0.99.

1.c Emission Limitation:

12.00 lbs/hr of OC

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined using an emission factor of 1.20 lbs/ton from FIRE version 6.25 SCC 3-04-003-31 and the maximum hourly production rate of 10 TPH.

1.d Emission Limitation:

10.00 lbs/hr TPY of CO

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be determined using an emission factor of 1.00 lb/ton from Waupaca foundry RBLC determination in Indiana and the maximum hourly production rate of 10 TPH.

V. Testing Requirements (continued)

1.e Emission Limitation:

26.28 TPY of PM/PM10 per rolling, 12-month period from the baghouse stack serving this emissions unit and emissions units F021, P021 and P902.

Applicable Compliance Method:

The annual emission limitation was established using the allowable grain loading limit for the baghouse stack (0.010 gr/dscf), the baghouse flow rate 70,000 scfm and potential operating hours of 8,760 hrs/yr. Therefore, compliance with the annual limit is assumed, as long as compliance with the grain loading limit is maintained.

1.f Emission Limitation:

0.21 TPY of PM10 per rolling, 12-month period (fugitive)
11.40 TPY of OC per rolling, 12-month period
9.50 TPY of CO per rolling, 12-month period

Applicable Compliance Method:

The annual emission limitations were established by multiplying the maximum annual iron production rate of 19,000 tons by the respective emission factors referenced in sections A.V.1.a through A.V.1.c and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with this annual iron production rate, compliance with the emission limitations will be assumed. Compliance with the annual production rate shall be demonstrated by the monitoring and record keeping in section A.III.1.

1.g Emission Limitation:

Visible emissions of fugitive dust shall not exceed five percent (5%) opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be determined using Method 9 of 40 CFR Part 60, Appendix A.

1.h Emission Limitation:

Visible PE from the baghouse stack serving this emissions unit shall not exceed five percent (5%) opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be determined using Method 9 of 40 CFR Part 60, Appendix A.

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

a. The emission testing shall be conducted within 12 months of expiration of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the mass emission limit for particulate emissions and to determine the visible particulate emissions from the baghouse serving this emissions unit.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1 through 5 and Method 9 of 40 CFR Part 60, Appendix A.

d. The test(s) shall be conducted while this emissions unit and emissions units F021, P021 and P902 are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

V. Testing Requirements (continued)

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

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: Pangborn North Tumble Blast (P040)

Activity Description: Pangborn North tumble blast machine used to clean sand from iron castings with 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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
Pangborn North tumble blast machine used to clean sand from iron castings with steel shot, controlled by a baghouse	OAC rule 3745-31-05(A)(3) (PTI 02-22041)	0.010 grain of particulate emissions (PE) per dry standard cubic foot of total exhaust gases (0.64 lb/hr and 2.80 TPY) Visible PE from the stack of the baghouse serving this emissions unit shall not exceed five percent (5%) opacity, as a six-minute average. Emissions of fugitive dust shall not exceed 1.04 TPY. Visible emissions of fugitive dust shall not exceed five percent (5%) opacity, as a three-minute average.
	OAC rules 3745-17-07(A) and 3745-17-11(B)	See section A.I.2.a.
	OAC rule 3745-17-07(B)	See section A.I.2.b.
	OAC rule 3745-17-08(B)	See section A.I.2.c.

2. Additional Terms and Conditions

2.a The emission limitations specified in these rules are less stringent than those established pursuant to OAC rule 3745-31-05(A)(3).

2.b In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

2.c In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.

2.d This emissions unit is operationally united with F020 (sandwich inoculation process for inliner), P002 (twelve snag grinders), P012 (Pangborn South tumble blast machine), P013 (South Wheelabrator shotblast machine), and P026 (North Wheelabrator) and all these emissions units are controlled by a common baghouse.

II. Operational Restrictions

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

III. Monitoring and/or Record Keeping Requirements

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

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit and for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

IV. Reporting Requirements

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

2. The permittee shall submit semiannual written reports that (a) identify all days during which any visible 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 Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous six-month period.

V. Testing Requirements

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

1.a Emission Limitation:

0.010 grain of PE per dry standard cubic foot of total exhaust gases (0.64 lb/hr and 2.80 TPY)

Applicable Compliance Method:

Compliance with the grain loading limit and hourly limit above shall be determined through stack testing as specified in section A.V.2.

The tpy emission limitation was developed by multiplying the short-term allowable particulate emission limitation (0.64 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

V. Testing Requirements (continued)

1.b Emission Limitation:

Emissions of fugitive dust shall not exceed 1.04 TPY.

Applicable Compliance Method:

The annual emission limitation above was created using the following equation:

E = PWR x EF x (1 - CE) x (1 - BCE) x (8,760 hrs/yr) / (2,000 lbs/ton)

where:

E = hourly fugitive dust emission rate (lbs/hr);
PWR = maximum hourly process weight rate (10 tons/hr);
EF = emission factor of 7.0 lbs/ton of material processed per 11/97 stack test;
CE = fractional capture efficiency (0.99); and
BCE = fractional building capture efficiency (0.66, based on AP-42, Section 12.10 "Gray Iron Foundries" Background Document).

1.c Emission Limitation:

Visible PE from the stack of the baghouse serving this emissions unit shall not exceed five percent (5%) opacity, as a six-minute average.

Applicable Compliance Method:

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

1.d Emission Limitation:

Visible emissions of fugitive dust shall not exceed five percent (5%) opacity, as a three-minute average.

Applicable Compliance Method:

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

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 in accordance with the terms and conditions of the Title V permit. This unit shall be operating during the testing of the baghouse required in the Title V permit for emissions units P002, P012, P013 and P026.

b. The emission testing shall be conducted to demonstrate compliance with the mass emission limits for particulate emissions and to determine the visible particulate emissions.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1 through 5 and Method 9 of 40 CFR Part 60, Appendix A.

d. The test(s) shall be conducted while this emissions unit and P002, P012, P013 and P026 are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

V. Testing Requirements (continued)

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Inliner Shakeout (P901)

Activity Description: Shakeout for the Osborn Inliner automatic molding machine

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
shakeout for the Osborn Inliner automatic molding machine	OAC rule 3745-17-11(B)(1)	Particulate emissions (PE) from the wet scrubber and the stack serving the cooling conveyor combined shall not exceed 59.5 pounds per hour. (See A.I.2.a and A.I.2.b.)
	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as provided by the rule.
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

2. Additional Terms and Conditions

2.a This emissions unit is operationally united with P903 (Inliner shakeout sand recycle system) and is controlled by a common wet scrubber. The allowable emission rate from the wet scrubber was determined by using Figure II and an uncontrolled emission rate of 734 pounds per hour of particulate emissions, as determined in an October 8, 2003, emissions test.

2.b PE from the punchout, scalping conveyor, and shakeout deck shall be vented to the mechanically aided wet scrubber. (The cooling conveyor exhaust stack is not controlled.)

II. Operational Restrictions

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

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

III. Monitoring and/or Record Keeping Requirements

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

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

a. the pressure drop across the scrubber, in inches of water, on a continuous basis;

b. the scrubber water flow rate, in gallons per minute, once per operating shift; and

c. the operating times for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stacks serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to minimize or eliminate the visible emissions.

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

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:

a. the static pressure drop across the scrubber; and

b. the scrubber water flow rate.

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

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

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:

Visible particulate emissions shall not exceed 20 percent opacity, as a six-minute average.

Applicable Compliance Method:

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

1.b Emission Limitation:

59.5 lbs of PE/hr

Applicable Compliance Method:

Compliance with the PE limitation shall be determined in accordance with OAC rule 3745-17-03(B)(10).

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 for all stacks serving this emissions unit within 12 months after issuance of the permit and within 12 months prior to permit expiration.

b. The emission testing shall be conducted to demonstrate compliance with the mass emission limit for particulate emissions and to determine the visible particulate emissions.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1 through 5 of 40 CFR Part 60, Appendix A and US EPA Method 9 readings of the stacks during each testing run.

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

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Back Floor Mold Sand Handling System (P902)

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
back floor sand reclaim system and muller, equipped with a baghouse	OAC rule 3745-17-11(B)	The requirements of OAC rule 3745-17-11(B) are less stringent than the requirements of OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-07(A)	The requirements established pursuant to OAC rule 3745-17-07(A) are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A) (3).
	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
	OAC rule 3745-31-05(A)(3) (PTI 02-2565)	Particulate emissions (PE) shall not exceed 0.010 gr/dscf of exhaust gases and 3.49 pounds per hour and 6.99 tons per year from the baghouse. Fugitive emissions shall not exceed 6.48 tons per year of PM and 0.97 ton per year of PM-10. Visible particulate emissions shall not exceed five percent (5%) opacity, as a six-minute average from the baghouse. See A.I.2.a, A.I.2.b and A.I.2.c.

2. Additional Terms and Conditions

2.a All sand processing equipment shall be fully enclosed and shall be exhausted to the baghouse. This shall include the rotary screen, the sand cooler and cyclone, and the return sand storage silo.

2.b All material handling equipment, except the final belt conveyor, shall be covered and shall be exhausted to the baghouse. This shall include the belt conveyor from the existing shakeout, the transfer point at the cross magnetic belt conveyor, the belt conveyors to the sand cooler, and the vibrating feed conveyor. The final belt conveyor to the existing sand muller shall be enclosed at the head and tail end and shall be exhausted to the baghouse.

2.c The collection efficiency of the air pollution capture hoods shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at all points of capture. The visible emissions of fugitive dust from the building that encloses this emissions unit shall not exceed five percent (5%) opacity, as a six-minute average.

II. Operational Restrictions

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

2. The maximum annual production rate for this emissions unit shall not exceed 360,000 tons of sand, based upon a rolling, 12-month summation.

3. The maximum annual operating hours for this emissions unit shall not exceed 4,000, based upon a rolling, 12-month summation.

III. Monitoring and/or Record Keeping Requirements

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

2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. whether the emissions are representative of normal operations;
c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
d. the total duration of any visible emission incident; and
e. any corrective actions taken to eliminate the visible emissions.

3. The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;
b. the total duration of any visible emission incident; and
c. any corrective actions taken to eliminate the visible emissions.

4. The permittee shall maintain monthly records of the following information:

a. the sand throughput rate, in tons;

b. the rolling, 12-month summation of the sand throughput rates;

c. the number of hours of operation; and

d. the rolling, 12-month summation of the hours of operation.

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

5. To determine compliance with the annual fugitive PE and PM-10 limitations, the permittee shall record the amount of sand handled by this emissions unit, in tons, on a monthly basis.

IV. Reporting Requirements

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

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

2. The permittee shall submit quarterly deviation (excursion) reports that identify each month the rolling, 12-month production rate and/or operating hours limitation(s) was (were) exceeded.

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

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

5. The permittee shall submit annual reports that specify the total PM, PM10, OC and CO emissions from emissions units F024, F025, P039 and P902, combined, for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Compliance with the emission limitation(s) 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 Limitation:

Visible particulate emissions shall not exceed five percent (5%) opacity, as a six-minute average.

The visible emissions of fugitive dust from the building that encloses this emissions unit shall not exceed five percent (5%) opacity, as a six-minute average.

Applicable Compliance Method:

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

1.b Emission Limitation:

0.01 gr/dscf and 3.49 pounds PE per hour from the baghouse stack

Applicable Compliance Method:

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

The hourly limit of 3.49 pounds per hour is based on a grain loading limit of 0.01 gr/dscf and the gas flow rate from this emissions unit of 40,750 SCFM.

V. Testing Requirements (continued)

1.c Emission Limitation:

6.99 tons per year of PE from baghouse stack

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable particulate emission limitation (3.49 lbs/hr) by the restricted annual hours of operation (4,000 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation and the restricted annual hours of operation, compliance shall also be shown with the annual emission limitation.

1.d Emission Limitation:

6.48 tons of PE/yr of fugitive emissions

Applicable Compliance Method:

Compliance with the fugitive PE emission limit shall be determined in accordance with the following equation:

E = Ts x 3.6 (lbs PM/ton sand) x (1-0.99) x 1/2000 (ton/pounds)

where:

E = tons PM emitted per year;

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

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

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

1.e Emission Limitation:

0.97 ton of PM-10/yr of fugitive emissions

Applicable Compliance Method:

Compliance with the fugitive PM-10 emission limit shall be determined in accordance with the following equation:

E = Ts x 0.54 (lbs PM-10/ton sand) x (1-0.99) x 1/2000 (ton/pounds)

where:

E = tons PM-10 emitted per year;

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

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

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

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 12 months prior to permit expiration. (The last emissions testing on this emissions unit which demonstrated compliance was last conducted on April 4, 2001.)

b. The emission testing shall be conducted to demonstrate compliance with the mass emission limit for particulate emissions and to determine the visible particulate emissions.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Methods 1 through 5 of 40 CFR Part 60, Appendix A and US EPA Method 9 readings for each sampling run.

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

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

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

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

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Inliner Shakeout Sand Recycle System (P903)

Activity Description: Sand system used to return sand from shakeout to recycle silos.

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
Sand system which is used to return sand from shakeout to recycle silos.	OAC rule 3745-17-08(B)	In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08(B) shall not apply to this emissions unit.
	OAC rule 3745-17-07(B)	In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.

2. Additional Terms and Conditions

2.a. This emissions unit is operationally united with emissions unit P901 (Inliner shakeout) and is controlled by a common wet scrubber. The controls for emissions unit P903 were not employed until 1994 and there were no stack emissions prior to that time. Therefore, this emissions unit continues to be a fugitive dust source, and OAC rules 3745-17-07 (A) and 3745-17-11 are not applicable.

2.b PE from the belt transfer 7 to 8, belt transfer 8 to 8A, belt transfer 8A to rotary screen, and the rotary screen shall continue to be vented to an air pollution control device.

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

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

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 Operation (R001)

Activity Description: Isopropyl alcohol based core wash operation.

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
core wash process using isopropyl alcohol-based material to wash cores made with any core line	OAC rule 3745-31-05(A)(3) (PTI 02-21651)	25.16 lbs of volatile organic compounds (VOC)/hr 7.53 lbs of particulate emissions (PE)/particulate emissions less than 10 microns in diameter (PM-10)/hr Visible emissions of fugitive dust from this emissions unit shall not exceed zero percent (0%) opacity, as a three-minute average. The requirements of this rule shall also include compliance with OAC rule 3745-31-05(C). See section A.I.2.a.
	OAC rule 3745-31-05(C) (PTI 02-21651)	25.19 TPY of VOC as a rolling, 12-month summation 7.54 TPY of PE/PM-10 as a rolling, 12-month summation
	OAC rule 3745-21-07(G)(2)	This emissions unit is exempt from the requirements of this rule as long as no photochemically reactive materials are employed.
	OAC rule 3745-17-07(B) and 3745-17-08(B)	The requirements in these rules are less stringent than those established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

2.a The permittee shall employ best available control measures consisting of normal operation and maintenance to ensure compliance with the opacity limitation specified above. If at any time compliance with the opacity limitation is not maintained, the permittee shall employ additional control measures.

2. Additional Terms and Conditions (continued)

2.b The hourly emission limitations specified above represent the potential to emit for this emissions unit. Therefore, no record keeping or reporting requirements are specified to demonstrate ongoing compliance with these limits.

II. Operational Restrictions

1. Annual material throughput for this emissions unit, in terms of core wash and core wash thinner employed, shall not exceed 5,988 gallons per year and 2,342 gallons per year, respectively. This material throughput restriction shall be based on a rolling, 12-month summation of the monthly production rates.

2. The permittee shall employ core wash with no greater than 5.80 lbs of VOC/gallon and no more than 4.20 lbs of solids/gallon.

3. The permittee shall employ core wash thinner with no greater than 6.68 lbs of VOC/gallon.

4. The permittee shall employ no photochemically reactive materials in this emissions unit, as defined in OAC rule 3745-21-01.

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall maintain the following monthly records for this emissions unit:

a. the name and identification number of each material employed;

b. an indication of whether or not each material is a photochemically reactive material as defined in OAC rule 3745-21-01;

c. the VOC content in lbs/gallon of each material employed;

d. the solids content in lbs/gallon of each material employed;

e. the number of gallons of each material employed in this emissions unit; and

f. the rolling, 12-month summations of the monthly total material throughput rate, in terms of core wash employed and core wash thinner employed.

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 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 deviation (excursion) reports that identify all exceedances of the rolling, 12-month material throughput restrictions.

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 eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous six-month period.

3. The permittee shall submit deviation (excursion) reports that identify all periods of time when photochemically reactive materials were used in this emissions unit.

V. Testing Requirements

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

1.a Emission Limitation:

25.16 lbs of VOC/hr

Applicable Compliance Method:

Compliance with the hourly VOC limit shall be determined using the equation below. The record keeping requirements in section A.III.1 shall be used to determine compliance with the maximum VOC content restrictions.

E = [(HCW) x (VCW)] + [(HCWT) x (VCWT)]

where:

E = hourly emission rate;
HCW = maximum hourly core wash usage rate (2.99 gals/hr);
VCW = maximum core wash VOC content (5.80 lbs VOC/gal);
HCWT = maximum hourly core wash thinner usage rate (1.17 gals/hr); and
VCWT = maximum core wash thinner VOC content (6.68 lbs VOC/gal).

1.b Emission Limitation:

7.53 lbs of PE/PM-10/hr

Applicable Compliance Method:

Compliance with the hourly PE/PM-10 limit shall be determined using the equation below. The record keeping requirements in section A.III.1 shall be used to determine compliance with the maximum solids content restriction.

E = (HCW) x (SCW) x (1 - TE)

where:

E = hourly emission rate;
HCW = maximum hourly core wash usage rate (2.99 gals/hr);
SCW = maximum solids content of core wash (4.20 lbs/gal); and
TE = fractional transfer efficiency if applied using spray technique (0.40).

V. Testing Requirements (continued)

1.c Emission Limitation:

Visible emissions of fugitive dust from this emissions unit shall not exceed zero percent (0%) opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be determined using Method 9 of 40 CFR Part 60, Appendix A, with the modification described in OAC rule 3745-17-03(B)(3)(a).

1.d Emission Limitations:

25.19 TPY of VOC as a rolling, 12-month summation
7.54 TPY of PE/PM-10 as a rolling, 12-month summation

Applicable Compliance Method:

Compliance with the annual emission limitations shall be determined by the record keeping requirements specified in section A.III.1. As long as compliance with the material throughput restrictions is maintained, compliance with the annual limits will be assumed.

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.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
core wash process using isopropyl alcohol-based material to wash cores made with any core line	none	none

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was performed and the predicted 1-hour maximum ground-level concentration was less than 80 percent of the MAGLC. Therefore, the air toxic demonstration is not part of this final permit. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any air toxic to increase may require the permittee to apply for and obtain a new permit to install.

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