State of Ohio Environmental Protection Agency

STREET ADDRESS:
Lazarus Government Center
50 W. Town St., Suite 700
Columbus, Ohio 43215

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www.epa.state.oh.us

MAILING ADDRESS:
P.O. Box 1049
Columbus, OH 43216-1049

7/9/2009

Certified Mail

No	TOXIC REVIEW
Yes	PSD
No	SYNTHETIC MINOR
No	CEMS
No	MACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED

Mr. Todd Rouse
GMC Powertrain Div.
26427 State Route 281 East
Defiance, OH 43512-0070

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0320010001
Permit Number: P0104241
Permit Type: Administrative Modification
County: Defiance

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully.

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission ("ERAC") under Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and describe the action complained of and the grounds for the appeal. The appeal must be filed with the ERAC within thirty (30) days after notice of the Director's action. A filing fee of $70.00 must be submitted to the ERAC with the appeal, although the ERAC, has discretion to reduce the amount of the filing fee if you can demonstrate (by affidavit) that payment of the full amount of the fee would cause extreme hardship. If you file an appeal of this action, you must notify Ohio EPA of the filing of the appeal (by providing a copy to the Director) within three (3) days of filing your appeal with the ERAC. Ohio EPA requests that a copy of the appeal also be provided to the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the ERAC at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, OH 43215

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. If you have any questions regarding this permit, please contact the Ohio EPA DAPC, Northwest District Office. This permit has been posted to the Division of Air Pollution Control (DAPC) Web page http://www.epa.state.oh.us/dapc.

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 *Via E-Mail Notification*
Ohio EPA DAPC, Northwest District Office

State of Ohio Environmental Protection Agency
Division of Air Pollution Control

FINAL

Air Pollution Permit-to-Install
for
GMC Powertrain Div.

Facility ID: 0320010001
Permit Number: P0104241
Permit Type: Administrative Modification
Issued: 7/9/2009
Effective: 7/9/2009

State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Air Pollution Permit-to-Install
for
GMC Powertrain Div.

Table of Contents

Authorization

Facility ID: 0320010001
Facility Description: Foundry.
Application Number(s): M0000270
Permit Number: P0104241
Permit Description: Administrative modification to permit 03-17353 to correct errors that were delayed due to time constraints with the implementation of OEPA's new permitting system.
Permit Type: Administrative Modification
Permit Fee: $0.00
Issue Date: 7/9/2009
Effective Date: 7/9/2009

This document constitutes issuance to:

GMC Powertrain Div.
State Route 281 East
Defiance, OH 43512

Of a Permit-to-Install for the emissions unit(s) identified on the following page.

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402
(419)352-8461

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski
Director

Authorization (continued)

Permit Number: P0104241
Permit Description: Administrative modification to permit 03-17353 to correct errors that were delayed due to time constraints with the implementation of OEPA's new permitting system.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID:	**F007**
Company Equipment ID:	waste sand load-out
Superseded Permit Number:	03-17353
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P472**
Company Equipment ID:	precision sand mold cooling line
Superseded Permit Number:	03-17353
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P473**
Company Equipment ID:	precision sand mold shakeout with duct burner
Superseded Permit Number:	03-17353
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P474**
Company Equipment ID:	precision sand casting cooling tunnel
Superseded Permit Number:	03-17353
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P475**
Company Equipment ID:	hershel hammer and parallel swing masters
Superseded Permit Number:	03-17353
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P476**
Company Equipment ID:	shot blast (precision sand casting final cleaning)
Superseded Permit Number:	03-17353
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P477**
Company Equipment ID:	precision sand degate saw
Superseded Permit Number:	03-17353
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P478**
Company Equipment ID:	waste sand feeder and crusher
Superseded Permit Number:	03-17353
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P479**
Company Equipment ID:	cast iron liners blast cabinet
Superseded Permit Number:	03-17353
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P801**
Company Equipment ID:	precision sand core storage and assembly area
Superseded Permit Number:	03-17353
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P906**
Company Equipment ID:	precision sand receiving and storage
Superseded Permit Number:	03-17353
General Permit Category and Type:	Not Applicable

Group Name: Mold fill pouring stations

Emissions Unit ID:	**F008**
Company Equipment ID:	mold fill pouring station no. 1
Superseded Permit Number:	03-17353
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**F009**
Company Equipment ID:	mold fill pouring station no. 2 (pilot line)
Superseded Permit Number:	03-17353
General Permit Category and Type:	Not Applicable

Group Name: Precision sand core machines

Emissions Unit ID:	**P464**
Company Equipment ID:	precision sand core machine no. 1
Superseded Permit Number:	03-17353
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P465**
Company Equipment ID:	precision sand core machine no. 2
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P466**
Company Equipment ID:	precision sand core machine no. 3
Superseded Permit Number:	03-17353
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P467**
Company Equipment ID:	precision sand core machine no. 4
Superseded Permit Number:	03-17353
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P468**
Company Equipment ID:	precision sand core machine no. 5
Superseded Permit Number:	03-17353
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P469**
Company Equipment ID:	precision sand core machine no. 6
Superseded Permit Number:	03-17353
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:

(1) Standard Term and Condition A. 2.a), Severability Clause

(2) Standard Term and Condition A. 3.c) through A. 3.e) General Requirements

(3) Standard Term and Condition A. 6.c) and A. 6.d), Compliance Requirements

(4) Standard Term and Condition A. 9., Reporting Requirements

(5) Standard Term and Condition A. 10., Applicability

(6) Standard Term and Condition A. 11.b) through A. 11.e), Construction of New Source(s) and Authorization to Install

(7) Standard Term and Condition A. 14., Public Disclosure

(8) Standard Term and Condition A. 15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

(9) Standard Term and Condition A. 16., Fees

(10) Standard Term and Condition A. 17., Permit Transfers

2. Severability Clause

a) 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.

b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any 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 and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. 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 re-issuance, or modification.

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, revoked, or revoked and reissued, for cause. 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 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.

4. Monitoring and Related Record Keeping and Reporting Requirements

a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

(1) The date, place (as defined in the permit), and time of sampling or measurements.

(2) The date(s) analyses were performed.

(3) The company or entity that performed the analyses.

(4) The analytical techniques or methods used.

(5) The results of such analyses.

(6) The operating conditions existing at the time of sampling or measurement.

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, 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.

c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:

(1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Northwest District Office.

(2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Northwest District Office. The written 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. See A.15. below if no deviations occurred during the quarter.

(3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the Ohio EPA DAPC, Northwest District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

(4) This permit is for an emissions unit located at a Title V facility. 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 are true, accurate, and complete.

d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

5. 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, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Ohio EPA DAPC, Northwest District Office in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to 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 emission unit(s) that is (are) served by such control system(s).

6. Compliance Requirements

a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this 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.

c) 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:

(1) 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.

(2) 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 ORC section 3704.08.

(3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

(4) 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.

d) The permittee shall submit progress reports to the Ohio EPA DAPC, Northwest District Office 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:

(1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

(2) 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.

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

8. 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.

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Northwest District Office.

b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Northwest District Office. 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.)

10. Applicability

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

11. Construction of New Sources(s) and Authorization to Install

a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit 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) by submitting a certification from the authorized 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 authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed through completion of the annual PER covering the last period of operation of the affected emissions unit(s).

d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit 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). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the PER covering the last period the emissions unit operated.

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

e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a PER, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

13. Construction Compliance Certification

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.

b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

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

16. 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. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The Ohio EPA DAPC, Northwest District Office must be notified in writing of any transfer of this permit.

18. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

19. 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.

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

   a) None.

C. Emissions Unit Terms and Conditions

1. F007, Waste sand load-out station and disposal

Operations, Property and/or Equipment Description:

Waste sand load-out station and disposal

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) OAC rule 3745-31-10 through 20	Volatile organic compound (VOC) emissions shall not exceed 4.0 tons per year (tpy), based upon a rolling, 12-month summation of the monthly emissions. See b)(2)b., b)(2)c., and b)(2)e.
b.	OAC rule 3745-17-08(B)(3)	See b)(2)d.
c.	OAC rule 3745-17-07(B)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a three-minute average.
d.	OAC rule 3745-21-07(G)	None, see b)(2)f.
e.	OAC rule 3745-31-05(D)	Particulate matter emissions less than or equal to 10 microns in size (PM10) shall not exceed 0.80 tpy based upon a rolling, 12-month summation of the monthly emissions. PE shall not exceed 1.61 tpy based upon a rolling, 12-month summation of the monthly emissions. See b)(2)c.
f.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)e.

(2) Additional Terms and Conditions

a. This emissions unit includes the following material handling operations:

i. waste sand loading from core breaker to hopper; and

ii. waste sand loading from hopper to truck.

b. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that no control technologies for VOC were cost effective.

c. The rolling, 12-month emission limitation is a federally enforceable limitation established for the purpose of reducing emissions. The emission limitation is based upon the federally enforceable restriction on the amount of sand processed [See c)(1)].

d. The permitee shall utilize reasonable available control measures (RACM) that are sufficient to minimize or eliminate visible emissions of fugitive dust. In accordance with the permittee's permit application, the permittee has committed to perform the following control measure(s) to ensure compliance:

i. building enclosure; and

ii. minimizing the drop height between material transfer points .

Nothing in this paragraph shall prohibit the permittee from employing other equally -effective control measures to ensure compliance.

For the other emission points associated with this emissions unit, the permittee maintains that the inherent nature of the operation and material involved is such that compliance with all applicable requirements will be obtained without additional control measures. If at any time the inherent nature of the operation and material involved is not sufficient to meet the above applicable requirements, the permittee shall employ RACM to ensure compliance.

e. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to VOC, PE and PM10 from this air contaminant source since the uncontrolled potential to emit for each is less than ten tons per year, taking into account the federally enforceable restriction on the sand throughput.

f. This emissions unit is not subject to the requirements in OAC rule 3745-21-07(G) because no liquid organic material is employed in this emissions unit. "Liquid organic material" is defined in OAC rule 3745-21-01.

c) Operational Restrictions

(1) The maximum annual sand processed in this emissions units shall not exceed 133,875 tons, based upon a rolling, 12-month summation of the monthly sand processed.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the sand processing levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Amount of Sand Processed(tons)
1	13,400
1-2	26,800
1-3	40,200
1-4	53,600
1-5	67,000
1-6	80,400
1-7	93,800
1-8	107,200
1-9	120,600
1-10	125,067
1-11	129,534
1-12	133,875

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual sand restriction shall be based upon a rolling, 12-month summation of the monthly sand processed.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information each information month for this emissions unit:

a. the quantity of sand processed, in tons;

b. for the first 12 months of operation following the issuance of this permit, the cumulative quantity of sand processed, in tons; and

c. after the first 12 months operation following the issuance of this permit, the quantity of sand processed, in tons, based on a rolling, 12-month summation of the monthly sand processed.

*The amount of sand processed through this emissions unit is equivalent to the amount of sand received in emissions unit P906. The monitoring and record keeping associated with the sand received in emissions unit P906 can be used to fulfill the requirements in this section.

(2) The permittee shall perform weekly* checks, when the emissions unit is in operation and when the weather conditions allow, 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 date and time of the visible emission observation;

b. the identification of the egress observed;

c. the color of the emissions;

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

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

*once during each normal calendar week

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports, which identify all exceedances of the following:

a. for the first 12 calendar months of operation following the issuance of this permit, the restriction on the maximum allowable cumulative quantity of sand processed; and

b. after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month restriction on the quantity of sand processed.

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

(2) The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust 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 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 periods.

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

The maximum annual amount of sand processed shall not exceed 133,875 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping requirements specified in d)(1).

b. Emission Limitations:

VOC emissions shall not exceed 4.0 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(1). The emission limitation was established by multiplying the company-supplied emission factor of 0.060 lb/ton of sand by the annual sand restriction of 133,875 tons and dividing by 2000 lbs/ton.

If required, the permittee shall demonstrate compliance with the emission factor by testing in accordance with USEPA Methods 1-4 and 18, 25 or 25A of 40 CFR Part 60, Appendix A.

c. Emission Limitation:

PM10 emissions shall not exceed 0.80 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(1). The emission limitation was established by multiplying the company-supplied emission factor of 0.0061 lb/ton of sand by the annual sand restriction of 133,875 tons, by 2 (two transfer points) and dividing by 2000 lbs/ton.

If required, the permittee shall demonstrate compliance with the emission factor by testing conducted in accordance with USEPA Methods 201 and 202 of 40 CFR Part 51, Appendix M.

d. Emission Limitation:

PE emissions shall not exceed 1.61 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(1). The emission limitation was established by multiplying the company-supplied emission factor of 0.012 lb/ton of sand by the annual sand restriction of 133,875 tons, by 2 (two transfer points) and dividing by 2000 lbs/ton.

If required, the permittee shall demonstrate compliance with the emission factor by testing in accordance with USEPA Methods 1-5 of 40 CFR Part 60, Appendix A.

e. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a three-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated using Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60, Appendix A (Standards of Performance for New Stationary Sources) as such Appendix existed on July 1, 2002, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

g) Miscellaneous Requirements

(1) None.

2. P472, precision sand mold cooling line

Operations, Property and/or Equipment Description:

Precision sand mold cooling line

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) OAC rule 3745-31-10 through 20	Volatile organic compound (VOC) emissions shall not exceed 0.25 pounds (lbs) per ton of aluminum and 3.35 tons per year (tpy), based upon a rolling, 12-month summation of the monthly emissions.
b.	OAC rule 3745-31-05(D)	Particulate emissions (PE) shall not exceed 0.12 lb/ton of aluminum and 1.61 tpy, based upon a rolling, 12-month summation of the monthly emissions. Particulate matter emissions less than or equal to 10 microns in size (PM10) shall not exceed 0.241 lb/ton of aluminum and 3.23tpy, based upon a rolling, 12-month summation of the monthly emissions. Visible PE shall not exceed 10% opacity, as a six-minute average. See b)(2)d. and b)(2)d.
c.	OAC rule 3745-17-11(B) OAC rule 3745-17-07(A)	The emission limitations specified by these rules are less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).
d.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)c, b)(2)d and b)(2)e.

(2) Additional Terms and Conditions

a. This emissions unit includes two chill removal stations and a mold cooling line. The abatement system includes a baghouse followed by a regenerative thermal oxidizer (RTO) (5 mmBtu/hr) and exhausts to a single stack.

b. The permittee shall employ best available control technology (BACT) on this emissions unit. BACT has been determined to be the use of the following:

i. a regenerative thermal oxidizer (RTO). The RTO shall meet a minimum control efficiency of 95% for VOC emissions.

c. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to VOC from this air contaminant source since the potential to emit is less than ten tons per year taking into account the federally enforceable restriction on the amount of aluminum processed and the use of a thermal oxidizer.

d. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the emissions of PE and PM10 emissions from this air contaminant source since the potential to emit for each is less than ten tons per year taking into account the federally enforceable restriction on the amount of aluminum processed and the use of a baghouse.

e. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the nitrogen oxides (NOx), carbon monoxide (CO) and Sulfur dioxide (SO2) emissions from this air contaminant source since the uncontrolled potential to emit (PTE) is less than ten tons per year.

The PTE for this emissions unit is 3.07 tpy of NOx; determined by multiplying the established emission factor (based on AP42) of 0.229 lb of NOx/ton of aluminum by the annual amount of aluminum poured of 26,775 tons and then dividing by 2000 lbs/ton.

The PTE for this emissions unit is 1.07 tpy of CO; determined by multiplying the established emission factor (based on AP42) of 0.08 lb of CO/ton of aluminum by the annual amount of aluminum poured of 26,775 tons and then dividing by 2000 lbs/ton.

The annual emission rate for this emissions unit is 0.01 tpy of SO2; determined by multiplying the established emission factor (based on AP42) of 0.0076 lb of SO2/ton of aluminum by the annual amount of aluminum poured of 26,775 tons and then dividing by 2000 lbs/ton.

c) Operational Restrictions

(1) The maximum annual aluminum usage for this emissions unit shall not exceed 26,775 tons, based upon a rolling, 12-month summation of the monthly quantities of aluminum used.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the aluminum usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Aluminum Usage (tons)
1	2,680
1-2	5,360
1-3	8,040
1-4	10,720
1-5	13,400
1-6	16,080
1-7	18,760
1-8	21,440
1-9	24,120
1-10	25,013
1-11	25,907
1-12	26,775

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual aluminum usage restriction shall be based upon a rolling, 12-month summation of the monthly quantity of aluminum poured in emissions unit F008 and F009 combined.

(2) The permittee shall operate the baghouse at all times when this emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information each month for this emissions unit:

a. the amount of aluminum processed, in tons;

b. for the first 12 months of operation following the issuance of this permit, the cumulative quantity of aluminum processed, in tons; and

c. after the first 12 months of operation following the issuance of this permit, the rolling, 12-month summation of the monthly amount of aluminum processed.

*The amount of aluminum processed through this emissions unit is equivalent to the amount of aluminum poured in emissions units F008 and F009. The monitoring and record keeping associated with the aluminum processed in emissions unit F008 and F009 can be used to fulfill the requirements in this section.

(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 stack(s) serving this emissions unit. The presence or absence of any visible emissions, excluding water vapor, 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 date and time of the visible emission observation;

b. the identification of the stack observed;

c. the color of the emissions;

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

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

*once during each normal calendar week

(3) The permittee shall properly install, operate, and maintain a continuous temperature monitors and recorder(s) that measure and record(s) the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation. The permittee shall record the combustion temperature on a continuous basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manual(s). The acceptable temperature setting shall be based upon the manufacturer's specifications until such time as any required emission testing is conducted and the appropriate temperature range is established to demonstrate compliance. These records shall be maintained at the facility for a period of no less than three years.

(4) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range/limit specified in this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

a. a description of the corrective action;

b. the date corrective action was completed;

c. the date and time the deviation ended;

d. the total period of time (in minutes) during which there was a deviation;

e. the temperature readings immediately after the corrective action was implemented; and

f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future emission tests that demonstrate compliance with the allowable VOC emission rate for the controlled emissions unit(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of administrative permit modification.

(5) The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the baghouse was not operating.

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions, excluding water vapor, were observed from the stack(s) serving this emissions unit and (b) describe the corrective actions, if any, taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

(2) The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the baghouse was not operating. Each report shall be submitted within 30 days after the deviation occurs.

(3) The permittee shall submit quarterly deviation (excursion) reports that identify the following information concerning the operation of the thermal oxidizer during the operation of this emissions unit(s):

a. Each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal; oxidizer was outside of the range specified by the manufacturer and/or outside of the acceptable range following any required compliance demonstration;

b. Each period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the thermal oxidizer;

c. an identification of each incident of deviation described in “a.” or “b.” where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in "a." or "b." where proper records were not maintained for the investigation and/or the corrective action(s).

If no deviations /excursions occurred during a calendar quarter, the report shall so state that no deviations occurred during the reporting period.

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

(4) The permittee shall submit quarterly deviation (excursion) reports, which identify all exceedances of the following:

a. for the first 12 calendar months of operation following the issuance of this permit, the maximum allowable cumulative aluminum usage restriction; and

b. after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month aluminum usage restriction.

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

f) Testing Requirements

(1) The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:

a. The emission testing shall be conducted within 180 days after achieving the maximum production rate at which this emissions unit will be operated.

b. The emission testing shall be conducted to demonstrate compliance with the following:

i. for VOC - 0.25 lb/ton of aluminum;

ii. for PE - 0.12 lb/ton of aluminum;

iii. for PM10 - 0.241 lb/ton of aluminum; and

iv. compliance with the control efficiency limitation for VOCs from the RTO controlling this emissions unit.

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

i. for total VOC, Methods 1-4 and 18, 25 or 25A of 40 CFR Part 60, Appendix A. Appropriate methods shall be used in conjunction with the test methods and procedures specified in Methods 18, 25, or 25A of 40 CFR Part 60, Appendix A for determining total VOC mass emissions;

ii. for PE, Methods 1-5 of 40 CFR Part 60, Appendix A; and

iii. for PM10, Methods 201/202A of 40 CFR Part 51, Appendix M.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO. The test method(s) which must be employed to demonstrate compliance with the control efficiencies are specified below.

d. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in Methods 18, 25, or 25A of 40 CFR Part 60, Appendix A for VOC emissions .

e. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."

f. The test(s) shall be conducted while this emissions unit is operating at its maximum capacities, unless otherwise specified or approved by the Ohio EPA, NWDO. The maximum capacity for this emissions units is 75 molds per hour (which relates to 52,500 pounds of sand per hour and 13,125 pounds of aluminum per hour for a combined process weight rate of 65,625 pounds per hour)

g. During emission testing, the permittee shall also record the average combustion temperature within the thermal incinerator, in degrees Fahrenheit.

h. 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, NWDO. 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, NWDO's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, NWDO 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 of 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, NWDO within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

(2) Compliance with the emissions limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emission Limitation:</u>

The maximum annual amount of aluminum processed shall not exceed 26,775 tons 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping requirements specified in d)(1).

b. Emission Limitation:

VOC emissions shall not exceed 0.25 lb/ton of aluminum and 3.35 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance with the lb/ton emission limitation shall be demonstrated based on the results of the emission testing conducted in accordance with Methods 1-4 and 18, 25 or 25A of 40 CFR Part 60, Appendix A.

Compliance with the annual limitation shall be based upon the record keeping requirements specified in d)(1). The emission limitation was established multiplying the company-supplied emission factor of 0.25 lb/ton of aluminum by the annual aluminum restriction of 26,775 tons and dividing by 2000 lbs/ton.

c. Emission Limitation:

PE shall not exceed 0.12 lb/ton of aluminum and 1.61 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance with the lb/ton emission limitation shall be demonstrated based on the results of the emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

Compliance with the annual limitation shall be based upon the record keeping requirements specified in d)(1). The emission limitation was established by multiplying the company-supplied emission factor of 0.12 lb/ton of aluminum by the annual aluminum restriction of 26,775 tons and dividing by 2000 lbs/ton.

d. Emission Limitation:

PM10 shall not exceed 0.241 lb/ton of aluminum and 3.23 tpy, based on a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance with the lb/ton emission limitation shall be demonstrated based on the results of the emission testing conducted in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M.

Compliance with the annual limitation shall be based upon the record keeping requirements specified in d)(1). The emission limitation was established by multiplying the company-supplied emission factor of 0.241 lb/ton of aluminum by the annual aluminum restriction of 26,775 tons and dividing by 2000 lbs/ton.

e. Emission Limitation:

Visible PE from the stack(s) serving this emissions unit shall not exceed 10% opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

f. Emission Limitation:

The regenerative thermal oxidizer shall meet a minimum control efficiency of 95% for VOC emissions.

Applicable Compliance Method:

Compliance with the control efficiency requirements above shall be demonstrated based on the results of emission testing conducted in accordance with the methods outlined in f)(1).

g) Miscellaneous Requirements

(1) None.

3. P473, precision sand mold shakeout with duct burner

Operations, Property and/or Equipment Description:

Precision sand mold shakeout with duct burner

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) OAC rule 3745-31-10 through 20	Volatile organic compound (VOC) emissions shall not exceed 0.95 pound (lb) per ton of aluminum and 12.72 tons per year (tpy), based upon a rolling, 12-month summation of the monthly emissions. [See b)(2)b.]
b.	OAC rule 3745-31-05(D)	Particulate matter emissions (PE) shall not exceed 0.308 lb/ton of aluminum and 4.15 tpy, based upon a rolling, 12-month summation of the monthly emissions. Particulate matter emissions less than or equal to 10 microns in size (PM10) shall not exceed 0.615 lb/ton of aluminum and 8.26 tpy, based upon a rolling, 12-month summation of the monthly emissions. Visible PE shall not exceed 10% opacity, as a six-minute average. See b)(2)b.
c.	OAC rule 3745-17-11(B) OAC rule 3745-17-07(A)	The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(D).
d.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)c and b)(2)d.
e.	OAC rule 3745-18-06	See b)(2)e.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	OAC rule 3745-21-08(B)	See b)(2)f.

(2) Additional Terms and Conditions

a. This emissions unit includes one shakeout unit and a duct burner (10 mmBtu/hr). The abatement system includes a baghouse followed by a regenerative thermal oxidizer (RTO) (5 mmBtu/hr) and exhausts to a single stack.

b. The permittee shall employ best available control technology (BACT) on this emissions unit. BACT has been determined to be the use of the following:

i. a regenerative thermal oxidizer (RTO). The RTO shall meet a minimum control efficiency of 95% for VOC emissions.

c. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to PE and PM10 emissions from this air contaminant source since the potential to emit for each is less than 10 tons per year taking into account the federally enforceable restriction on aluminum usage and the use of a baghouse.

d. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the nitrogen oxides (NOx), carbon monoxide (CO) and SO2 emissions from this air contaminant source since the uncontrolled potential to emit (PTE) is less than ten tons per year.

The PTE for this emissions unit is 6.12 tpy of NOx; determined by multiplying the established emission factor (based on AP42) of 0.457 lb of NOx/ton of aluminum by the annual amount of aluminum poured of 26,775 tons and then dividing by 2000 lbs/ton.

The PTE for this emissions unit is 3.06 tpy of CO; determined by multiplying the established emission factor (based on AP42) of 0.23 lb of CO/ton of aluminum by the annual amount of aluminum poured of 26,775 tons and then dividing by 2000 lbs/ton.

The annual emission rate for this emissions unit is 0.031 tpy of SO2; determined by multiplying the established emission factor (based on AP42) of 0.00229 lb of SO2/ton of aluminum by the annual amount of aluminum poured of 26,775 tons and then dividing by 2000 lbs/ton.

e. This emissions unit is exempt from the requirements of OAC rule 3745-18-06 pursuant to OAC rule 3745-18-06(A).

f. The design of the emissions unit and the technology associated with the current operating practices satisfy the "best available control techniques and operating practices" required pursuant to OAC rule 3745-21-08(B).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. On June 24, 2003, that rule revision was submitted to the U.S. EPA as a revision to Ohio's

State Implementation Plan (SIP), however, until the U.S. EPA approves the revisions to OAC rule 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

c) Operational Restrictions

(1) The maximum annual aluminum usage for this emissions unit shall not exceed 26,775 tons, based upon a rolling, 12-month summation of the monthly quantities of aluminum used.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the aluminum usage levels specified in the following table

Month(s)	Maximum Allowable Cumulative Aluminum Usage (tons)
1	2,680
1-2	5,360
1-3	8,040
1-4	10,720
1-5	13,400
1-6	16,080
1-7	18,760
1-8	21,440
1-9	24,120
1-10	25,013
1-11	25,907
1-12	26,775

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual aluminum usage restriction shall be based upon a rolling, 12-month summation of the monthly quantity of aluminum poured in emissions unit F008 and F009 combined.

(2) The permittee shall operate the baghouse at all times when this emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information each month for this emissions unit:

a. the amount of aluminum processed, in tons;

b. for the first 12 months of operation following the issuance of this permit, the cumulative quantity of aluminum processed, in tons; and

c. after the first 12 months of operation following the issuance of this permit, the rolling, 12-month summation of the monthly amount of aluminum processed.

*The amount of aluminum processed through this emissions unit is equivalent to the amount of aluminum poured in emissions units F008 and F009. The monitoring and record keeping associated with the aluminum processed in emissions unit F008 and F009 can be used to fulfill the requirements in this section.

(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 stack(s) serving this emissions unit. The presence or absence of any visible emissions, excluding water vapor, 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 date and time of the visible emission observation;

b. the identification of the stack observed;

c. the color of the emissions;

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

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

* once during each normal operating calendar week

(3) The permittee shall properly install, operate, and maintain a continuous temperature monitors and recorder(s) that measure and record(s) the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation. The permittee shall record the combustion temperature on a continuous basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manual(s). The acceptable temperature setting shall be based upon the manufacturer's specifications until such time as any required emission testing is conducted and the appropriate temperature range is established to demonstrate compliance. These records shall be maintained at the facility for a period of no less than three years.

(4) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range/limit specified in this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

a. a description of the corrective action;

b. the date corrective action was completed;

c. the date and time the deviation ended;

d. the total period of time (in minutes) during which there was a deviation;

e. the temperature readings immediately after the corrective action was implemented; and

f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future emission tests that demonstrate compliance with the allowable VOC emission rate for the controlled emissions unit(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of administrative permit modification.

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions, excluding water vapor, were observed from the stack(s) serving this emissions unit and (b) describe the corrective actions, if any, taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

(2) The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the baghouse was not operating. Each report shall be submitted within 30 days after the deviation occurs.

(3) The permittee shall submit quarterly deviation (excursion) reports that identify the following information concerning the operation of the thermal oxidizer during the operation of this emissions unit(s):

a. Each period of time (start time and date, and end time and date) when the average combustion temperature within the thermal; oxidizer was outside of the

range specified by the manufacturer and/or outside of the acceptable range following any required compliance demonstration;

b. Each period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the thermal oxidizer;

c. an identification of each incident of deviation described in "a." or "b." where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in "a." or "b." where proper records were not maintained for the investigation and/or the corrective action(s).

If no deviations /excursions occurred during a calendar quarter, the report shall so state that no deviations occurred during the reporting period.

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

(4) The permittee shall submit quarterly deviation (excursion) reports, which identify all exceedances of the following:

a. for the first 12 calendar months of operation following the issuance of this permit, the maximum allowable cumulative aluminum usage restriction; and

b. after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month aluminum usage restriction.

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

f) Testing Requirements

(1) The permittee shall conduct, or have conducted, emission testing in accordance with the following requirements:

a. The emission testing shall be conducted within 180 days after achieving the maximum production rate at which this emissions unit will be operated.

b. The emission testing shall be conducted to demonstrate compliance with the following:

i. for VOC - 0.95 lb/ton of aluminum;

ii. for PE - 0.308 lb/ton of aluminum;

iii. for PM10 - 0.615 lb/ton of aluminum; and

iv. compliance with the control efficiency limitation for VOCs from the RTO controlling this emissions unit.

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

i. for total VOC, Methods 1-4 and 18, 25 or 25A of 40 CFR Part 60, Appendix A. Appropriate methods shall be used in conjunction with the test methods and procedures specified in Methods 18, 25, or 25A of 40 CFR Part 60, Appendix A for determining total VOC mass emissions.

ii. for PE, Methods 1-5 of 40 CFR Part 60, Appendix A.

iii. for PM10, Methods 201/202 of 40 CFR Part 51, Appendix M.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO. The test method(s) which must be employed to demonstrate compliance with the control efficiencies are specified below.

d. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in Methods 18, 25, or 25A of 40 CFR Part 60, Appendix A for VOC emissions .

e. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."

f. The test(s) shall be conducted while this emissions unit is operating at its maximum capacities, unless otherwise specified or approved by the Ohio EPA, NWDO. The maximum capacity for this emissions units is 75 molds per hour (which relates to 52,500 pounds of sand per hour and 13,125 pounds of aluminum per hour for a combined process weight rate of 65,625 pounds per hour)

g. During emission testing, the permittee shall also record the average combustion temperature within the thermal incinerator, in degrees Fahrenheit.

h. 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, NWDO. 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, NWDO's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, NWDO 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 of 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, NWDO within 30 days following completion of the test(s). The

permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

(2) Compliance with the emissions limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

The maximum annual amount of aluminum processed shall not exceed 26,775 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping requirements specified in d)(1).

b. Emission Limitations:

VOC emissions shall not exceed 0.95 lb/ton of aluminum and 12.72 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance with the lb/ton emission limitation shall be demonstrated based on the results of the emission testing conducted in accordance with Methods 1-4 and 18, 25 or 25A of 40 CFR Part 60, Appendix A.

Compliance with the annual emission limitation shall be demonstrated by the record keeping requirements specified in d)(1). The emission limitation was established multiplying the company-supplied emission factor of 0.95 lb of VOC per ton of aluminum by the annual aluminum restriction of 26,775 tons and dividing by 2000 lbs/ton.

Emission Limitations:

PE shall not exceed 0.308 lb/ton of aluminum and 4.15 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance with the lb/ton emission limitation shall be demonstrated based on the results of the emission testing conducted in accordance with Methods 1-5, of 40 CFR Part 60, Appendix A.

Compliance with the annual emission limitation shall be demonstrated by the record keeping requirements specified in d)(1). The emission limitation was established by multiplying the company-supplied emission factor of 0.308 lb of PE per ton of aluminum by the annual aluminum restriction of 26,775 tons and dividing by 2000 lbs/ton.

c. Emission Limitations:

PM10 shall not exceed 0.615 lb/ton of aluminum and 8.26 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance with the lb/ton emission limitation shall be demonstrated based on the results of the emission testing conducted in accordance with Methods 201/202, of 40 CFR Part 51, Appendix M.

Compliance with the annual emission limitation shall be demonstrated by the record keeping requirements specified in d)(1). The emission limitation was established by multiplying the company-supplied emission factor of 0.615 lb of PM10 per ton of aluminum by the annual aluminum restriction of 26,775 tons and dividing by 2000 lbs/ton.

d. Emission Limitation:

Visible PE from the stack(s) serving this emissions unit shall not exceed 10% opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

e. Emission Limitation:

The regenerative thermal oxidizer shall meet a minimum control efficiency of 95% for VOC emissions.

Applicable Compliance Method:

Compliance with the control efficiency requirements above shall be demonstrated based on the results of emission testing conducted in accordance with the methods outlined in f)(1) of this permit.

g) Miscellaneous Requirements

(1) None

4. P474, precision sand casting cooling tunnel

Operations, Property and/or Equipment Description:

Casting cooling tunnel

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) OAC rule 3745-31-10 through 20	Volatile organic compound (VOC) emissions shall not exceed 0.75 pound per ton (lb/ton) of aluminum and 10.04 tons per year(tpy), based upon a rolling, 12-month summation of the monthly emissions. See b)(2)b. and b)(2)d.
b.	OAC rule 3745-31-05(D)	Particulate matter emissions (PE) shall not exceed 0.24 lb/ton of aluminum and 3.21 tpy, based upon a rolling, 12-month summation of the monthly emissions. Particulate matter emissions less than or equal to 10 microns in size (PM10) shall not exceed 0.48 lb/ton and 6.43 tpy, based upon a rolling, 12-month summation of the monthly emissions. Visible particulate matter emissions (PE) shall not exceed 10% opacity, as a six-minute average.
c.	OAC rule 3745-17-07(A) OAC rule 3745-17-11(B)	The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(D).
d.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)c.

(2) Additional Terms and Conditions

a. This emissions unit includes one casting cooling tunnel. The abatement system includes one baghouse and exhausts to a single stack. The allowable emissions limitation includes the emissions generated from two chill cleaning stations.

b. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that no control technologies for VOC were cost effective.

c. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to PE and PM10 from this air contaminant source since the potential to emit for each is less than ten tons per year taking into account the federally enforceable restriction on aluminum usage and the use of a baghouse.

d. The rolling, 12-month emission limitations are federally enforceable limitations established for the purpose of reducing emissions. The emission limitations are based on the federally enforceable limitation on aluminum usage [See c)(1)].

c) Operational Restrictions

(1) The maximum annual aluminum usage for this emissions unit shall not exceed 26,775 tons, based upon a rolling, 12-month summation of the monthly quantities of aluminum used.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the aluminum usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Aluminum Usage (tons)
1	2,680
1-2	5,360
1-3	8,040
1-4	10,720
1-5	13,400
1-6	16,080
1-7	18,760
1-8	21,440
1-9	24,120
1-10	25,013
1-11	25,907
1-12	26,775

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual aluminum usage restriction shall be based upon a rolling, 12-month summation of the monthly quantity of aluminum poured in emissions unit F008 and F009 combined.

(2) The permittee shall operate the baghouse(s) at all times when this emissions unit is in operation.

d) Monitoring and/or Record keeping Requirements

(1) The permittee shall collect and record the following information each month for this emissions unit:

a. the amount of aluminum processed, in tons;

b. for the first 12 months of operation following the issuance of this permit, the cumulative quantity of aluminum processed, in tons; and

c. after the first 12 months of operation following the issuance of this permit, the rolling, 12-month summation of the monthly amount of aluminum processed.

*The amount of aluminum processed through this emissions unit is equivalent to the amount of aluminum poured in emissions units F008 and F009. The monitoring and record keeping associated with the aluminum processed in emissions unit F008 and F009 can be used to fulfill the requirements in this section.

(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 stack(s) serving this emissions unit. The presence or absence of any visible emissions, excluding water vapor, 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 date and time of the visible emission observation;

b. the identification of the stack observed;

c. the color of the emissions;

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

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

*once during each normal calendar week

(3) The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the baghouse(s) was(were) not operating.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports, which identify all exceedances of the following:

a. for the first 12 calendar months of operation following the issuance of this permit, the maximum allowable cumulative aluminum usage restriction; and

b. after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month aluminum usage restriction.

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

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

(3) The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the baghouse(s) was not operating. Each report shall be submitted within 30 days after the deviation occurs.

f) Testing Requirements

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

a. The emission testing shall be conducted within 180 days after achieving the maximum production rate at which this emissions unit will be operated.

b. The emission testing shall be conducted to demonstrate compliance with the following:

i. for VOC, 0.75 lb/ton of aluminum;
ii. for PE, 0.24 lb/ton of aluminum; and
iii. for PM10, 0.48 lb/ton of aluminum.

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

i. For total VOC, Methods 1-4 and 18, 25 or 25A of 40 CFR Part 60, Appendix A. Appropriate methods shall be used in conjunction with the test methods and procedures specified in Methods 18, 25, or 25A of 40 CFR Part 60, Appendix A for determining total VOC mass emissions.

ii. For PE, Methods 1-5 of 40 CFR Part 60, Appendix A.

iii. For PM10, Methods 201 and 202 of 40 CFR Part 51, Appendix M.

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

d. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

e. The test(s) shall be conducted while this emissions unit is operating at its maximum capacities, unless otherwise specified or approved by the Ohio EPA, NWDO. The maximum capacity for this emissions unit is 13,125 pounds of aluminum per hour (based 75 molds per hour on 175 pounds of aluminum per mold).

f. 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, NWDO. 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, NWDO's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, NWDO 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 of 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, NWDO within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

(2) Compliance with the emission limitations specified in b)(1) of the terms and conditions of this permit shall be determined in accordance with the following method(s):

a. Emission Limitation:

The maximum annual aluminum usage shall not exceed 26,775 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the annual emission limitation shall be demonstrated by the record keeping requirements specified in d)(1).

b. Emission Limitations:

VOC emissions shall not exceed 0.75 lb/ton of aluminum and 10.04 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated based on the results of the emission testing conducted in accordance with Methods 1-4, 18, 25 or 25A of 40 CFR Part 60, Appendix A.

The annual emission limitation was established by multiplying the company-supplied emission factor of 0.75 lb of VOC per ton of aluminum by the annual

aluminum restriction of 26,775 tons and dividing by 2000 lbs/ton. Compliance will be assumed provided compliance is show with the annual aluminum restriction and the VOC emission factor of 0.75 lb/ton of aluminum.

c. Emission Limitations:

PE shall not exceed 0.24 lb/ton and 3.21 tpy, based on a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated based on the results of the emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

The annual emission limitation was established by multiplying the company-supplied emission factor of 0.24 lb of PE per ton of aluminum by the annual aluminum restriction of 26,775 tons and dividing by 2000 lbs/ton. Compliance will be assumed provided compliance is show with the annual aluminum restriction and the PE emission factor of 0.24 lb/ton of aluminum.

d. Emission Limitations:

PM10 shall not exceed 0.48 lb/ton and 6.43 tpy, based on a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated based on the results of the emission testing conducted in accordance with Methods 201 and 202, 40 CFR Part 51, Appendix M.

The annual emission limitation was established by multiplying the company-supplied emission factor of 0.48 lb of PM10 per ton of aluminum by the annual aluminum restriction of 26,775 tons and dividing by 2000 lbs/ton. Compliance will be assumed provided compliance is show with the annual aluminum restriction and the PM10 emission factor of 0.48 lb/ton of aluminum.

e. Emission Limitation:

Visible PE from the baghouse stack(s) shall not exceed 10% opacity.

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be demonstrated 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").

g) Miscellaneous Requirements

(1) None.

5. P475, hershel hammer and parallel swing masters

Operations, Property and/or Equipment Description:

Hershel hammer and parallel swing masters

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) none

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) OAC rule 3745-31-10 through 20	Volatile organic compound (VOC) emissions shall not exceed 0.38 pound per ton (lb/ton) of aluminum and 5.09 tons per year(tpy), based upon a rolling, 12-month summation of the monthly emissions. See b)(2)b., b)(2)d. and b)(2)f.
b.	OAC rule 3745-31-05(D)	Particulate matter emissions less than or equal to 10 microns in size (PM10) shall not exceed 0.34 lb/hour (hr) and 0.69tpy, based upon a rolling, 12-month summation of the monthly emissions. Visible particulate matter emissions (PE) shall not exceed 10% opacity, as a six-minute average. See b)(2)d and b)(2)e.
c.	OAC rule 3745-17-07(A) OAC rule 3745-17-11(B)	The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(D).
d.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)c.

(2) Additional Terms and Conditions

a. This emissions unit includes one hershel hammer and two swing masters controlled with one baghouse and exhausts to one stack.

b. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that no control technologies for VOC were cost effective.

c. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to PM10 from this air contaminant source since the potential to emit is less than ten tons per year taking into account the federally enforceable restriction on aluminum usage and the use of a baghouse.

d. The rolling, 12-month emission limitations are federally enforceable limitations established for the purpose of reducing emissions. The emission limitations are based on the federally enforceable limitation on aluminum usage [See c)(1)].

e. All particulate matter emissions are PM10.

f. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to VOC from this air contaminant source since the uncontrolled potential to emit is less than ten tons per year taking into account the federally enforceable restriction on aluminum usage.

c) Operational Restrictions

(1) The maximum annual aluminum usage for this emissions unit shall not exceed 26,775 tons, based upon a rolling, 12-month summation of the monthly quantities of aluminum used.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the aluminum usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Aluminum Usage (tons)
1	2,680
1-2	5,360
1-3	8,040
1-4	10,720
1-5	13,400
1-6	16,080
1-7	18,760
1-8	21,440

1-9	24,120
1-10	25,013
1-11	25,907
1-12	26,775

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual aluminum usage restriction shall be based upon a rolling, 12-month summation of the monthly quantity of aluminum poured in emissions unit F008 and F009 combined.

(2) The permittee shall operate the baghouse(s) at all times when this emissions unit is in operation.

d) Monitoring and/or Record keeping Requirements

(1) The permittee shall collect and record the following information each month for this emissions unit:

a. the amount of aluminum processed, in tons;

b. for the first 12 months of operation following the issuance of this permit, the cumulative quantity of aluminum processed, in tons; and

c. after the first 12 months of operation following the issuance of this permit, the rolling, 12-month summation of the monthly amount of aluminum processed.

*The amount of aluminum processed through this emissions unit is equivalent to the amount of aluminum poured in emissions units F008 and F009. The monitoring and record keeping associated with the aluminum processed in emissions unit F008 and F009 can be used to fulfill the requirements in this section.

(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 stack(s) serving this emissions unit. The presence or absence of any visible emissions, excluding water vapor, 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 date and time of the visible emission observation;

b. the identification of the stack observed;

c. the color of the emissions;

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

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

*once during each normal calendar week

(3) The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the baghouse(s) was(were) not operating.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports, which identify all exceedances of the following:

a. for the first 12 calendar months of operation following the issuance of this permit, the maximum allowable cumulative aluminum usage restriction; and

b. after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month aluminum usage restriction.

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

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

(3) The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the baghouse(s) was not operating. Each report shall be submitted within 30 days after the deviation occurs.

f) Testing Requirements

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

a. The emission testing shall be conducted within 180 days after achieving the maximum production rate at which this emissions unit will be operated.

b. The emission testing shall be conducted to demonstrate compliance with the following:

i. for VOC, 0.38 lb/ton of aluminum.

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

i. For total VOC, Methods 1-4 and 18, 25 or 25A of 40 CFR Part 60, Appendix A. Appropriate methods shall be used in conjunction with the test methods and procedures specified in Methods 18, 25, or 25A of 40 CFR Part 60, Appendix A for determining total VOC mass emissions.

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

d. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

e. The test(s) shall be conducted while this emissions unit is operating at its maximum capacities, unless otherwise specified or approved by the Ohio EPA, NWDO. The maximum capacity for this emissions unit is 13,125 pounds of aluminum per hour (based 75 molds per hour on 175 pounds of aluminum per mold).

f. 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, NWDO. 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, NWDO's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, NWDO 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 of 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, NWDO within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

(2) Compliance with the emission limitations specified in b)(1) of the terms and conditions of this permit shall be determined in accordance with the following method(s):

a. Emission Limitation:

The maximum annual aluminum usage shall not exceed 26,775 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the annual emission limitation shall be demonstrated by the record keeping requirements specified in d)(1).

b. Emission Limitations:

VOC emissions shall not exceed 0.38 lb/ton of aluminum and 5.09 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated based on the results of the emission testing conducted in accordance with Methods 1-4, 18, 25 or 25A of 40 CFR Part 60, Appendix A.

The annual emission limitation was established by multiplying the company-supplied emission factor of 0.38 lb of VOC per ton of aluminum by the annual aluminum restriction of 26,775 tons and dividing by 2000 lbs/ton. Compliance will be assumed provided compliance is show with the annual aluminum restriction and the VOC emission factor of 0.38 lb/ton of aluminum.

c. Emission Limitations:

PM10 shall not exceed 0.34 lb/hr and 0.69 tpy, based on a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

The hourly emission limitation was established by multiplying the maximum hourly metal throughput of 6.56 tons per hour by the company-supplied emission factor of 1.03 lb PE/ton of aluminum x 0.05 (95% control efficiency). If required, compliance with the hourly emission limitation shall be demonstrated based on the results of the emission testing conducted in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M.

The emission limitation was established by multiplying the company-supplied emission factor of 1.03 lb of PM10 per ton of aluminum by the annual aluminum restriction of 26,775 tons, dividing by 2000 lbs/ton and applying a 95% control efficiency. Compliance will be assumed provided compliance is shown with the annual aluminum restriction, the PM10 emission factor of 1.03 lb/ton of aluminum and the baghouse control efficiency of 95%.

d. Emission Limitation:

Visible PE from the baghouse stack(s) shall not exceed 10% opacity.

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be demonstrated 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").

g) Miscellaneous Requirements

(1) None.

6. P476, precision sand final cleaning (shot blast)

Operations, Property and/or Equipment Description:

Shot blast unit

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) none

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D)	Particulate matter emissions less than or equal to 10 microns in size (PM10) shall not exceed 0.024 pound per ton (lb/ton) of aluminum and 0.32 ton per year (tpy), based upon a rolling, 12-month summation of the monthly emissions. Visible PE shall not exceed 10% opacity, as a six-minute average. See b)(2)c and b)(2)d.
b.	OAC rule 3745-17-07(A) OAC rule 3745-17-11(B)	The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(D).
c.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)b.

(2) Additional Terms and Conditions

a. This emissions unit includes one shot blast cabinet controlled with one shared baghouse and is exhausted to one stack. The baghouse is shared with emissions unit P477 (degate saw).

b. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to PM10 from this air contaminant source since the potential to emit is less than ten tons per year taking into account the federally enforceable restriction on aluminum usage and the use of a baghouse.

c. The rolling, 12-month emission limitation is a federally enforceable limitation established for the purpose of reducing emissions. The emission limitation is based on the federally enforceable limitation on aluminum usage [c)(1)].

d. All particulate matter emissions are PM10.

c) Operational Restriction

(1) The maximum annual aluminum usage for this emissions unit shall not exceed 26,775 tons, based upon a rolling, 12-month summation of the monthly quantities of aluminum used.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the aluminum usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Aluminum Usage (tons)
1	2,680
1-2	5,360
1-3	8,040
1-4	10,720
1-5	13,400
1-6	16,080
1-7	18,760
1-8	21,440
1-9	24,120
1-10	25,013
1-11	25,907
1-12	26,775

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual aluminum usage restriction shall be based upon a rolling, 12-month summation of the monthly quantity of aluminum poured in emissions unit F008 and F009 combined.

(2) The permittee shall operate the baghouse(s) at all times when this emissions unit is in operation.

d) Monitoring and/or Record keeping Requirements

(1) The permittee shall collect and record the following information each month for this emissions unit:

a. the amount of aluminum processed, in tons;

b. for the first 12 months of operation following the issuance of this permit, the cumulative quantity of aluminum processed, in tons; and

c. after the first 12 months of operation following the issuance of this permit, the rolling, 12-month summation of the monthly amount of aluminum processed.

*The amount of aluminum processed through this emissions unit is equivalent to the amount of aluminum poured in emissions units F008 and F009 . The monitoring and record keeping associated with the aluminum processed in emissions unit F008 and F009 can be used to fulfill the requirements in this section.

(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 stack(s) serving this emissions unit. The presence or absence of any visible emissions, excluding water vapor, 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 date and time of the visible emission observation;

b. the identification of the stack observed;

c. the color of the emissions;

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

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

* once during each normal operating calendar week

(3) The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the baghouse was not operating.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports, which identify all exceedances of the following:

a. for the first 12 calendar months of operation following the issuance of this permit, the maximum allowable cumulative aluminum usage restriction; and

b. after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month aluminum usage restriction.

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

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

(3) The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the baghouse(s) was not operating. Each report shall be submitted within 30 days after the deviation occurs.

f) Testing Requirements

(1) Compliance with the emission limitations specified in b)(1) of the terms and conditions of this permit shall be determined in accordance with the following method(s):

a. Emission Limitation:

The maximum annual aluminum usage shall not exceed 26,775 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the annual emission limitation shall be demonstrated by the record keeping requirements specified in d)(1).

b. Emission Limitations:

PM10 shall not exceed 0.024 lb/ton of aluminum and 0.32 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

If required, compliance with the lb/ton emission limitation shall be demonstrated based on the results of the emission testing conducted in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M.

The emission limitation was established by multiplying the company-supplied emission factor of 0.024 lb of PM10 per ton of aluminum by the annual aluminum restriction of 26,775 tons and dividing by 2000 lbs/ton. Compliance will be assumed provided compliance is shown with the annual aluminum restriction and the PM10 emission factor or 0.024 lb/ton of aluminum.

c. Emission Limitation:

Visible PE from the baghouse stack(s) shall not exceed 10% opacity.

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be demonstrated 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").

g) Miscellaneous Requirements

(1) None.

7. P477, precision sand degate saw

Operations, Property and/or Equipment Description:

Precision sand degate saw

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) none

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) OAC rule 3745-31-10 through 20	Volatile organic compound (VOC) emissions shall not exceed 0.0037 pound per ton (lb/ton) of aluminum and 0.05 tons per year (tpy), based upon a rolling, 12-month summation of the monthly emissions. See b)(2)b and b)(2)c
b.	OAC rule 3745-31-05(D)	Particulate emissions (PE) shall not exceed 0.01025 lb/ton of aluminum and 0.14, based upon a rolling, 12-month summation of the monthly emissions. Particulate matter emissions less than or equal to 10 microns in size (PM10) shall not exceed 0.0205 lb/ton of aluminum and 0.27, based upon a rolling, 12-month summation of the monthly emissions. Visible PE shall not exceed 10% opacity, as a six-minute average. See b)(2)c.
c.	OAC rule 3745-17-07(A) OAC rule 3745-17-11(B)	The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(D).
d.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)d and b)(2)e.

(2) Additional Terms and Conditions

a. This emissions unit includes two degate saws controlled with a shared baghouse and is exhausted to one stack. The baghouse is shared with emissions unit P476 (shot blast - finished casting final cleaning).

b. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that no control technologies for VOC were cost effective.

c. The rolling, 12-month emission limitations are federally enforceable limitations established for the purpose of reducing emissions. The emission limitations are based on the federally enforceable restriction on aluminum usage [See c)(1)].

d. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC from this air contaminant source since the potential to emit is less than ten tons per year taking into account the federally enforceable restriction on aluminum usage.

e. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to PE and PM10 from this air contaminant source since the potential to emit for each is less than ten tons per year taking into account the federally enforceable restriction on aluminum usage and the use of a baghouse.

c) Operational Restrictions

(1) The maximum annual aluminum usage for this emissions unit shall not exceed 26,775 tons, based upon a rolling, 12-month summation of the monthly quantities of aluminum used.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the aluminum usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Aluminum Usage (tons)
1	2,680
1-2	5,360
1-3	8,040
1-4	10,720
1-5	13,400
1-6	16,080
1-7	18,760
1-8	21,440
1-9	24,120

1-10	25,013
1-11	25,907
1-12	26,775

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual aluminum usage restriction shall be based upon a rolling, 12-month summation of the monthly quantity of aluminum poured in emissions unit F008 and F009 combined.

(2) The permittee shall operate the baghouse(s) at all times when this emissions unit is in operation.

d) Monitoring and/or Record keeping Requirements

(1) The permittee shall collect and record the following information each month for this emissions unit:

a. the amount of aluminum processed, in tons;

b. for the first 12 months of operation following the issuance of this permit, the cumulative quantity of aluminum processed, in tons; and

c. after the first 12 months of operation following the issuance of this permit, the rolling, 12-month summation of the monthly amount of aluminum processed.

*The amount of aluminum processed through this emissions unit is equivalent to the amount of aluminum poured in emissions units F008 and F009. The monitoring and record keeping associated with the aluminum processed in emissions unit F008 and F009 can be used to fulfill the requirements in this section.

(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 stack(s) serving this emissions unit. The presence or absence of any visible emissions, excluding water vapor, 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 date and time of the visible emission observation;

b. the identification of the stack observed;

c. the color of the emissions;

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

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

*once during each normal calendar week

(3) The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the baghouse(s) was not operating.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports, which identify all exceedances of the following:

a. for the first 12 calendar months of operation following the issuance of this permit, the maximum allowable cumulative aluminum usage restriction; and

b. after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month aluminum usage restriction

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

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

(3) The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the baghouse(s) was not operating. Each report shall be submitted within 30 days after the deviation occurs.

f) Testing Requirements

(1) Compliance with the emission limitations specified in b)(1) of the terms and conditions of this permit shall be determined in accordance with the following method(s):

a. Emission Limitation:

The maximum annual aluminum usage shall not exceed 26,775 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the annual emission limitation shall be demonstrated by the record keeping requirements specified in d)(1).

b. Emission Limitations:

PE shall not exceed 0.01025 lb/ton of aluminum and 0.14 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

If required, compliance with the lb/ton emission limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

The emission limitation was established by multiplying the company-supplied emission factor of 0.01025 lb of PE per ton of aluminum by the annual aluminum

restriction of 26,775 tons and dividing by 2000 lbs/ton. Compliance will be assumed provided compliance is shown with the annual aluminum restriction and the PE emission factor or 0.010205 lb/ton of aluminum.

c. Emission Limitations:

PM10 shall not exceed 0.0205 lb/ton of aluminum and 0.27 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

If required, compliance with the lb/ton emission limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M.

The emission limitation was established by multiplying the company-supplied emission factor of 0.0205 lb of PM10 per ton of aluminum by the annual aluminum restriction of 26,775 tons and dividing by 2000 lbs/ton. Compliance will be assumed provided compliance is shown with the annual aluminum restriction and the PM10 emission factor or 0.0205 lb/ton of aluminum.

d. Emission Limitations:

VOC shall not exceed 0.0037 lb/ton of aluminum and 0.05 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

If required, compliance with the lb/ton emission limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 18, 25 or 25A of 40 CFR Part 60, Appendix A.

The emission limitation was established by multiplying the company-supplied emission factor of 0.0037 lb of VOC per ton of aluminum by the annual aluminum restriction of 26,775 tons and dividing by 2000 lbs/ton. Compliance will be assumed provided compliance is show with the annual aluminum restriction and the VOC emission factor of 0.0037 lb/ton of aluminum.

e. Emission Limitation:

Visible PE from the baghouse stack(s) shall not exceed 10% opacity.

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be demonstrated 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").

g) Miscellaneous Requirements

(1) None.

8. P478, waste sand feeder and core breaker

Operations, Property and/or Equipment Description:

Feeder and core breaker

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) none

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D)OAC rule 3745-31-10 through 20	Volatile organic compound (VOC) emissions shall not exceed 0.10 pound per ton (lb/ton) of aluminum and 6.70 tons per year (tpy), based upon a rolling, 12-month summation of the monthly emissions. See b)(2)b and b)(2)c.
b.	OAC rule 3745-31-05(D)	Particulate emissions (PE) shall not exceed 0.048 lb/ton of aluminum and 3.21 tpy, based upon a rolling, 12-month summation of the monthly emissions. Particulate matter emissions less than or equal to 10 microns in size (PM10) shall not exceed 0.096 lb/ton of aluminum and 6.43 tpy, based upon a rolling, 12-month summation of the monthly emissions. Visible PE shall not exceed 10% opacity, as a six-minute average. See b)(2)c.
c.	OAC rule 3745-17-07(A) OAC rule 3745-17-11(B)	The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(D).
d.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)d and b)(2)e.

(2) Additional Terms and Conditions

a. This emissions unit includes one core breaker. The abatement systems include one baghouse and exhausts to a single stack.

b. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that no control technologies for VOC were cost effective.

c. The rolling, 12-month emission limitations are federally enforceable limitations established for the purpose of reducing emissions. The emission limitations are based on the federally enforceable restriction on aluminum usage [See c)(1)].

d. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC from this air contaminant source since the potential to emit is less than ten tons per year taking into account the federally enforceable restriction on aluminum usage.

e. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to PE and PM10 from this air contaminant source since the potential to emit for each is less than ten tons per year taking into account the federally enforceable restriction on aluminum usage and the use of a baghouse.

f. This emissions unit is not subject to the requirements in OAC rule 3745-21-07(B) because no liquid organic material is employed in this emissions unit. “Liquid organic material” is defined in OAC rule 3745-21-01.

c) Operational Restrictions

(1) The maximum annual sand usage for this emissions unit shall not exceed 133,875 tons, based upon a rolling, 12-month summation of the monthly quantities of sand used.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the sand usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Sand Usage (tons)
1	13,400
1-2	26,800
1-3	40,200
1-4	53,600
1-5	67,000
1-6	80,400
1-7	93,800
1-8	107,200

1-9	120,600
1-10	125,067
1-11	129,534
1-12	133,875

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual sand usage restriction shall be based upon a rolling, 12-month summation of the monthly sand processed.

(2) The permittee shall operate the baghouse(s) at all times when this emissions unit is in operation.

d) Monitoring and/or Record keeping Requirements

(1) The permittee shall collect and record the following information each month for this emissions unit:

a. the amount of sand processed, in tons;

b. for the first 12 months of operation following the issuance of this permit, the cumulative quantity of sand processed, in tons; and

c. after the first 12 months of operation following the issuance of this permit, the rolling, 12-month summation of the monthly amount of sand processed.

*The amount of sand processed through this emissions unit is equivalent to the amount of sand received in emissions units P906. The monitoring and record keeping associated with the aluminum processed in emissions unit P906 can be used to fulfill the requirements in this section.

(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 stack(s) serving this emissions unit. The presence or absence of any visible emissions, excluding water vapor, 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 date and time of the visible emission observation;

b. the identification of the stack observed;

c. the color of the emissions;

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

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

*once during each normal calendar week

(3) The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the baghouse(s) was not operating.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports, which identify all exceedances of the following:

a. for the first 12 calendar months of operation following the issuance of this permit, the maximum allowable cumulative sand processed; and

b. after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month sand processed.

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

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

(3) The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the baghouse(s) was not operating. Each report shall be submitted within 30 days after the deviation occurs.

f) Testing Requirements

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

a. The emission testing shall be conducted within 180 days after achieving the maximum production rate at which this emissions unit will be operated.

b. The emission testing shall be conducted to demonstrate compliance with the following:

i. for VOC, 0.10 lb/ton of sand processed;

ii. for PE, 0.048 lb/ton of sand processed; and

iii. for PM10, 0.096 lb/ton of sand processed.

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

i. for total VOC, Methods 1-4 and 18, 25 or 25A of 40 CFR Part 60, Appendix A. Appropriate methods shall be used in conjunction with the test methods and procedures specified in Methods 18, 25, or 25A of 40 CFR Part 60, Appendix A for determining total VOC mass emissions.

ii. for PE, Methods 1-5 40 CFR Part 60, Appendix A.

iii. for PM10, 40 CFR Part 51, Appendix M, Methods 201 and 202.

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

d. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

e. The test(s) shall be conducted while this emissions unit is operating at its maximum capacities, unless otherwise specified or approved by the Ohio EPA, NWDO. The maximum capacity for this emissions unit is 52,500 pounds of sand per hour (based 75 molds per hour and 700 lbs of sand per mold).

f. 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, NWDO. 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, NWDO's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, NWDO 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 of 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, NWDO within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

(2) Compliance with the emission limitations specified in b)(1) of the terms and conditions of this permit shall be determined in accordance with the following method(s):

a. Emission Limitation:

The maximum annual sand usage shall not exceed 133,875 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the annual emission limitation shall be demonstrated by the record keeping requirements specified in d)(1).

b. Emission Limitations:

PE shall not exceed 0.048 lb/ton of aluminum and 3.21 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance with the lb/ton emission limitation shall be demonstrated based upon the results of the emission testing conducted in accordance with Method 1-5 of 40 CFR Part 60, Appendix A.

The emission limitation was established by multiplying the company-supplied emission factor of 0.048 lb of PE per ton of sand by the annual sand processed of 133,875 tons and dividing by 2000 lbs/ton. Compliance will be assumed provided compliance is shown with the annual sand restriction and the PE emission factor or 0.048 lb/ton of sand processed.

c. Emission Limitations:

PM10 shall not exceed 0.096 lb/ton of aluminum and 6.43 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance with the lb/ton emission limitation shall be demonstrated based upon the results of the emission testing conducted in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M.

The emission limitation was established by multiplying the company-supplied emission factor of 0.096 lb of PM10 per ton of sand by the annual sand processed of 133,875 tons and dividing by 2000 lbs/ton. Compliance will be assumed provided compliance is shown with the annual sand restriction and the PM10 emission factor or 0.096 lb/ton of sand processed.

d. Emission Limitations:

VOC shall not exceed 0.10 lb/ton of sand processed and 6.70 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance with the lb/ton emission limitation shall be demonstrated based upon the results of emission testing conducted in accordance with Methods 1-4 and 18, 25 or 25A of 40 CFR Part 60, Appendix A.

The emission limitation was established by multiplying the company-supplied emission factor of 0.10 lb of VOC per ton of sand by the annual sand processed of 133,875 tons and dividing by 2000 lbs/ton. Compliance will be assumed provided compliance is show with the annual sand restriction and the VOC emission factor of 0.10 lb/ton of sand processed.

e. Emission Limitation:

Visible PE from the baghouse stack(s) shall not exceed 10% opacity.

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be demonstrated 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").

g) Miscellaneous Requirements

(1) None.

9. P479, cast liners blast cabinet

Operations, Property and/or Equipment Description:

Blast cabinet

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) none

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D)	Particulate matter emissions less than or equal to 10 microns in size (PM10) shall not exceed 0.043 pound per ton of aluminum and 0.58 ton per year (tpy), based upon a rolling, 12-month summation of the monthly emissions. Visible particulate matter emissions (PE) shall not exceed 10% opacity, as a six-minute average. See b)(2)a. through b)(2)c.
b.	OAC rule 3745-17-07(A) OAC rule 3745-17-11(B)	The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(D).
c.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)d.

(2) Additional Terms and Conditions

a. This emissions unit includes one blast cabinet. The abatement system includes one baghouse and exhausts to a single stack.

b. The rolling, 12-month limitation is a federally enforceable limitation established for the purpose of reducing emissions. The emission limitation is based on the federally enforceable restriction on sand usage (See c)(1)).

c. All PE is in the form of PM10.

d. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to PM10 from this air contaminant source since the potential to emit is less than ten tons per year taking into account the federally enforceable restriction on aluminum usage and the use of a baghouse.

c) Operational Restrictions

(1) The permittee shall operate the baghouse(s) at all times when this emissions unit is in operation.

(2) The maximum annual aluminum usage for this emissions unit shall not exceed 26,775 tons, based upon a rolling, 12-month summation of the monthly quantities of aluminum used.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the aluminum usage levels specified in the following table, for this emissions unit:

Month(s)	Maximum Allowable Cumulative Aluminum Usage (tons)
1	2,680
1-2	5,360
1-3	8,040
1-4	10,720
1-5	13,400
1-6	16,080
1-7	18,760
1-8	21,440
1-9	24,120
1-10	25,013
1-11	25,907
1-12	26,775

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual aluminum usage restriction shall be based upon a rolling, 12-month summation of the monthly quantity of aluminum poured in emissions unit F008 and F009 combined.

d) Monitoring and/or Record keeping Requirements

(1) The permittee shall collect and record the following information each month for this emissions unit:

a. the amount of aluminum processed*, in tons;

b. for the first 12 months of operation following the issuance of this permit, the cumulative quantity of aluminum processed, in tons; and

c. after the first 12 months of operation following the issuance of this permit, the rolling, 12-month summation of the monthly amount of aluminum processed.

*The amount of aluminum processed through this emissions unit is equivalent to the amount of aluminum poured in emissions units F008 and F009. The monitoring and record keeping associated with the aluminum processed in emissions unit F008 and F009 can be used to fulfill the requirements in this section.

(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 stack(s) serving this emissions unit. The presence or absence of any visible emissions, excluding water vapor, 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 date and time of the visible emission observation;

b. the identification of the stack observed;

c. the color of the emissions;

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

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

*once during each normal calendar week

(3) The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the baghouse was not operating.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports, which identify all exceedances of the following:

a. for the first 12 calendar months of operation following the issuance of this permit, the maximum allowable cumulative aluminum usage restriction; and

b. after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month aluminum usage restriction.

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

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

(3) The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the baghouse(s) was(were) not operating. Each report shall be submitted within 30 days after the deviation occurs.

f) Testing Requirements

(1) Compliance with the emission limitations specified in b)(1) of the terms and conditions of this permit shall be determined in accordance with the following method(s):

a. Emission Limitation:

The amount of aluminum poured shall not exceed 26,775 tons per rolling, 12-month period for this emissions unit.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping requirements specified in d)(1).

b. Emission Limitations:

PM10 emission shall not exceed 0.043 lb/ton and 0.58 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

If required, compliance with the lb/ton emission limitation shall be demonstrated based on the results of emission testing conducted in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M.

Compliance with the annual limitations shall be demonstrated by the record keeping requirements specified in d)(2).

c. Emission Limitation:

Visible PE from the baghouse stack(s) shall not exceed 10% opacity.

Applicable Compliance Method:

If required, compliance with the visible emission limitation shall be demonstrated 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").

g) Miscellaneous Requirements

(1) None.

10. P801, precision sand core storage and assembly

Operations, Property and/or Equipment Description:

Precision sand core storage and assembly

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) OAC rule 3745-31-10 through 20	Volatile organic compound (VOC) emissions shall not exceed 26.51 tons per year (tpy), based upon a rolling, 12-month summation of the monthly emissions [See b)(2)c.].
b.	OAC rule 3745-21-07(G)	See b)(2)d.

(2) Additional Terms and Conditions

a. This emissions unit is an assembly and storage area where sand cores are assembled into molds.

b. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that no control technologies for VOC were cost effective.

c. The rolling, 12-month emission limitation is a federally enforceable restriction established for the purpose of reducing emissions. The emission limitation is based on the federally enforceable restriction on sand usage [See c)(1)].

d. This emissions unit is not subject to the requirements in OAC rule 3745-21-07(G) because no liquid organic material is employed in this emissions unit. "Liquid organic material" is defined in OAC rule 3745-21-01.

c) Operational Restrictions

(1) The maximum annual sand processed in this emissions unit shall not exceed 133,875 tons, based upon a rolling, 12-month summation.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the sand usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Amount of Sand Processed (tons)
1	13,400
1-2	26,800
1-3	40,200
1-4	53,600
1-5	67,000
1-6	80,400
1-7	93,800
1-8	107,200
1-9	120,600
1-10	125,067
1-11	129,534
1-12	133,875

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual sand restriction shall be based upon a rolling, 12-month summation of the monthly sand processed.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information each month for this emissions units:

a. the quantity of sand processed*, in tons;

b. for the first 12 months of operation following the issuance of this permit, the cumulative quantity of sand processed, in tons; and

c. after the first 12 months operation, the quantity of sand processed, in tons, based on a rolling, 12-month summation of the monthly sand processed.

*The amount of sand processed through this emissions unit is equivalent to the amount of sand received in emissions unit P906. The monitoring and record keeping associated with the sand received in emissions unit P906 can be used to fulfill the requirements in this section.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports, which identify all exceedances of the following:

a. for the first 12 calendar months of operation following the issuance of this permit, the restriction on the maximum allowable cumulative quantity of sand processed; and

b. after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month restriction on the quantity of sand processed.

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

f) Testing Requirements

(1) Compliance with the emission limitations specified in b)(1) of the terms and conditions of this permit shall be determined in accordance with the following method(s):

a. Emission Limitation:

The maximum annual sand usage shall not exceed 133,875 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the annual sand usage restriction shall be demonstrated by the record keeping requirements specified in d)(1).

b. Emission Limitation:

VOC emissions shall not exceed 26.51 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

The annual limitation was established by multiplying the company-supplied emission factor of 0.396 lb VOC/ton of sand by 133,875 tons sand per year and dividing by 2000 lbs/ton. If required, compliance with the emission factor of 0.396 lb VOC/ton of sand shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 18, 25 or 25A of 40 CFR Part 60 Appendix A.

g) Miscellaneous Requirements

(1) None

11. P906, precision sand receiving and storage

Operations, Property and/or Equipment Description:

Precision sand receiving and storage

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) none

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-17-07(B)	Visible fugitive particulate emissions (PE) shall not exceed 20% opacity, as a three-minute average, except as provided by rule.
b.	OAC rule 3745-17-08(B)(3)	The permitee shall utilize reasonable available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. [See b)(2)b.]
c.	OAC rule 3745-31-05(D)	<u>Stack emissions:</u> Particulate matter emissions less than or equal to 10 microns in size (PM10) shall not exceed 1.17 tons per year (tpy), based upon a rolling, 12-month summation of the monthly emissions. <u>receiving bin and two receiving storage bins (Stack No. 2)</u> PM10 emissions shall not exceed 0.007 lb/ton of sand processed. <u>intermediate bin and two storage bins (Stack No. 3)</u> PM10 emissions shall not exceed 0.0105 lb/ton of sand processed. Fugitive PM10 emissions shall not exceed 0.58 tpy, based upon a rolling, 12-month summation of the monthly emissions.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Visible PE from the stack(s) serving this emissions unit shall not exceed 10% opacity, as a six-minute average. See b)(2)c.
	OAC rule 3745-17-07(A) OAC rule 3745-17-11(B)	The emission limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(D).
d.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)e.

(2) Additional Terms and Conditions

a. This emissions units includes the following material handling operations:

i. one sand receiving station (fugitive);

ii. one exterior receiving storage silo (exhausted to Stack 2);

iii. two receiving storage bins (exhausted to Stack 2);

iv. one intermediate storage bin (exhausted to Stack 3);

v. two storage bins (exhausted to Stack 3); and

vi. associated conveyors.

This emissions unit is partially abated with two dust collectors.

b. The requirements specified by this rule are equivalent to and/or less stringent than the requirements established pursuant to OAC rule 3745-31-05(D).

c. The rolling, 12-month emission limitations are federally enforceable restrictions established for the purpose of reducing emissions. The emission limitations are based on the federally enforceable restriction on the amount of sand received [See c)(1)].

d. All emissions of particulate matter are PM10.

e. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to PM10 from this air contaminant source since the potential to emit is less than ten tons per year, taking into account the federally enforceable restriction on the amount of sand received and the use of dust collectors.

c) Operational Restrictions

(1) The maximum annual sand received in this emissions unit shall not exceed 133,875 tons, based upon a rolling, 12-month summation.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the sand usage levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Amount of Sand Received (tons)
1	13,400
1-2	26,800
1-3	40,200
1-4	53,600
1-5	67,000
1-6	80,400
1-7	93,800
1-8	107,200
1-9	120,600
1-10	125,067
1-11	129,534
1-12	133,875

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual sand usage limitation shall be based upon a rolling, 12-month summation of monthly sand received.

d) Monitoring and/or Record keeping Requirements

(1) The permittee shall collect and record the following information each month for this emissions units:

a. the quantity of sand received, in tons;

b. for the first 12 months of operation following the issuance of this permit, the cumulative quantity of sand processed, in tons; and

c. after the first 12 months operation, the quantity of sand processed, in tons, based on a rolling, 12-month summation of the sand processed.

(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 stack(s)

serving this emissions unit. The presence or absence of any visible emissions, excluding water vapor, 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 date and time of the visible emission observation;

b. the identification of the stack observed;

c. the color of the emissions;

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

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

*once during each normal calendar week

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit, (b) identify all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit, and (c) describe any corrective actions taken to minimize or eliminate the visible particulate emissions and/or visible fugitive dust 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 periods.

(2) The permittee shall submit quarterly deviation (excursion) reports, which identify all exceedances of the following:

a. for the first 12 calendar months of operation following the issuance of this permit, the maximum allowable cumulative sand throughput limitation; and

b. after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month sand throughput limitation.

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

f) Testing Requirements

(1) Compliance with the emission limitations specified in b)(1) of the terms and conditions of this permit shall be determined in accordance with the following method(s):

a. <u>Emission Limitation:</u>

The maximum annual amount of sand received shall not exceed 133,875 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping requirements specified in d)(1).

b. Emission Limitations:

Stack PM10 emissions shall not exceed 0.007 lb/ton of sand received from stack 2, 0.0105 lb/ton of sand received from stack 3, and 1.17 tpy, based on a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

If required, compliance with the lb/ton emission limitations shall be demonstrated based on the results of emission testing conducted in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M.

The annual limitation was established by multiplying the company-supplied emission factors of 0.007 and 0.0105 lbs of PM10 per ton of sand by the annual sand received of 133,875 tons. Compliance will be assumed provided compliance is shown with the annual sand received restriction and the emission factors of 0.007 and 0.0105 lbs/ton of sand.

c. Emission Limitations:

PM10 shall not exceed 0.0105 lb/ton of sand received from stack 3 emissions units.

Applicable Compliance Method:

If required, compliance shall be demonstrated based on the results of emission testing conducted in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M.

d. Emission Limitation:

Visible PE from the baghouse stack(s) shall not exceed 10% opacity

Applicable Compliance Method:

If required, compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

e. Emission Limitation:

Visible fugitive PE shall not exceed 20% opacity, as a three-minute average, except as provided by rule, from the unloading operation at the sand receiving station.

Applicable Compliance Method:

If required, compliance with the visible emission limitation 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, 2002, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

g) Miscellaneous Requirements

(1) None.

12. Emissions Unit Group – mold fill pouring stations: F008 and F009,

EU ID	Operations, Property and/or Equipment Description
F008	Mold fill pouring station #1
F009	Mold fill pouring station #2

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) OAC rule 3745-31-10 through 20	Volatile organic compound (VOC) emissions from emissions unit F008 and F009, combined, shall not exceed 1.34 tpy, based upon a rolling, 12-month summation of the monthly emissions. See b)(2)a and b)(2)b.
b.	OAC rule 3745-31-05(D)	Particulate emissions (PE) shall not exceed 0.28 ton per year (tpy), based upon a rolling, 12-month summation of the monthly emissions. Particulate matter emissions less than or equal to 10 microns in size (PM10) shall not exceed 0.55 tpy, based upon a rolling, 12-month summation of the monthly emissions. See b)(2)b.
c.	OAC rule 3745-17-08(B)(3)	See b)(2)d.
d.	OAC rule 3745-17-07(B)	Visible PE shall not exceed 20% opacity as a three-minute average, except as provided by rule.
e.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)c.

(2) Additional Terms and Conditions

a. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that no control technologies for VOC were cost effective.

b. The rolling, 12-month emission limitations are federally enforceable limitations established for the purpose of reducing emissions. The emission limitations are based on the federally enforceable restriction on the amount of aluminum processed (See A.II.1).

c. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the emissions of VOC, PE and PM10 emissions from this air contaminant source since the uncontrolled potentials to emit for each is less than ten tons per year taking into account the federally enforceable restriction on the amount of aluminum processed.

d. The permitee shall utilize reasonable available control measures (RACM) that are sufficient to minimize or eliminate visible emissions of fugitive dust. In accordance with the permittee's permit application, the permittee has committed to perform the following control measure(s) to ensure compliance:

i. building enclosure.

Nothing in this paragraph shall prohibit the permittee from employing other equally -effective control measures to ensure compliance.

c) Operational Restrictions

(1) The maximum annual aluminum usage for emissions units F008 and F009, combined, shall not exceed 26,775 tons, based upon a rolling, 12-month summation of the monthly quantities of aluminum used.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the aluminum usage levels specified in the following table, for emissions units F008 and F009 combined:

Month(s)	Maximum Allowable Cumulative Aluminum Usage (tons)
1	2,680
1-2	5,360
1-3	8,040
1-4	10,720
1-5	13,400
1-6	16,080
1-7	18,760
1-8	21,440

1-9	24,120
1-10	25,013
1-11	25,907
1-12	26,775

(2) After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual aluminum usage restriction shall be based upon a rolling, 12-month summation of the monthly quantity of aluminum poured in emissions unit F008 and F009 combined.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information each month for emissions unit F008 and F009, combined:

a. the amount of aluminum processed (amount poured at emissions units F008 and F009), in tons;

b. for the first 12 months of operation following the issuance of this permit, the cumulative quantity of aluminum processed, in tons; and

c. after the first 12 months of operation following the issuance of this permit, the rolling, 12-month summation of the monthly amount of aluminum processed.

(2) The permittee shall perform weekly* checks, when the emissions unit is in operation and when the weather conditions allow, 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 date and time of the visible emission observation;
b. the identification of the stack observed;
c. the color of the emissions;
d. the total duration of any visible emission observation; and
e. the corrective actions, if any, taken to eliminate the visible emissions.

*once during each normal calendar week

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports, which identify all exceedances of the following:

a. for the first 12 calendar months of operation following the issuance of this permit, the maximum allowable cumulative aluminum usage restriction; and

b. after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month aluminum usage restriction

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

(2) The permittee shall submit semiannual written reports that (a) identify all days during which any visible emissions of fugitive dust 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 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 periods.

f) Testing Requirements

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

a. Emission Limitation:

The amount of aluminum poured shall not exceed 26,775 tons per rolling, 12-month period for emissions unit F008 and F009, combined.

Compliance Method:

Compliance shall be demonstrated by the record keeping requirements specified in d)(1).

b. Emission Limitation:

VOC emissions shall not exceed 1.34 tpy, based upon a rolling, 12 month summation of the monthly emissions, for emissions unit F008 and F009, combined.

Applicable Compliance Method:

The emission limitation was established by multiplying the company-supplied emission factor of 0.10 lb/ton of aluminum by the annual aluminum restriction of 26,775 tons and dividing by 2000 lbs/ton. If required, testing, to verify the accuracy of the emission factor of 0.10 lb/ton, shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 18, 25 or 25A of 40 CFR Part 60, Appendix A.

c. Emission Limitations:

PE shall not exceed 0.28 tpy based upon a rolling, 12 month summation of the monthly emissions, for emissions units F008 and F009, combined.

Applicable Compliance Method:

The emission limitation was established by multiplying the company-supplied emission factor of 0.210 lb/ton of aluminum by the annual aluminum restriction of 26,775 tons and dividing by 2000 lbs/ton. If required, testing, to verify the accuracy of the emission factor of 0.210 lb/ton, shall be demonstrated based on

the results of emission testing conducted in accordance with Methods 1-5 of 40 CFR Part 60, Appendix A.

d. Emission Limitations:

PM10 emissions shall not exceed 0.55 tpy based upon a rolling, 12 month summation of the monthly emissions, for emissions units F008 and F009, combined.

Applicable Compliance Method:

The emission limitation was established by multiplying the company-supplied emission factor of 0.041 lb/ton of aluminum by the annual aluminum restriction of 26,775 tons and dividing by 2000 lbs/ton. If required, testing, to verify the accuracy of the emission factor of 0.041 lb/ton, shall be demonstrated based on the results of emission testing conducted in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M.

e. Emission Limitation:

Visible PE from the egress points of the building containing this emissions unit shall not exceed 20% opacity, as a three -minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated using Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60, Appendix A (Standards of Performance for New Stationary Sources) as such Appendix existed on July 1, 2002, and the modifications listed in paragraphs (B)(3)(a) and (B)(3)(b) of OAC rule 3745-17-03.

g) Miscellaneous Requirements

(1) None.

13. Emissions Unit Group – precision sand core machines: P464 through P469,

EU ID	Operations, Property and/or Equipment Description
P464	Precision sand core machine #1
P465	Precision sand core machine #2
P466	Precision sand core machine #3
P467	Precision sand core machine #4
P468	Precision sand core machine #5
P469	Precision sand core machine #6

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) OAC rule 3745-31-10 through 20	Volatile organic compound emissions (VOC) from emissions units P464, P465, P466, P467, P468 and P469, combined, shall not exceed 55.0 tons per year (tpy), based upon a rolling, 12-month summation of the monthly emissions. <u>Receiving hopper and sand mixer (Stack No. 5)</u> VOC emissions shall not exceed 0.10 pound per ton of sand processed. <u>Core making (Stack No. 4)</u> VOC emissions shall not exceed 0.60 pound per ton of sand processed. <u>Maintenance (metal cleaning of core machine - Stack No. 4):</u> VOC emissions shall not exceed 0.119 pound per ton of sand processed. Fugitive VOC emissions shall not exceed 2.0 tpy, based on a rolling, 12-month summation of the monthly emissions.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See b)(2)a and b)(2)b.
b.	OAC rule 3745-31-05(D)	Particulate matter less than or equal to 10 microns in size (PM10) from emissions units P464, P465, P466, P467, P468 and P469, combined, shall not exceed 2.0 tons per year (tpy), based upon a rolling, 12-month summation of the monthly emissions. <u>Receiving hopper and sand mixer (Stack No. 5)</u> PM10 shall not exceed 0.0086 lb/ton of sand processed. <u>Core making (Stack No. 4)</u> PM10 shall not exceed 0.021 lb/ton of sand processed. Visible PE from the stack(s) serving this emissions unit shall not exceed 10% opacity, as a six-minute average. See b)(2)band b)(2)c.
c.	OAC rule 3745-17-07(A) OAC rule 3745-17-11(B)	The emission limitations specified by these rules are less stringent than the emissions limitations established pursuant to OAC rule 3745-31-05(D).
d.	OAC rule 3745-21-07(G)	Exempt, pursuant to OAC rule 3745-21-07(G)(9)(i).
e.	OAC rule 3745-31-05(A)(3)(a)(ii)	See b)(2)d and b)(2)e.

(2) Additional Terms and Conditions

a. The permittee shall employ best available control technology (BACT) on this emissions unit for VOC. BACT has been determined to be the use of the following:

i. sand mixing - no control technologies were cost effective.

ii. core making - a wet scrubber. The wet scrubber shall achieve a control efficiency of 95% for the catalyst dimethyl isopropyl amine (DMIPA) and 30% for all other VOC's.

b. The rolling, 12-month emission limitations are federally enforceable limitations established for the purpose of reducing emissions. The emission limitations are based on the federally enforceable restriction on the amount of sand processed [See c)(1)].

c. All emissions of particulate emissions are PM10.

d. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the emissions of VOC from this air contaminant source since the potential to emit is less than ten tons per year, taking into account the federally enforceable restriction on the amount of sand processed and the use of a wet scrubber.

e. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the emissions of PM10 from this air contaminant source since the potential to emit is less than ten tons per year, taking into account the federally enforceable restriction on the amount of sand processed, the use of a baghouse and cyclone.

c) Operational Restrictions

(1) The maximum annual sand processed in emissions units P464 through P469, combined, shall not exceed 133,875 tons, based upon a rolling, 12-month summation of sand processed.

To ensure federal enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the sand processing levels specified in the following table:

Month(s)	Maximum Allowable Cumulative Amount of Sand Processed(tons)
1	13,400
1-2	26,800
1-3	40,200
1-4	53,600
1-5	67,000
1-6	80,400
1-7	93,800
1-8	107,200
1-9	120,600
1-10	125,067
1-11	129,534
1-12	133,875

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual sand restriction shall be, based upon a rolling, 12-month summation of the monthly sand processed.

(2) The permittee shall operate the baghouse at all times when this emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information each month for emissions units P464, through P469, combined:

a. the quantity of sand processed, in tons;

b. for the first 12 months of operation following the issuance of this permit, the cumulative quantity of sand processed, in tons; and

c. after the first 12 months operation, the quantity of sand processed, in tons, based on a rolling, 12-month summation of the monthly sand processed.

*The amount of sand processed through this emissions unit is equivalent to the amount of sand received in emissions unit P906. The monitoring and record keeping associated with the sand received in emissions unit P906 can be used to fulfill the requirements in this section.

(2) The permittee shall properly operate and maintain equipment to continuously monitor the liquor pH and the scrubber liquor 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 catalyst gas scrubber liquor pH, on a once-per-shift basis;

b. the catalyst gas scrubber liquor flow rate, in gallons per minute, on a once-per-shift basis; and

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

Whenever the monitored values for the catalyst gas scrubber liquor pH and catalyst gas scrubber liquor flow rate deviate from the range specified below, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation: the date and time the deviation began and the magnitude of the deviation at that time, the date(s) the investigation was conducted, the names of the personnel who conducted the investigation, and the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable ranges specified below, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken: a description of the corrective action, the date it was completed, the

date and time the deviation ended, the total period of time (in minutes) during which there was a deviation, the catalyst gas scrubber liquor pH and catalyst gas scrubber liquor flow rate immediately after the corrective action, and the names of the personnel who performed the work. Investigation and records required by this paragraph does not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

d. The catalyst gas scrubber liquor pH shall be continuously maintained at a value of less than or equal to 5 at all times while the emissions unit is in operation, or as established during the most recent performance test that demonstrated the emissions unit was in compliance.

e. The catalyst gas scrubber liquor flow rate shall be continuously maintained at a value of not less than 3 gallons per minute per 1,000 cfm if gas flow at all times while the emissions unit is in operation, or as established during the most recent performance test that demonstrated the emissions unit was in compliance.

These ranges are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the ranges based upon information obtained during future tests that demonstrate compliance with the allowable VOC emission rate for this emissions unit. In addition, approved revisions to the ranges will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of administrative modification.

(3) The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the baghouse was not operating.

(4) The permittee shall perform weekly* checks when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse and from the cyclone serving this emissions unit. The presence or absence of any visible emissions, excluding water vapor, 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 date and time of the visible emission observation;

b. the identification of the stack observed;

c. the color of the emissions;

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

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

*once during each normal calendar week

(5) The permit to install for these emissions units P464, P465, P466, P467, P468 and P469 were evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee in the permit application. The Ohio EPA's "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to

this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

   i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or

   ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC).

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

   Toxic contaminant: phenol
   TLV (mg/m^3): 19.25
   Maximum Hourly Emission Rate (lbs/hr): 1.80 (permit total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 4.77
   MAGLC (ug/m^3): 458

   Toxic contaminant: m,p-xylene
   TLV (mg/m^3): 434
   Maximum Hourly Emission Rate (lbs/hr): 1.15 (permit total)
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 6.33
   MAGLC (ug/m^3): 10,338

Toxic contaminant: napthalene
TLV (mg/m^3): 54
Maximum Hourly Emission Rate (lbs/hr): 0.67 (permit total)
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m^3): 2.93
MAGLC (ug/m^3): 1296

The permittee, has demonstrated that emissions of phenol, m,p-xylene and napthalene, from emissions units P464, P465, P466, P467, P468 and P469, are calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic contaminant in accordance with ORC 3704.03(F).

(6) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the ORC 3704.03(F), the statute, has been documented. If the change(s) meet(s) the definition of a "modification" or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

(7) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute":

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with ORC 3704.03(F) and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

(8) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with ORC 3704.03(F) through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports, which identify all exceedances of the following:

a. for the first 12 calendar months of operation following the issuance of this permit, the restriction on the maximum allowable cumulative quantity of sand processed; and

b. after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month restriction on the quantity of sand processed.

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

(2) The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the baghouse(s) was not operating. Each report shall be submitted within 30 days after the deviation occurs.

(3) The permittee shall submit quarterly deviation (excursion) reports that identify the following information concerning the operation of the wet scrubber during the operation of the emissions unit(s):

a. each period of time (start time and date, and end time and date) when the liquid flow rate or the liquid pH was outside of the appropriate range or limit specified by the manufacturer and outside of the acceptable range for each parameter following any required compliance demonstration;

b. an identification of each incident of deviation described in (3)a. where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in (3)a. where prompt corrective action, that would bring the liquid flow rate or scrubber liquid pH into compliance with the acceptable range, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in (3)a. where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

If no deviations/excursions occurred during a calendar quarter, the report shall so state that no deviations occurred during the reporting period.

The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the Standard 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, excluding water vapor, were observed from the baghouse and from the cyclone serving this emissions unit and (b) describe the corrective actions, if any, taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Northwest District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

(5) The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with ORC 3704.03(F) through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

f) Testing Requirements

(1) The permittee shall conduct, or have conducted, emission testing for emissions units P464, P465, P466, P467, P468 and P469 in accordance with the following requirements:

a. The emission testing shall be conducted within 180 days after achieving the maximum production rate at which emissions units P464, P465, P466, P467, P468 and P469 will be operated.

b. The emission testing shall be conducted to demonstrate compliance with the following:

i. for the receiving hopper and sand mixer: 0.10 lb/ton of sand for VOC;

ii. for core making: 0.60 lb/ton of sand & control efficiencies for VOC; and

iii. for metal cleaning: 0.119 lb VOC/ton of sand.

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

i. for total VOC, Methods 1-4 and 18, 25 or 25A of 40 CFR Part 60, Appendix A. Appropriate methods shall be used in conjunction with the

test methods and procedures specified in Methods 18, 25, or 25A of 40 CFR Part 60, Appendix A for determining total VOC mass emissions.

Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA, NWDO. The test method(s) which must be employed to demonstrate compliance with the control efficiencies are specified below.

d. The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in Methods 18, 25, or 25A of 40 CFR Part 60, Appendix A for VOC emissions .

e. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases."

f. The test(s) shall be conducted while emissions units P464, P465, P466, P467, P468 and P469 are operating at their maximum capacities, unless otherwise specified or approved by the Ohio EPA, NWDO.

g. During emission testing, the permittee shall also record the following information:

i. the pH range for the scrubbing liquid; and

ii. the scrubber water flow rate, in gallons/minute.

h. 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, NWDO. 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, NWDO's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, NWDO 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 of 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, NWDO within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, NWDO.

(2) Compliance with the emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

The maximum annual amount of sand processed shall not exceed 133,875 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated by the record keeping requirements specified in d)(1).

b. Emission Limitations:

0.10 lb of VOC per ton of sand (hopper and mixing)
0.60 lb of VOC per ton of sand (core making)
0.119 lb of VOC per ton of sand (metal cleaning)

Applicable Compliance Method:

Compliance shall be demonstrated based on the results of emission testing conducted in accordance with Methods 1-4 and 18, 25 or 25A of 40 CFR Part 60, Appendix A.

c. Emission Limitations:

PM10 emissions shall not exceed 0.0086 lb/ton of sand (hopper and mixing)

PM10 emissions shall not exceed 0.021 lb/ton of sand (core making)

Applicable Compliance Method:

If required, compliance with the company-established emission factors shall be demonstrated based on the results of emission testing conducted in accordance with Methods 201 and 202 of 40 CFR Part 51, Appendix M.

d. Emission Limitation:

VOC emissions shall not exceed 55.0 tpy, based on a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

The emission limitation was established by multiplying the company-supplied emission factors of 0.010, 0.60 and 0.119 lbs of VOC per ton of sand by the annual sand restriction of 133,875 tons and dividing by 2000 lbs/ton.

e. Emission Limitation:

fugitive VOC emissions shall not exceed 2.0 tpy, based on a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

The emission limitation was established by multiplying the company-supplied emission factors of 0.030 lb of VOC per ton of sand by the annual sand restriction of 133,875 tons and dividing by 2000 lbs/ton.

f. Emission Limitation:

PM10 emissions shall not exceed 2.0 tpy, based on a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

The emission limitation was established multiplying the company-supplied emission factors of 0.0086 and 0.021 lbs/ton of sand by the annual sand restriction of 133,875 tons and dividing by 2000 lbs/ton. Compliance will be assumed provided compliance with the annual sand restriction and if required, stack testing, is shown.

g. Emission Limitation:

Visible PE from the stack(s) serving this emissions unit shall not exceed 10% opacity, as a six-minute average.

Applicable Compliance Method:

If required, compliance shall be determined according to test Method 9 as set forth in the "Appendix on Test Methods" in 40 CFR Part 60 "Standards of Performance for New Stationary Sources."

g) Miscellaneous Requirements

(1) None.