



State of Ohio Environmental Protection Agency

Street Address:

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

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Mailing Address:

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

**RE: FINAL PERMIT TO INSTALL
FRANKLIN COUNTY
Application No: 01-08152**

CERTIFIED MAIL

Y	TOXIC REVIEW
	PSD
	SYNTHETIC MINOR
	CEMS
	MACT
	NSPS
	NESHAPS
	NETTING
	MAJOR NON-ATTAINMENT
Y	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

DATE: 4/26/00

Met Foam Inc
Jeff Vogel
1071 W Goodale Blvd
Columbus, OH 43212

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging 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 Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
236 East Town Street, Room 300
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo, Manager
Field Operations and Permit Section
Division of Air Pollution Control

cc: USEPA

CDO



FINAL PERMIT TO INSTALL 01-08152

Application Number: 01-08152
APS Premise Number: 0125040115
Permit Fee: **\$4200**
Name of Facility: Met Foam Inc
Person to Contact: Jeff Vogel
Address: 1071 W Goodale Blvd
Columbus, OH 43212

Location of proposed air contaminant source(s) [emissions unit(s)]:
**1071 W Goodale Blvd
Columbus, Ohio**

Description of proposed emissions unit(s):
Ductile inoculation, pouring and cooling shakout, shotblast, and sand reclamation and flask fill units.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) 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 above described 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

Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

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

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from 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 appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by 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.)

3. Records Retention Requirements

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

4. Inspections and Information Requests

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

be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

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

6. Permit Transfers

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

7. 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.

8. Termination of Permit to Install

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. 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.

9. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. 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 the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install 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 prove to be inadequate or cannot meet applicable standards.

10. 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.

11. 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).

12. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

13. Source Operation and Operating Permit Requirements After Completion of Construction

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the emissions unit(s) covered by this permit.

14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

15. 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 this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

**SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	4.2
OC	17.7
PM	40.1

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P007 - Ductile inoculation of iron with a Tundish ladle lid.	OAC rule 3745-31-05(A)(3)	Particulate emissions shall not exceed 12.00 pounds per hour and 20.0 tons per year.
	OAC rule 3745-17-08 (B)	Reasonably available control measures to minimize or eliminate visible particulate emissions of fugitive dust.
	OAC rule 3745-17-07 (B)	Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.

2. **Additional Terms and Conditions**

- 2.a The particulate matter emission limitations of 12.00 pounds per hour and 20.0 tons per year were established to reflect the potential to emit for P007. Therefore, it is not necessary to develop recordkeeping and/or reporting requirements to ensure compliance with these limits

B. Operational Restrictions

None

C. Monitoring and/or Recordkeeping Requirements

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

D. Reporting Requirements

1. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. If no visible particulate emissions were observed, the permittee shall submit a semiannual report, which states that no visible particulate emissions were observed. These reports shall be submitted to the Director (the Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation -
Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.

Applicable Compliance Method -
Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).
 - b. Emission Limitation -
Particulate emissions shall not exceed 12.00 pounds per hour and 20.0 tons per year.

Applicable Compliance Method -
Compliance with the short term emission limitation shall be determined by multiplying the emission factor of 4.00 lbs. of PM per ton iron (AIRS, 1990) by the maximum capacity of 3.0 tons of metal per hour.

Compliance with the long term emission limitation shall be determined by multiplying the emission factor of 4.00 lbs. of PM per ton of iron (AIRS, 1990) by the maximum capacity of 10,000 tons of metal per year and dividing by 2000 lbs. per ton.

F. Miscellaneous Requirements

None

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P008 - Shotblast with baghouse	OAC rule 3745-31-05 (A)(3)	Particulate emissions shall not exceed 0.68 pound per hour and 2.7 tons per year.
		Particulate emissions from the fabric filter shall not exceed 0.03 grain per dry standard cubic foot (gr/dscf).
	OAC rule 3745-17-07 (A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six minute average, except as specified by rule.
	OAC rule 3745-17-11 (B)	The emission limitations established pursuant to OAC rule 3745-31-05 are more stringent than the emission limitations established by this rule.
	OAC rule 3745-17-07 (B)	Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.
	OAC rule 3745-17-08	Reasonably available control measures to minimize or eliminate visible particulate emissions of fugitive dust.
		See II.B.1 below.

2. Additional Terms and Conditions

2.a None

B. Operational Restrictions

1. Permittee shall capture 99.5% of particulate emissions from this emissions unit and vent to the baghouse at all times this emissions unit is in operation.
2. The pressure drop across the baghouse shall be maintained within the range of 2.0 to 8.0 inches of water while the emissions unit is in operation except during startup and initial loading of filters following filter change.

C. Monitoring and/or Recordkeeping Requirements

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

D. Reporting Requirements

2. The permittee shall submit pressure deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above except during startup and initial loading of filters following filter change.
3. The permittee shall submit semiannual written reports which (a) identify all days during which any visible fugitive particulate emissions were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. If no visible particulate emissions were observed, the permittee shall submit a semiannual report, which states that no visible particulate emissions were observed. These reports shall be submitted to the Director (the Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.
4. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. If no visible particulate emissions were observed, the permittee shall submit a semiannual report, which states that no visible particulate emissions were observed. These reports shall be submitted to the Director (the Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation -
Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.

Applicable Compliance Method -
Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).
 - b. Emission Limitation -
Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six minute average, except as specified by rule.

Applicable Compliance Method -
Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- c. Emission Limitation -
Particulate emissions shall not exceed 0.68 pound per hour and 2.7 tons per year.

Applicable Compliance Method -

Compliance with the short term emission limitation shall be determined by summing the stack emissions and the fugitive emissions. In order to determine the stack emissions, the permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

1. The emission testing shall be conducted within 6 months of startup of the emissions unit.
2. The emission testing shall be conducted to demonstrate compliance with the particulate matter emission limitations.
3. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Method 5, 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
4. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Central District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Central District Office.

Fugitive emissions are determined by multiplying the emission factor of 15.50 lbs. per ton of iron (Modern Casting, 1/72) by the maximum capacity of 4 tons per hour by the percent of fugitive emissions (0.5%) and by the percent of fugitive emissions released from the building (1-0.7).

Compliance with the long term emission limitation shall be determined by summing the stack emissions and the fugitive emissions. To determine the stack emissions multiply the emission factor found during the most recent stack test (lbs. per ton of iron) by the maximum capacity of 6500 tons per year and divide by 2000 lbs per ton. To determine the fugitive emissions multiply the emission factor of 15.50 lbs. per ton of iron by the maximum capacity of 6500 tons per year, divide by 2000 lbs per ton and multiply by the percent of fugitive emissions (0.50%) and by the percent of fugitive emissions released from the building (1-0.7).

- d. Emission Limitation -
Particulate emissions from the fabric filter shall not exceed 0.03 grain per dry standard cubic foot (gr/dscf).

Applicable Compliance Method -
Compliance shall be demonstrated by the testing specified in II.E.1.c.

F. Miscellaneous Requirements

None

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P009 - Shakeout of castings with baghouse	OAC rule 3745-31-05 (A)(3)	Particulate emissions shall not exceed 1.97 pound per hour and 7.3 tons per year.
	OAC rule 3745-17-07 (A)(1)	Particulate emissions from the fabric filter shall not exceed 0.02 grain per dry standard cubic foot (gr/dscf).
	OAC rule 3745-17-11 (B)	Volatile organic compound emissions shall not exceed 2.19 pounds per hour and 3.7 tons per year.
	OAC rule 3745-17-07 (B)	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six minute average, except as specified by rule.
	OAC rule 3745-17-08	The emission limitations established pursuant to OAC rule 3745-31-05 are more stringent than the emission limitations established by this rule.
		Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.
		Reasonably available control measures to minimize or eliminate visible
		particulate emissions of fugitive dust.

| See II.B.1 below.

2. Additional Terms and Conditions

2.a None

B. Operational Restrictions

1. Permittee shall capture 95% of particulate emissions from this emissions unit and vent to the baghouse at all times this emissions unit is in operation.
2. The pressure drop across the baghouse shall be maintained within the range of 2.0 to 8.0 inches of water while the emissions unit is in operation except during startup and initial loading of filters following filter change.

C. Monitoring and/or Recordkeeping Requirements

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

- a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions; and,
 - d. any corrective actions taken to eliminate the abnormal emissions.
4. The permit to install for this emissions unit P009 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Benzene

TLV (mg/m³): 1.6

Maximum Hourly Emission Rate (lbs/hr): 0.71

Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m³): 5.9

MAGLC (ug/m³): 38.1

Pollutant: Styrene

TLV (mg/m³): 85

Maximum Hourly Emission Rate (lbs/hr): 1.22

Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m³): 10.1

MAGLC (ug/m³): 2024

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee

shall conduct an evaluation to determine that the “Air Toxic Policy” will still be satisfied. If, upon evaluation, the permittee determines that the “Air Toxic Policy” will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the “Air Toxic Policy” include the following::

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and,
- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

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

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

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

D. Reporting Requirements

1. The permittee shall submit pressure deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above, except during startup and initial loading of filters following filter change.

2. The permittee shall submit semiannual written reports which (a) identify all days during which any visible fugitive particulate emissions were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. If no visible particulate emissions were observed, the permittee shall submit a semiannual report, which states that no visible particulate emissions were observed. These reports shall be submitted to the Director (the Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.
3. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed escaping from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. If no visible particulate emissions were observed, the permittee shall submit a semiannual report, which states that no visible particulate emissions were observed. These reports shall be submitted to the Director (the Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation -
Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.

Applicable Compliance Method -
Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).
 - b. Emission Limitation -
Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six minute average, except as specified by rule.

Applicable Compliance Method -
Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).
 - c. Emission Limitation -
Particulate emissions shall not exceed 1.97 pounds per hour and 7.3 tons per year.

Applicable Compliance Method -

Compliance with the short term emission limitation shall be determined by summing the stack emissions and the fugitive emissions. In order to determine the stack emissions, the permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

1. The emission testing shall be conducted approximately 2.5 years after startup of the emissions unit.
2. The emission testing shall be conducted to demonstrate compliance with the particulate matter emission limitations.
3. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Method 5, 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
4. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Central District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Central District Office.

Fugitive emissions are determined by multiplying the emission factor of 3.20 lbs. per ton of iron (AIRS, 1990) by the maximum capacity of 3 tons per hour by the percent of fugitive emissions (5.0%).

Compliance with the long term emission limitation shall be determined by summing the stack emissions and the fugitive emissions. To determine the stack emissions multiply the emission factor found during the most recent stack test (lbs. per ton of iron) by the maximum capacity

of 10,000 tons per year and divide by 2000 lbs. per ton. To determine the fugitive emissions multiply the emission factor of 3.20 lbs. per ton of iron by the maximum capacity of 10,000 tons per year, divide by 2000 lbs per ton and multiply by the percent of fugitive emissions (5.0%).

- d. Emission Limitation -
Particulate emissions from the fabric filter shall not exceed 0.02 grain per dry standard cubic foot (gr/dscf).

Applicable Compliance Method -
Compliance shall be demonstrated by the testing specified in II.E.1.c.

- e. Emission Limitation -
Volatile organic compound emissions shall not exceed 2.19 pounds per hour and 3.7 tons per year.

Applicable Compliance Method -
Compliance with the short term emission limitation shall be determined by summing the stack emissions and the fugitive emissions. Stack emissions are determined by multiplying the emission factor of 0.73 lbs. of VOC per ton iron ("Precision Lost Foam Casting Technology", 8/30/95, 13.7) by the maximum capacity of 3.0 tons of metal per hour by the percent of emissions through the stack (95%). Fugitive emissions are determined by multiplying the emission factor of 0.73 lbs. of VOC per ton iron by the maximum capacity of 3.0 tons of metal per hour by the percent of emissions that are fugitive (5.0%).

Compliance with the long term emission limitation shall be determined by summing the stack emissions and the fugitive emissions. Stack emissions are determined by multiplying the emission factor of 0.73 lbs. of VOC per ton iron by the maximum capacity of 10,000 tons of metal per year by the percent of emissions through the stack (95%). Fugitive emissions are determined by multiplying the emission factor of 0.73 lbs. of VOC per ton iron by the maximum capacity of 10,000 tons of metal per year by the percent of emissions that are fugitive (5.0%).

F. Miscellaneous Requirements

None

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P010 - Pouring and cooling with flare	OAC rule 3745-31-05 (A)(3)	Particulate emissions shall not exceed 1.23 pounds per hour and 2.1 tons per year. Volatile organic compound emissions shall not exceed 0.31 pounds per hour and 0.5 tons per year. Carbon monoxide emissions shall not exceed 10.62 pounds per hour and 17.7 tons per year. See II.B.1 below.
	OAC rule 3745-17-07 (A)(1)	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six minute average, except as specified by rule.
	OAC rule 3745-17-11 (B)	The emission limitations established pursuant to OAC rule 3745-31-05 are more stringent than the emission limitations established by this rule.
	OAC rule 3745-17-07 (B)	Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.
	OAC rule 3745-17-08	Reasonably available control measures to minimize or eliminate visible particulate emissions of fugitive dust.

See II.B.1 below.

2. Additional Terms and Conditions

2.a None

B. Operational Restrictions

1. The permittee shall capture at least 80% of the emissions generated during pouring and vent the emissions to a flare.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation to assure that a spark is present to combust the false bottom flask's pouring emissions. If a spark is not present, the spark plug will be replaced prior to further pouring. The permittee shall also note the following in the operations log:
 - a. the presence or absence of a spark; and
 - b. any replacement of the spark plug.
2. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions escaping from the building containing this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions; and,
 - d. any corrective actions taken to eliminate the abnormal emissions.
3. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions; and,
 - d. any corrective actions taken to eliminate the abnormal emissions.

D. Reporting Requirements

2. The permittee shall submit deviation (excursion) reports that identify all periods of time during which a spark was not detected and the spark plug was not replaced prior to further pouring.
3. The permittee shall submit semiannual written reports which (a) identify all days during which any visible fugitive particulate emissions were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. If no visible particulate emissions were observed, the permittee shall submit a semiannual report, which states that no visible particulate emissions were observed. These reports shall be submitted to the Director (the Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.
4. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. If no visible particulate emissions were observed, the permittee shall submit a semiannual report, which states that no visible particulate emissions were observed. These reports shall be submitted to the Director (the Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. Testing Requirements

1. Compliance with the emission limitations specified in Section A.I of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation -
Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.

Applicable Compliance Method -
Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).
 - b. Emission Limitation -
Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six minute average, except as specified by rule.

Applicable Compliance Method -
Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).
 - c. Emission Limitation -
Particulate emissions shall not exceed 1.97 pounds per hour and 7.3 tons per year.

Applicable Compliance Method -

Compliance with the short term emission limitation shall be determined by summing the pouring stack emissions, pouring fugitive emissions and the cooling fugitive emissions.

Short term stack emissions for the pouring operation are determined by multiplying the emission factor of 0.273 lbs. per ton of iron (Stack Test, 1/18/96, Quality Castings) by the maximum capacity of 3.0 tons of metal per hour by the percent of emissions through the stack (80%).

Short term fugitive emissions for the pouring operation are determined by multiplying the emission factor of 0.273 lbs. per ton of iron by the maximum capacity of 3.0 tons of metal per hour by the percent of emissions that are fugitive (20%).

Short term fugitive emissions for the cooling operation are determined by multiplying the emission factor of 0.137 lbs. per ton of iron (Stack Test, 1/18/96, Quality Castings) by the maximum capacity of 3.0 tons of metal per hour.

Compliance with the long term emission limitation shall be determined by summing the pouring stack emissions, pouring fugitive emissions and cooling fugitive emissions.

Long term stack emissions for the pouring operation are determined by multiplying the emission factor of 0.273 lbs. per ton of iron by the maximum capacity of 10,000 tons of metal per year, dividing by 2000 lbs per ton and multiplying by the percent of emissions through the stack (80%).

Long term fugitive emissions for the pouring operation are determined by multiplying the emission factor of 0.273 lbs. per ton of iron by the maximum capacity of 10,000 tons of metal per year, dividing by 2000 lbs per ton and multiplying by the percent of emissions that are fugitive (20%).

Long term fugitive emissions for the cooling operation are determined by multiplying the emission factor of 0.137 lbs. per ton of iron by the maximum capacity of 10,000 tons of metal per year, dividing by 2000 lbs per ton.

- d. Emission Limitation -
Volatile organic compound emissions shall not exceed 0.31 pounds per hour and 0.5 tons per year.

Applicable Compliance Method -
Compliance with the short term emission limitation shall be determined by summing the pouring stack emissions and pouring fugitive emissions.

Short term stack emissions for the pouring operation are determined by multiplying the emission factor of 0.290 lbs. per ton of iron ("Precision Lost Foam Casting Technology", 8/30/95, 13.7) by the maximum capacity of 3.0 tons of metal per hour by the percent of emissions through the stack (80%) by the percent of emissions not controlled (1 - 0.8).

Short term fugitive emissions for the pouring operation are determined by multiplying the emission factor of 0.290 lbs. per ton of iron by the maximum capacity of 3.0 tons of metal per hour by the percent of emissions that are fugitive (20%).

Compliance with the long term emission limitation shall be determined by summing the pouring stack emissions and pouring fugitive emissions.

Long term stack emissions for the pouring operation are determined by multiplying the emission factor of 0.290 lbs. per ton of iron by the maximum capacity of 10,000 tons of metal per year, dividing by 2000 lbs per ton and multiplying by the percent of emissions through the stack (80%) by the percent of emissions not controlled (1 - 0.8).

Long term fugitive emissions for the pouring and cooling operation are determined by multiplying the emission factor of 0.29 lbs. per ton of iron by the maximum capacity of 10,000 tons of metal per year, dividing by 2000 lbs per ton and multiplying by the percent of emissions that are fugitive (20%). .

- e. Emission Limitation -
Carbon monoxide emissions shall not exceed 10.62 pounds per hour and 17.7 tons per year.

Applicable Compliance Method -
Compliance with the short term emission limitation shall be determined by summing the pouring stack emissions, pouring fugitive emissions and the cooling fugitive emissions.

Short term stack emissions for the pouring operation are determined by multiplying the emission factor of 0.40 lbs. per ton of iron ("Precision Lost Foam Casting Technology", 8/30/95, 13.7) by the maximum capacity of 3.0 tons of metal per hour by the percent of emissions through the stack (80%).

Short term fugitive emissions for the pouring operation are determined by multiplying the emission factor of 0.40 lbs. per ton of iron by the maximum capacity of 3.0 tons of metal per hour by the percent of fugitive emissions (20%).

Short term fugitive emissions for the cooling operation are determined by multiplying the emission factor of 3.14 lbs. per ton of iron (“Precision Lost Foam Casting Technology”, 8/30/95, 13.7) by the maximum capacity of 3.0 tons of metal per hour.

Compliance with the long term emission limitation shall be determined by summing the pouring stack emissions, pouring fugitive emissions and cooling fugitive emissions.

Long term stack emissions for the pouring operation are determined by multiplying the emission factor of 0.40 lbs. per ton of iron by the maximum capacity of 10,000 tons of metal per year, dividing by 2000 lbs per ton and multiplying by the percent of emissions through the stack (80%).

Long term fugitive emissions for the pouring operation are determined by multiplying the emission factor of 0.40 lbs. per ton of iron by the maximum capacity of 10,000 tons of metal per year, dividing by 2000 lbs per ton and multiplying by the percent of emissions that are fugitive (20%).

Long term fugitive emissions for the cooling operation are determined by multiplying the emission factor of 3.14 lbs. per ton of iron by the maximum capacity of 10,000 tons of metal per year, dividing by 2000 lbs per ton.

F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA’s “Air Toxic Policy” was not necessary because the emissions unit’s maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a “modification” as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P011 - Sand reclamation system, flask fill and compaction with baghouse	OAC rule 3745-31-05 (A)(3)	Particulate emissions shall not exceed 2.31 pounds per hour and 6.94 tons per year.
	OAC rule 3745-17-07 (A)(1)	Particulate emissions from the fabric filter shall not exceed 0.02 grain per dry standard cubic foot (gr/dscf).
	OAC rule 3745-17-11 (B)	Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six minute average, except as specified by rule.
	OAC rule 3745-17-07 (B)	The emission limitations established pursuant to OAC rule 3745-31-05 are more stringent than the emission limitations established by this rule.
	OAC rule 3745-17-08	Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.
		Reasonably available control measures to minimize or eliminate visible particulate emissions of fugitive dust.
		See II.B.1 below.
Sand silo with fabric filter	OAC rule 3745-31-05 (A)(3)	Particulate emissions shall not exceed 0.25 pound per hour and 1.1 tons per year.

OAC rule 3745-17-07 (A)(1)

OAC rule 3745-17-11 (B)

Particulate emissions from the fabric filter shall not exceed 0.03 grain per dry standard cubic foot (gr/dscf).

Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six minute average, except as specified by rule.

The emission limitations established pursuant to OAC rule 3745-31-05 are more stringent than the emission limitations established by this rule.

2. Additional Terms and Conditions

2.a None

B. Operational Restrictions

1. Permittee shall capture 95% of particulate emissions from the sand reclamation system and 90% of the particulate emissions from the flask fill and compaction and vent to the baghouse at all times the emissions unit is in operation.
2. The pressure drop across the sand reclamation baghouse shall be maintained within the range of 2.0 to 8.0 inches of water while the emissions unit is in operation except during startup and initial loading of filters following filter change.

C. Monitoring and/or Recordkeeping Requirements

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

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

D. Reporting Requirements

1. The permittee shall submit pressure deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above except during startup and initial loading of filters following filter change.
2. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed escaping from the stack serving the the sand reclamation system and/or the flask compaction baghouse and (b) describe any corrective actions taken to eliminate the visible particulate emissions. If no visible particulate emissions were observed, the permittee shall submit a semiannual report, which states that no visible particulate emissions were observed. These reports shall be submitted to the Director (the Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.
3. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed escaping from the stack serving the sand silo fabric filter and (b) describe any corrective actions taken to eliminate the visible particulate emissions. If no visible particulate emissions were observed, the permittee shall submit a semiannual report, which states that

no visible particulate emissions were observed. These reports shall be submitted to the Director (the Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

4. The permittee shall submit semiannual written reports which (a) identify all days during which any visible fugitive particulate emissions were observed escaping from the building containing this emissions unit and (b) describe any corrective actions taken to eliminate the visible fugitive particulate emissions. If no visible particulate emissions were observed, the permittee shall submit a semiannual report, which states that no visible particulate emissions were observed. These reports shall be submitted to the Director (the Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. Testing Requirements

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

- a. Emission Limitation (sand reclamation system) -
Visible particulate emissions of fugitive dust shall not exceed twenty percent opacity, as a three-minute average, except as specified by rule.

Applicable Compliance Method -

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitation (sand reclamation system) -
Visible particulate emissions from any stack shall not exceed twenty percent opacity, as a six minute average, except as specified by rule.

Applicable Compliance Method -

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- c. Emission Limitation (sand reclamation system) -
Particulate emissions shall not exceed 2.31 pounds per hour and 6.94 tons per year.

Applicable Compliance Method -

Compliance with the short term emission limitation shall be determined by summing the stack emissions, sand reclamation system fugitive emissions and the flask fill and compaction fugitive emissions.

In order to determine the stack emissions, the permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

1. The emission testing shall be conducted within 6 months of startup of the emissions unit.
2. The emission testing shall be conducted to demonstrate compliance with the particulate matter emission limitations.
3. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Method 5, 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
4. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

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

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

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Central District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Central District Office.

Sand reclamation system fugitive emissions are determined by multiplying the emission factor of 3.60 lbs. per ton of sand (AIRS, 1990) by the maximum capacity of 24 tons per hour by the percent of fugitive emissions (5.0%) and by the percent of fugitive emissions released from the building (1-0.7). Flask fill and compaction fugitive emissions are determined by multiplying the emission factor of 0.029 lbs. per ton of sand (AIRS, 1990) by the maximum capacity of 24 tons per hour by the percent of fugitive emissions (10%) and by the percent of fugitive emissions released from the building (1-0.7).

Compliance with the long term emission limitation shall be determined by summing the stack emissions, sand reclamation system fugitive emissions and flask fill and compaction fugitive emissions.

To determine the stack emissions multiply the emission factor found during the most recent stack test (lbs. per ton of sand) by the maximum capacity of 80,133 tons per year, divide by 2000 lbs. per ton and multiply by the percent of stack emissions (99.5%). To determine the sand reclamation system fugitive emissions multiply the emission factor of 3.60 lbs. per ton of sand (AIRS, 1990) by the maximum capacity of 80,133 tons per year, divide by 2000 lbs per ton and multiply by the percent of fugitive emissions (5.0%) and by the percent of fugitive emissions released from the building (1-0.7). To determine the flask fill and compaction fugitive emissions multiply the emission factor of 0.029 lbs. per ton of sand (AIRS, 1990) by the maximum capacity of 80,133 tons per year, divide by 2000 lbs per ton and multiply by the percent of fugitive emissions (10%) and by the percent of fugitive emissions released from the building (1-0.7).

- d. Emission Limitation (sand reclamation system, flask fill and compaction) -
Particulate emissions from the fabric filter shall not exceed 0.02 grain per dry standard cubic foot (gr/dscf).

Applicable Compliance Method -
Compliance shall be demonstrated by the testing specified in II.E.1.c.

- e. Emission Limitation (sand silo) -
Particulate emissions shall not exceed 0.25 pound per hour and 1.1 ton per year.

Applicable Compliance Method -
Compliance with the short term emission limitation shall be demonstrated by multiplying the silo emission rate of 0.03 grain per dry standard cubic foot (gr/dscf) by the actual cubic feet per minute (acfm) to dscf conversion factor (960) by 60 minutes per hour and dividing by 7000 grains per lb.

Compliance with the long term emission limitation shall be demonstrated by multiplying the maximum short term emission limitation of 0.25 lb per hour by 8760 hours per year and dividing by 2000 pounds per ton.

- f. Emission Limitation (sand silo) -
Particulate emissions from the fabric filter shall not exceed 0.03 grain per dry standard cubic foot (gr/dscf).

Applicable Compliance Method -

If necessary, testing shall be required in accordance with Method 5,40 CFR Part 60, Appendix A.

F. Miscellaneous Requirements

None