



Environmental Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

9/8/2011

Certified Mail

Mr. Earl Marcum
Elyria Foundry
120 Filbert Street
Elyria, OH 44036

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0247040014
Permit Number: P0108308
Permit Type: Initial Installation
County: Lorain

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED
No	MAJOR GHG
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

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. Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 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. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission 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, Northeast District Office. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

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

Cc: U.S. EPA
Ohio EPA-NEDO; Canada



FINAL

**Division of Air Pollution Control
Permit-to-Install
for
Elyria Foundry**

Facility ID:	0247040014
Permit Number:	P0108308
Permit Type:	Initial Installation
Issued:	9/8/2011
Effective:	9/8/2011



Division of Air Pollution Control
Permit-to-Install
for
Elyria Foundry

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Authorization

Facility ID: 0247040014
Facility Description: Iron Foundry
Application Number(s): A0041896
Permit Number: P0108308
Permit Description: Palmer Sand Mixer (9 tons per hour) located in #3 Foundry using an Enviroset 20E (Furan No-Bake or equivalent) Binder controlled by a baghouse.
Permit Type: Initial Installation
Permit Fee: \$1,000.00
Issue Date: 9/8/2011
Effective Date: 9/8/2011

This document constitutes issuance to:

Elyria Foundry
120 Filbert Street
Elyria, OH 44036

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

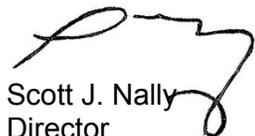
Ohio EPA District Office or local air agency responsible for processing and administering your permit:

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

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


Scott J. Nally
Director



Authorization (continued)

Permit Number: P0108308

Permit Description: Palmer Sand Mixer (9 tons per hour) located in #3 Foundry using an Enviroset 20E (Furan No-Bake or equivalent) Binder controlled by a baghouse.

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

Emissions Unit ID:	F024
Company Equipment ID:	Core Sand Mixer
Superseded Permit Number:	
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 of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA 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, Northeast 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, Northeast 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, Northeast 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, Northeast 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, Northeast 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, Northeast 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, Northeast 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 by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown 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 reporting requirements identified in this permit 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 deviation report, 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 new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in Air Services once the transfer is legally completed. The change must be submitted through Air Services within thirty days of the ownership transfer date.

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. F024, Core Sand Mixer

Operations, Property and/or Equipment Description:

Palmer Sand Mixer (9 tons per hour) for Cores in #3 Foundry controlled by a baghouse. Using an Enviroset 20E (Furan No-Bake) or equivalent Binder

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 operation(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 are identified below. 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)(1)(a) OAC rule 3745-31-05(E)	<p>Particulate matter (PM) emissions from the baghouse, from this emissions unit, shall not exceed 0.05 pound per hour and 0.15 ton per year. [See b)(2)c.]</p> <p>Particulate matter less than 10 microns in diameter (PM₁₀) emissions from the baghouse, from this emissions unit, shall not exceed 0.03 pound per hour and 0.07 ton per year. [See b)(2)c.]</p> <p>Fugitive particulate matter (PM) emissions shall not exceed 9.6 tons per year.</p> <p>Fugitive particulate matter less than 10 microns in diameter (PM₁₀) shall not exceed 4.8 tons per year.</p> <p>Organic compound (OC)/volatile organic compound (VOC) emissions shall not exceed 0.94 pound per hour and 2.51 tons per year.</p> <p>See b)(2)a.</p>

b.	OAC rule 3745-17-08(B)	Exempt, facility is not located within an Appendix A area.
c.	OAC rule 3745-17-07(B)	Exempt, facility is not located within an Appendix A area.
d.	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent than the emissions limitation established pursuant to OAC rule 3745-31-05(E).
e.	OAC rule 3745-21-07	The emission limitation established by this rule is equivalent to and/or less stringent than the limit established pursuant to OAC rule 3745-31-05. See b)(2)b.
f.	OAC rule 3745-17-07(A)	Visible particulate emissions from the baghouse stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

(2) Additional Terms and Conditions

- a. This permit to install (PTI) for this air contaminant source takes into account the following voluntary restrictions (including the use of any applicable air pollution control equipment), as provided by the permittee, for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3):
 - i. The use of a baghouse to control sand emissions from the emissions unit.
 - ii. The throughput restrictions as specified in c)(1) and c)(2) below.
- b. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the 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 revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The requirements of amended OAC rule 3745-21-07 do not apply to emissions units that are installed after February 18, 2008.
- c. The baghouse that currently controls this emissions unit also controls other emissions units. The PM and PM₁₀ emission limitations, stated above, only apply to this emissions unit's contribution to the total baghouse emissions.

c) Operational Restrictions

- (1) The amount of sand processed through this emissions unit shall not exceed 49,500 tons per year.

- (2) The amount of combined binder and activator processed through this emissions unit shall not exceed 644 tons per year.

d) **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 particulate emissions from the baghouse serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

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

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

- (2) The permittee shall keep annual records of the following:
- a. the amount of sand, in tons, processed through this emissions unit; and
 - b. the amount of binder/activator, in tons, processed through this emissions unit.
- (3) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the range of 4.0 to 8.5 inches of water, 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 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 the 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 pressure drop 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.

This range of the pressure drop across the baghouse shall be 4.0 to 8.5 inches of water, unless revisions are requested by the permittee and approved in writing by the Northeast District Office of the Ohio EPA. The permittee may request revisions to the permitted range for the pressure drop based upon information obtained during future testing that demonstrates compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a modification.

e) Reporting Requirements

- (1) The permittee shall submit semiannual written reports that identify:
 - a. all days during which any visible particulate emissions were observed from the baghouse that is serving this emissions unit; and

- b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Ohio EPA Northeast District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

- (2) The permittee shall submit quarterly pressure drop deviation (excursion) reports that identify:
 - a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
 - b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the baghouse;
 - c. each incident of deviation described in "a" (above) where a prompt investigation was not conducted;
 - d. each incident of deviation described in "a" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - e. each incident of deviation described in "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.
- (3) The permittee shall submit annual deviation (excursion) reports that identify if the annual sand usage exceeded 49,500 tons.
- (4) The permittee shall submit annual deviation (excursion) reports that identify if the combined annual binder and activator usage exceeded 644 tons.

f) **Testing Requirements**

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation: PM emissions from the baghouse shall not exceed 0.05 pound per hour.

Applicable Compliance Method: Compliance shall be determined by using the following equation:

$$E_{sh} = 0.33 \times TPH \times CE \times (1 - FE) \quad \text{where:}$$

E_{sh} = emissions from stack, pound per hour;

0.33 = emission factor from RACM, page 2-219; Core and Mold Sand Unloading and Storage - 0.03 lb/ton sand unloaded, plus Core Sand and Binder Mixing - 0.3 lb/ton sand mixed (0.03 + 0.3 = 0.33)

TPH = tons of sand processed through emissions unit, maximum capacity of 9.0 tons per hour;

CE = capture efficiency of baghouse, assumed to be 90%, 0.9; and

FE = baghouse efficiency, assumed to be 98%, 0.98.

- b. Emission Limitation: PM emissions from the baghouse shall not exceed 0.15 ton per year.

Applicable Compliance Method: Compliance shall be determined by using the following equation:

$Es_y = [0.33 \times TPY \times CE \times (1 - FE)]/2000$ where:

Es_y = emissions from stack, ton per year;

0.33 = emission factor from RACM, page 2-219; Core and Mold Sand Unloading and Storage - 0.03 lb/ton sand unloaded, plus Core Sand and Binder Mixing - 0.3 lb/ton sand mixed (0.03 + 0.3 = 0.33)

TPY = tons of sand processed through emissions unit, maximum capacity of 49,500 tons per year;

CE = capture efficiency of baghouse, assumed to be 90%, 0.9;

FE = baghouse efficiency, assumed to be 98%, 0.98; and

2000 = conversion factor, pounds per ton.

- c. Emission Limitation: Fugitive particulate emissions shall not exceed 9.6 tons per year.

Applicable Compliance Method: Compliance shall be demonstrated by using the following equation:

$E_{ft} = E_{fec} + E_{fb}$ where

$E_{fec} = [(0.33 \times TPY \times 0.1)]/2000$ where:

E_{fec} = fugitive emissions that escape capture, tons per year;

0.33 = emission factor from RACM, page 2-219; Core and Mold Sand Unloading and Storage - 0.03 lb/ton sand unloaded, plus Core Sand and Binder Mixing - 0.3 lb/ton sand mixed (0.03 + 0.3 = 0.33)

TPY = tons of sand processed through emissions unit, maximum capacity of 49,500 tons of sand per year;

0.1 = fraction that escapes capture from the baghouse, assume to be 10%; and

2000 = conversion factor, pounds per ton.

$$E_{fb} = [0.35 \times (TPY_s + TPY_b)] / 2000 \quad \text{where}$$

E_{fb} = fugitive emissions emitted into the building, tons per year;

0.35 = emission factor from RACM page 2-219 for Core Making, pound of PM per ton of core produced;

TPY_s = tons of sand processed through emissions unit, maximum capacity of 49,500 tons per year;

TPY_b = tons of binder/activator processed through this emissions unit, maximum capacity of 644 tons per year; and

2000 = conversion factor, pounds per ton.

- d. Emission Limitation: Particulate matter less than 10 microns in diameter (PM_{10}) emissions from the baghouse shall not exceed 0.03 pound per hour and 0.07 ton per year.

Applicable Compliance Method: Particulate emissions less than 10 microns in diameter (PM_{10}) are assumed to be 50% of PM emissions.

- e. Emission Limitation: Fugitive particulate matter less than 10 microns in diameter (PM_{10}) shall not exceed 4.8 tons per year.

Applicable Compliance Method: Fugitive particulate emissions less than 10 microns in diameter (PM_{10}) are assumed to be 50% of fugitive PM emissions.

- f. Emission Limitation: OC/VOC emissions shall not exceed 0.94 pound per hour.

Applicable Compliance Method: Compliance shall be determined by using the following equation:

$$E = PPH \times EF \quad \text{where:}$$

E = emissions of OC/VOC, pounds per hour;

PPH = throughput of binder/resin, in pounds, maximum capacity of 240 pounds per hour (binder usage is based on a 1.3% of sand usage)

EF = emission factor from "Casting Emission Reduction Program (CERP); Product Test; HA International Enviroset 22 Furan No-Bake;



Mix/Make/Cure; Storage; Pouring/Cooling/Shakeout; Technikon 1411-113 GI, March 2005.” Furan No-Bake - 0.0039 pound OC/VOC per pound of binder.

- g. Emission Limitation: OC/VOC emissions shall not exceed 2.51 tons per year.

Applicable Compliance Method: Compliance with the annual binder/resin usage limitation of 644 tons is sufficient to demonstrate compliance, or by using the following equation:

$E = [TPY \times EF] / 2000$ where:

E = emissions of OC/VOC, tons per year;

TPY = throughput of binder/resin, in tons, maximum capacity of 644 tons per year;

EF = emission factor from “Casting Emission Reduction Program (CERP); Product Test; HA International Enviroset 22 Furan No-Bake; Mix/Make/Cure; Storage; Pouring/Cooling/Shakeout; Technikon 1411-113 GI, March 2005.” Furan No-Bake - 0.0039 pound OC/VOC per pound of binder.

2000 = conversion factor, pounds per ton.

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

Applicable Compliance Method: If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Method 9.

- g) Miscellaneous Requirements

- (1) None.