Ohio Environmental Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

11/9/2016

Certified Mail

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

Bradley Belden
Belden Brick Plant 3
PO Box 430
Sugarcreek, OH 44701

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0679005018
Permit Number: P0120205
Permit Type: Initial Installation
County: Tuscarawas

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA)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. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**
- **What should you do if you notice a spill or environmental emergency?**

How to appeal this permit

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
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

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. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

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

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

What should you do if you notice a spill or environmental emergency?

Any spill or environmental emergency which may endanger human health or the environment should be reported to the Emergency Response 24-HOUR EMERGENCY SPILL HOTLINE toll-free at (800) 282-9378. Report non-emergency complaints to the appropriate district office or local air agency.

If you have any questions regarding your permit, please contact Ohio EPA DAPC, Southeast District Office at (740)385-8501 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Michael E. Hopkins, P.E.
Assistant Chief, Permitting Section, DAPC

Cc: U.S. EPA
Ohio EPA-SEDO; Pennsylvania; West Virginia

FINAL

Division of Air Pollution Control
Permit-to-Install
for
Belden Brick Plant 3

Facility ID:	0679005018
Permit Number:	P0120205
Permit Type:	Initial Installation
Issued:	11/9/2016
Effective:	11/9/2016

Ohio Environmental Protection Agency

Division of Air Pollution Control
Permit-to-Install
for
Belden Brick Plant 3

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Authorization

Facility ID:	0679005018
Facility Description:	Brick Manufacturing
Application Number(s):	A0054987
Permit Number:	P0120205
Permit Description:	This PTI is an initial installation permit for three emissions units at Belden Bricks Plant 3. The EUs covered by this permit are P364- the softmud/brick dryer, P370- the sand dryer and P376- Plant 3 roadways. All three of these EUs are already installed so this PTI is an after installation permit.
Permit Type:	Initial Installation
Permit Fee:	$1,600.00
Issue Date:	11/9/2016
Effective Date:	11/9/2016

This document constitutes issuance to:

Belden Brick Plant 3
690 Dover Rd. NE
Sugarcreek, OH 44681

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

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Southeast District Office
2195 Front Street
Logan, OH 43138
(740)385-8501

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

Craig W. Butler
Director

Authorization (continued)

Permit Number: P0120205
Permit Description: This PTI is an initial installation permit for three emissions units at Belden Bricks Plant 3. The EUs covered by this permit are P364- the softmud/brick dryer, P370- the sand dryer and P376- Plant 3 roadways. All three of these EUs are already installed so this PTI is an after installation permit.

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

Emissions Unit ID:	**F376**
Company Equipment ID:	Plant 3 Roadways and Parking Areas
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P364**
Company Equipment ID:	Plant 3 Soft Mud Dryer
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P370**
Company Equipment ID:	Plant 3 Sand Dryer
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) 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, Southeast District Office.

(2) Quarterly written reports of (i) any deviations from federally enforceable emissionlimitations, operationalrestrictions, andcontroldeviceoperatingparameterlimitations, 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, Southeast 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, andreportingrequirements contained in this permit shall be submitted to the Ohio EPA DAPC, Southeast 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 theOhio EPA DAPC, Southeast District Officein 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) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the appropriate Ohio EPA District Office or contracted

local air agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the electronic signature date shall constitute the date that the required application, notification or report is considered to be "submitted". Any document requiring signature may be represented by entry of the personal identification number (PIN) by responsible official as part of the electronic submission process or by the scanned attestation document signed by the Authorized Representative that is attached to the electronically submitted written report.

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.

b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

(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.

c) The permittee shall submit progress reports to the Ohio EPA DAPC, Southeast 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, Southeast 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, Southeast 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 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)not exempt from the requirement to obtain a Permit-to-Install.

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 permittee 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 "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update electronically will constitute notifying the Director 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.

Unless otherwise exempted,no emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31 and OAC Chapter 3745-77 if the restarted operation is subject to one or more applicable requirements.

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 operation of the proposed new or modified source(s) as authorized by this permit would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d)must be <u>obtained before</u>operating the source in a manner that would violate the existing Title V permit requirements.

13. Construction Compliance Certification

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

a) Completion of initial installation date shall be enteredupon 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 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. F376, Plant 3 Roadways and Parking Areas

Operations, Property and/or Equipment Description:

Plant 3 roadways and parking areas installed in 1980. 2,100 paved VMT controlled via good housekeeping and sweeping and 1,612 unpaved VMT controlled by watering

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(A)(3)	Fugitive particulate emissions (PE) shall not exceed 0.14 ton per year. Fugitive emissions of particulate matter less than 10 microns (PM_{10}) shall not exceed 0.03 ton per year. For paved roadways and parking areas, no visible PE except for one minute during any 60-minute period. For unpaved roadways and parking areas, no visible PE except for three minutes during any 60-minute period. Best available control measures that are sufficient to minimize or eliminate visible PE of fugitive dust. See b)(2)a.- d. below.
b.	OAC rules 3745-17-07(B) and 3745-17-08(B)	See b)(2)e. below.

(2) Additional Terms and Conditions

a. The permittee shall employ best available control measures on all paved and unpaved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the

permittee's application, the permittee has committed to sweeping the paved roadways and parking areas and water the unpaved roadways and parking areas at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

b. The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for paved roadways and parking areas that are covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.

c. The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.

d. Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.

e. This facility is located in Tuscarawas County, which is not identified in Appendix A of OAC rule 3745-17-08. Therefore, the fugitive dust emissions from this emissions unit are exempt from the fugitive dust control requirements and visible emission limitation established in OAC rules 3745-17-08(B) and 3745-17-07(B), respectively.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Except as otherwise provided in this section, the permittee shall perform inspections of each of the roadway segments and parking areas in accordance with the following frequencies:

Paved roadways and parking areas	Minimum inspection frequency
All	Weekly

Unpaved roadways and parking areas	Minimum inspection frequency
All	Weekly

(2) The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking

area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

(3) The permittee shall maintain records of the following information:

a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;

b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;

c. the dates the control measures were implemented; and

d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

The information required in d)(3)d. shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

(2) The permittee shall submit deviation reports that identify any of the following occurrences:

a. each week during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and

b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

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

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. Emissions Limitation:

Fugitive PE shall not exceed 0.14 ton per year.

Applicable Compliance Method:

Unpaved Roadways and Parking Areas:

The emission factor calculation for unpaved roadways and parking areas in AP-42 Section 13.2.2 (11/06) shall be utilized to determine compliance. The emissions limitation from unpaved roadways has been established using inputs representing current conditions as follows:

$EF = [k((s/12)^a)((W/3)^b)[(365-p)/365)]$

Where:

EF = size-specific emission factor (lb/VMT) k = (dimension less constant) particle size multiplier = 4.9 s = silt content of road surface material (%) = 4.8% a = dimension less constant = 0.7 W = mean vehicle weight (tons) = 13.75 b = dimension less constant = 0.45 p = days/yr with > 0.10 inch precipitation = 140

Therefore, EF = 3.16 lbs PE/VMT

Maximum travel = 1,612.59 VMT/year

= VMT/yr X lbs/VMT X 1 ton/2000 lbs

= 1,612.59 VMT/yr X 3.16 lbs/VMT X 1 ton/2000 lbs

= 2.54 tons of PE/year

Assume 95% control for 3 in 60 min VE limit

= 2.54 tons/year X (1 – 0.95)

= 0.13 ton of PE controlled/year

Paved Roadways and Parking Areas:

The emission factor calculation for paved roadways and parking areas in AP-42 Section 13.2.1 (1/11) shall be utilized to determine compliance. The emissions limitation from paved roadways has been established using inputs representing current conditions as follows:

$E = (k(sL)^{0.91}*(W)^{1.02}))*(1-P/(4*365))$

Where:

EF = size-specific emission factor (lb/VMT) k = (dimension less constant) particle size multiplier = 0.011 sL = road

surface silt loading for asphalt = 8.2 W = mean vehicle weight (tons) =3.13 P = days/yr with > 0.10 inch precipitation = 140

Therefore, EF = 0.22 lb PE/VMT

Maximum travel = 2,100.02 VMT/year

= VMT/yr X lbs/VMT X 1 ton/2000 lbs

= 2,100.02 VMT/yr X 0.22 lb/VMT X 1 ton/2,000 lbs

= 0.23 ton of PE/year

Assume 95% control for 1 in 60 min VE limit

= 0.23 ton/year X (1 – 0.95)

= 0.01 ton of PE controlled/year

Total:

= 0.13 ton/year + 0.01 ton/year

= 0.14 ton/year

b. Emissions Limitation:

Fugitive PM_{10} emissions shall not exceed 0.03 ton per year.

Applicable Compliance Method:

Unpaved Roadways and Parking Areas:

The emission factor calculation for unpaved roadways and parking areas in AP-42 Section 13.2.2 (11/06) shall be utilized to determine compliance. The emissions limitation from unpaved roadways has been established using inputs representing current conditions as follows:

$EF = [k((s/12)^a)((W/3)^b)[(365-p)/365)]$

Where:

EF = size-specific emission factor (lb/VMT) k = (dimension less constant) particle size multiplier = 1.5 s = silt content of road surface material (%) = 4.8% a = dimension less constant = 0.9 W = mean vehicle weight (tons) =13.75 b = dimension less constant = 0.45 p = days/yr with > 0.10 inch precipitation = 140

Therefore, EF = 0.80 lb PM_{10}/VMT

Maximum travel = 1.612.59 VMT/year

= VMT/yr X lbs/VMT X 1 ton/2000 lbs

= 1,612.59 VMT/yr X 0.80 lb/VMT X 1 ton/2000 lbs

= 0.65 ton of PM_{10}/year

Assume 95% control for 3 in 60 min VE limit

= 0.65 ton/year X (1 – 0.95)

= 0.03 ton of PM_{10} controlled/year

Paved Roadways and Parking Areas:

The emission factor calculation for paved roadways and parking areas in AP-42 Section 13.2.1 (1/11) shall be utilized to determine compliance. The emissions limitation from paved roadways has been established using inputs representing current conditions as follows:

$E = (k(sL)^{0.91}*(W)^{1.02}))*(1-P/(4*365))$

Where

EF = size-specific emission factor (lb/VMT) k = (dimension less constant) particle size multiplier = 0.0022 sL = road surface silt loading for asphalt = 8.2 W = mean vehicle weight (tons) = 3.13 P = days/yr with > 0.10 inch precipitation = 140

Therefore, EF = 0.04 lb PM_{10}/VMT

Maximum travel = 2,100.02 VMT/year

= VMT/yr X lbs/VMT X 1 ton/2000 lbs

= 2,100.02 VMT/yr X 0.04 lb/VMT X 1 ton/2,000 lbs

= 0.05 ton of PM_{10}/year

Assume 95% control for 1 in 60 min VE limit

= 0.05 ton/year X (1 – 0.95)

= 0.002 ton of PM_{10} controlled/year

Total:

= 0.03 ton/year + 0.002 ton/year

= 0.03 PM_{10} ton/year

c. Emissions Limitation:

For paved roadways and parking areas, no visible PE except for one minute during any 60-minute period.

Applicable Compliance Method:

If required, visible PE shall be determined according to USEPA Method 22.

d. Emissions Limitation:

For unpaved roadways and parking areas, no visible PE except for three minute during any 60-minute period.

Applicable Compliance Method:

If required, visible PE shall be determined according to USEPA Method 22.

g) Miscellaneous Requirements

(1) None.

2. P364, Plant 3 Soft Mud Dryer

Operations, Property and/or Equipment Description:

Plant 3 soft mud dryer with a max throughput of 18.5 tons of brick per hour equipped with a 6.0 mmBTU/hr natural gas heater. The dryer was installed in 1980.

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(A)(3)	Nitrogen oxides (NO_x) emissions shall not exceed 1.8 pounds per hour and 7.94 tons per year. Carbon monoxide (CO) emissions shall not exceed 5.74 pounds per hour and 25.12 tons per year. Volatile organic compound (VOC) emissions shall not exceed 0.56 pound per hour and 2.43 tons per year. Particulate emissions (PE), emissions of particulate matter less than 10 microns (PM_{10}) and emissions of particulate matter less than 2.5 microns ($PM_{2.5}$) shall not exceed 3.46 pounds per hour and 15.2 tons per year. No visible PE shall be discharged into the atmosphere from any stack serving the brick drying system.
b.	OAC rules 3745-17-11 and 3745-17-07(A)	See b)(2)a. below.
c.	OAC rule 3745-18-06	See b)(2)b. below.

(2) Additional Terms and Conditions

a. The uncontrolled mass rate of PE from this emissions unit is less than 10 pounds per hour as determined by emissions factors from AP 42 Chapter 11.3. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply pursuant to OAC rule 3745-17-11(A)(2)(b)(ii). This emissions unit is also exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.

b. This emissions unit is exempt from the sulfur dioxide emission limitations specified in OAC rule 3745-18-06, pursuant to OAC rule 3745-18-06(B), because the unit is less than ten MMBtu per hour total rated capacity.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) None.

e) Reporting Requirements

(1) None.

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. Emissions Limitation:

NO_x emissions shall not exceed 1.8 pounds per hour and 7.94 tons per year.

Applicable compliance Method:

Compliance with the hourly NO_x emissions limitation is demonstrated by the following equation using an emission factor from AP-42 Table 11.3-3 (7/98) and a maximum throughput of 18.5 tons/hour:

= 0.098 lb NO_x /ton X 18.5 tons/hour

= 1.8 lbs/hr

If required, NO_x emissions shall be determined according to test Methods 1 - 4, and 7 as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-

approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the annual NO_x emissions limitation is demonstrated by multiplying the hourly emission rate by 8,760 hours per year and dividing by 2,000 pounds per ton.

= 1.8 lbs/hr X 8,760 hrs/yr X 1 ton/2,000 lbs

= 7.94 tons/yr

b. Emissions Limitation:

CO emissions shall not exceed 5.74 pounds per hour and 25.12 tons per year.

Applicable Compliance Method:

Compliance with the hourly CO emissions limitation is demonstrated by the following equation using an emission factor from AP-42 Table 11.3-3 (7/98) and a maximum throughput of 18.5 tons/hr:

= 0.31 lb CO/ton X 18.5 tons/hour

= 5.74 lbs/hr

If required, CO emissions shall be determined according to test Methods 1 - 4, and 10 as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the annual CO emissions limitation is demonstrated by multiplying the hourly emission rate by 8,760 hours per year and dividing by 2,000 pounds per ton.

= 5.74 lbs/hr X 8,760 hrs/yr X 1 ton/2,000 lbs

= 25.14 tons/yr

c. Emissions Limitation:

VOC emissions shall not exceed 0.56 pound per hour and 2.43 tons per year.

Applicable Compliance Method:

Compliance with the hourly VOC emissions limitation is demonstrated by the following equation using an emission factor from AP-42 Table 11.3-5 (7/98) and a maximum throughput of 18.5 tons/hr:

= 0.03 lb VOC/ ton X 18.5 tons/hour

= 0.56 lb/hr

If required, VOC emissions shall be determined according to test Methods 1 - 4, and 18, 25, or 25A as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources". Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the annual VOC emissions limitation is demonstrated by multiplying the hourly emission rate by 8,760 hours per year and dividing by 2,000 pounds per ton.

= 0.56 lb/hr X 8,760 hrs/yr X 1 ton/2,000 lbs

= 2.43 tons/yr

d. Emissions Limitation:

PE and emissions of PM_{10} and $PM_{2.5}$ shall not exceed 3.46 pounds per hour and 15.2 tons per year.

Applicable Compliance Method:

Compliance with the hourly PE/PM_{10}/$PM_{2.5}$ emissions limitation is demonstrated by the following equation using emission factors from AP-42 Table 11.3-1 (7/98) and a maximum throughput of 18.5 tons/hr:

= 0.077 + 0.11 lb PE/PM_{10}/$PM_{2.5}$/ton X 18.5 tons/hour

= 3.46 lb/hr

If required, PE shall be determined according to test Methods 1 - 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources", and PM_{10}/$PM_{2.5}$ emissions shall be determined according to test Methods 201/201A, and 202 as set forth in 40 CFR Part 51, Appendix M. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

Compliance with the annual emissions limitation is demonstrated by multiplying the hourly emission rate by 8,760 hours per year and dividing by 2,000 pounds per ton.

(3.46 lbs/hr)(8,760 hrs/yr)(1 ton/2,000 lbs) = 15.2 tons/yr

e. Emissions Limitation:

No visible PE shall be discharged into the atmosphere from any stack serving the brick drying system.

Applicable Compliance Method:

If required, visible particulate emissions shall be determined according to USEPA Method 22.

g) Miscellaneous Requirements

(1) None.

3. P370, Plant 3 Sand Dryer

Operations, Property and/or Equipment Description:

Plant 3 sand dryer installed in 1981 with a max throughput of 2.5 tons per hour. This EU includes the load-in and out of 5 sand bunkers, the load in of sand to a hopper, transfers to a belt conveyor, bucket chute, sand dryer and load out to a sand bunker. The dryer is equipped with a 0.6 MMBtu/hr and controlled by a baghouse with 100% control efficiency and 99.5% capture efficiency.

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(A)(3)	Fugitive particulate emissions (PE) shall not exceed 0.02 pound per hour and 0.088 ton per year. Fugitive emissions of particulate matter less than 10 microns (PM_{10}) shall not exceed 0.008 pound per hour and 0.035 ton per year. Fugitive emissions of particulate matter less than 2.5 microns ($PM_{2.5}$) shall not exceed 0.001 pound per hour and 0.004 ton per year. Stack PE shall not exceed 0.025 pound per hour and 0.011 ton per year. No emissions shall be discharged into the atmosphere from any stack serving the sand drying system or any fugitive emissions that exhibit greater than 10 percent opacity. Best available control measures that are sufficient to minimize or eliminate visible

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		emissions of fugitive dust. See b)(2)a. below.
b.	OAC rules 3745-17-11 and 3745-17-07(A)	See b)(2)b. below.
c.	OAC rules 3745-17-07(B) and 3745-17-08(B)	See b)(2)c. below.

(2) Additional Terms and Conditions

a. The permittee shall employ best available control measures for the above-identified sand drying operations for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permit application, the permittee will maintain the building enclosure which encompasses all of the above-mentioned sand drying operations, and will ensure that the dryer baghouse capture 99.5% of the emissions from the sand drying operations. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

b. The uncontrolled mass rate of PE from this emissions unit is less than 10 pounds per hour as determined by emissions factors from AP 42 Chapter 11.19. Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, Table I of OAC rule 3745-17-11 does not apply pursuant to OAC rule 3745-17-11(A)(2)(b)(ii). This emissions unit is also exempt from the visible particulate emission limitations specified in OAC rule 3745-17-07(A), pursuant to OAC rule 3745-17-07(A)(3)(h), because the emissions unit is not subject to the requirements of OAC rule 3745-17-11.

c. This facility is located in Tuscarawas County, which is not identified in Appendix A of OAC rule 3745-17-08. Therefore, the fugitive dust emissions from this emissions unit are exempt from the fugitive dust control requirements and visible emission limitation established in OAC rules 3745-17-08(B) and 3745-17-07(B), respectively.

c) Operational Restrictions

(1) None.

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 stack serving this emissions unit and any visible emissions of fugitive dust from egress points from the building housing the dross handling emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

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

d. the total duration of any visible emissions 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 emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions 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.

e) Reporting Requirements

(1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

(2) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;

b. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and

c. any corrective actions taken to minimize or eliminate the visible particulate emissions from the stack and/or visible emissions of fugitive dust.

These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

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. Emissions Limitation:

Fugitive particulate emissions (PE) shall not exceed 0.02 pound per hour and 0.088 tons per year.

Applicable Compliance Method:

Compliance with the hourly PE emissions limitation is demonstrated by the following one-time calculation using emission factors from AP-42 13.2.4, Equation 1 (11/06) and AP-42 11.19.2(8/04) and a maximum throughput of 2.5 tons/hr:

<u>Load-in and Load out of 5 sand bunkers (only one can be loaded at a time) +Load-in of feed hopper</u>

= 0.00421 lb PE/ton X 2.5 TPH X 3 emissions points X 70% (building settling factor)

= 0.0095 lb PE/hr

EF from AP-42 13.2.4, Equation 1 (11/06)

<u>Transfer from feed hopper to belt conveyor + Transfer of belt conveyor to bucket elevator</u>

= 0.003 lb PE/ton X 2.5 TPH X 2 emissions points X 70% (building settling factor)

= 0.0045 lb PE/hr

EF from AP-42 11.19.2 (8/04)

<u>Transfer from belt conveyor to sand dryer (in building)</u>

= 0.003 lb PE/ton X 2.5 TPH X 70% (building settling factor)

= 0.00225 lb PE/hr

EF from AP-42 11.19.2 (8/04)

<u>Transfer from dryer to sand bunker (in building)</u>

= 0.003 lb PE/ton X 2.5TPH X 70% (building settling factor)

= 0.00225 lb PE/hr

EF from AP-42 11.19.2 (8/04)

<u>Total Fugitive lbs PE/hr</u>

= 0.0095 lb PE/hr + 0.0045 lb PE/hr + 0.00225 lb PE/hr + 0.00225 lb PE/hr

= 0.019 lb PE/hour

Compliance with the annual emissions limitation is demonstrated by multiplying the hourly emission rate by 8,760 hours per year and dividing by 2,000 pounds per ton.

= 0.02 lb PE/hr X 8,760 hrs/yr X 1 ton/2,000 lbs

= 0.083 ton/yr

b. Emissions Limitation:

Fugitive emissions of PM_{10} shall not exceed 0.008 pound per hour and 0.035 ton per year.

Applicable Compliance Method:

Compliance with the hourly PM_{10} emissions limitation is demonstrated by the following one-time calculation using emission factors from AP-42 13.2.4, Equation 1 (11/06) and AP-42 11.19.2(8/04) and a maximum throughput of 2.5 tons/hr:

<u>Load-in and Load out of 5 sand bunkers (only one can be loaded at a time) + Load-in of feed hopper</u>

= 0.00199 lb PM_{10}/ton X 2.5 TPH X 3 emissions points X 70% (building settling factor)

= 0.0048 lb PM_{10}/hr

EF from AP-42 13.2.4, Equation 1 (11/06)

<u>Transfer from feed hopper to belt conveyor + Transfer of belt conveyor to bucket elevator</u>

= 0.0011 lb PM_{10}/ton X 2.5 TPH X 2 emissions points X 70% (building settling factor)

= 0.0017 lb PM_{10}/hr

EF from AP-42 11.19.2 (8/04)

<u>Transfer from belt conveyor to sand dryer (in building)</u>

= 0.0011 lb PM_{10}/ton X 2.5 TPH X 70% (building settling factor)

= 0.00083 lb PM_{10}/hr

EF from AP-42 11.19.2 (8/04)

<u>Transfer from dryer to sand bunker (in building)</u>

= 0.0011 lb PM_{10}/ton X 2.5 TPH X 70% (building settling factor)

= 0.00083 lb PM_{10}/hr

EF from AP-42 11.19.2 (8/04)

Total Fugitive lb PM_{10}/hr

= 0.0048 lb PM_{10}/hr + 0.0017 lb PM_{10}/hr + 0.00083 lb PM_{10}/hr + 0.00083 lb PM_{10}/hr

= 0.008 lb PM_{10}/hr

Compliance with the annual emissions limitation is demonstrated by multiplying the hourly emission rate by 8,760 hours per year and dividing by 2,000 pounds per ton.

= 0.008 lb PE/hr X 8,760 hrs/yr X 1 ton/2,000 lbs

= 0.035 ton/yr

c. Emissions limitation:

Fugitive emissions of particulate matter less than 2.5 microns ($PM_{2.5}$) shall not exceed 0.001 pound per hour and 0.004 ton per year.

Applicable Compliance Method:

Compliance with the hourly $PM_{2.5}$ emissions limitation is demonstrated by the following one-time calculation using emission factors from AP-42 13.2.4, Equation 1 (11/06) and AP-42 11.19.2(8/04) and a maximum throughput of 2.5 tons/hr:

Load-in and Load out of 5 sand bunkers (only one can be loaded at a time) + Load-in of feed hopper

= 0.0003 lb $PM_{2.5}$/ton X 2.5 TPH X 3 emissions points X 70% (building settling factor)

= 0.0007 lb $PM_{2.5}$/hr

EF from AP-42 13.2.4, Equation 1 (11/06)

Transfer from feed hopper to belt conveyor + Transfer of belt conveyor to bucket elevator

= 0.0001 lb $PM_{2.5}$/ton X 2.5 TPH X 2 emissions points X 70% (building settling factor)

= 0.0002 lb $PM_{2.5}$/hr

EF from AP-42 11.19.2 (8/04) and the 0.1 $PM_{2.5}/PM_{10}$ ratio from the “Analysis of the Fine Fraction of Particulate Matter in Fugitive Dust” report.

Transfer from belt conveyor to sand dryer (in building)

= 0.0001 lb $PM_{2.5}$/ton X 2.5 TPH X 70% (building settling factor)

= 0.00008 lb $PM_{2.5}$/hr

EF from AP-42 11.19.2 (8/04) and the 0.1 $PM_{2.5}/PM_{10}$ ratio from the "Analysis of the Fine Fraction of Particulate Matter in Fugitive Dust" report.

Transfer from dryer to sand bunker (in building)

= 0.0001 lb $PM_{2.5}$/ton X 2.5TPH X 70% (building settling factor)

= 0.00008 lb $PM_{2.5}$/hr

EF from AP-42 11.19.2 (8/04) and the 0.1 $PM_{2.5}/PM_{10}$ ratio from the "Analysis of the Fine Fraction of Particulate Matter in Fugitive Dust" report.

Total Fugitive lb $PM_{2.5}$/hr

= 0.0007 lb $PM_{2.5}$/hr + 0.0002 lb $PM_{2.5}$/hr + 0.00008 lb $PM_{2.5}$/hr + 0.00008 lb $PM_{2.5}$/hr

= 0.0010 lb $PM_{2.5}$/hr

Compliance with the annual emissions limitation is demonstrated by multiplying the hourly emission rate by 8,760 hours per year and dividing by 2,000 pounds per ton.

= 0.0010 lb PE/hr X 8,760 hrs/yr X 1 ton/2,000 lbs

= 0.004 ton/yr

d. Emissions Limitation:

Stack PE shall not exceed 0.025 pound per hour and 0.011 ton per year.

Applicable Compliance Method:

Compliance with the hourly PE emissions limitation is demonstrated by the following calculation using emission factors from AP-42 11.19.2(8/04) and a maximum throughput of 2.5 tons/hr:

Sand dryer emissions (baghouse control)

= 0.010 lb PE/ton X 2.5 TPH

= 0.025 lb PE/hr

EF from AP-42 Table 11.19.1-1 (8/04)

Compliance with the annual emissions limitation is demonstrated by multiplying the hourly emission rate by 8,760 hours per year and dividing by 2,000 pounds per ton.

= 0.025 lb PE/hr X 8,760 hrs/yr X 1 ton/2,000 lbs

= 0.11 ton/year

If required, PE shall be determined according to test Methods 1 - 5, as set forth in the "Appendix on Test Methods" in 40 CFR, Part 60 "Standards of Performance for New Stationary Sources. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA, Southeast District Office.

e. Emissions Limitation:

No emissions shall be discharged into the atmosphere from any stack serving the sand drying system or any fugitive emissions that exhibit greater than 10 percent opacity.

Applicable Compliance Method:

If required, visible particulate emissions shall be determined according to USEPA Method 22.

g) Miscellaneous Requirements

(1) None.