



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

2/7/2013

Certified Mail

Braden Stocker
 Stocker Sand & Gravel Co. - Plant #1
 7574 State Route 36 SE
 P.O. Box 176
 Gnadenhutten, OH 44629

No	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MODELING SUBMITTED
No	SYNTHETIC MINOR TO AVOID TITLE V
No	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0679000081
 Permit Number: P0105460
 Permit Type: Renewal
 County: Tuscarawas

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. 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**

How to appeal this permit

The issuance of this PTIO 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/dapc/permitsurvey.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.

If you have any questions, 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 W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: Ohio EPA-SEDO



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
Stocker Sand & Gravel Co. - Plant #1**

Facility ID:	0679000081
Permit Number:	P0105460
Permit Type:	Renewal
Issued:	2/7/2013
Effective:	2/7/2013
Expiration:	1/9/2023



Division of Air Pollution Control
Permit-to-Install and Operate
for
Stocker Sand & Gravel Co. - Plant #1

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Final Permit-to-Install and Operate
Stocker Sand & Gravel Co. - Plant #1
Permit Number: P0105460
Facility ID: 0679000081
Effective Date: 2/7/2013

Authorization

Facility ID: 0679000081
Application Number(s): A0038379, A0041485
Permit Number: P0105460
Permit Description: PTIO Renewal permits for F004 (storage piles), F006 (concrete batch plant) and F007 (concrete block plant).
Permit Type: Renewal
Permit Fee: \$0.00
Issue Date: 2/7/2013
Effective Date: 2/7/2013
Expiration Date: 1/9/2023
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Stocker Sand & Gravel Co. - Plant #1
7574 State Route 36 SE
Gnadenhutten, OH 44629

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

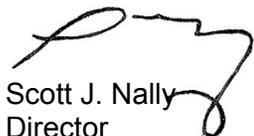
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

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

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (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 described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Scott J. Nally
Director



Final Permit-to-Install and Operate
Stocker Sand & Gravel Co. - Plant #1
Permit Number: P0105460
Facility ID: 0679000081
Effective Date: 2/7/2013

Authorization (continued)

Permit Number: P0105460
Permit Description: PTIO Renewal permits for F004 (storage piles), F006 (concrete batch plant) and F007 (concrete block plant).

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

Emissions Unit ID:	F004
Company Equipment ID:	Storage Piles
Superseded Permit Number:	06-3928
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	F006
Company Equipment ID:	Concrete Batch Plant
Superseded Permit Number:	06-3928
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	F007
Company Equipment ID:	Concrete Block Plt.
Superseded Permit Number:	06-3928
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
Stocker Sand & Gravel Co. - Plant #1
Permit Number: P0105460
Facility ID: 0679000081
Effective Date: 2/7/2013

A. Standard Terms and Conditions



1. What does this permit-to-install and operate ("PTIO") allow me to do?

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. Who is responsible for complying with this permit?

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. What records must I keep under this permit?

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. What are my permit fees and when do I pay them?

There are two fees associated with permitted air contaminant sources in Ohio:

- PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. When does my PTIO expire, and when do I need to submit my renewal application?

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is



very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.



10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Ohio EPA DAPC, Southeast District Office in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means 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.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting¹ a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emissions unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

¹ Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile 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).



13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.



Final Permit-to-Install and Operate
Stocker Sand & Gravel Co. - Plant #1
Permit Number: P0105460
Facility ID: 0679000081
Effective Date: 2/7/2013

B. Facility-Wide Terms and Conditions



1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
 - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) None.



Final Permit-to-Install and Operate
Stocker Sand & Gravel Co. - Plant #1
Permit Number: P0105460
Facility ID: 0679000081
Effective Date: 2/7/2013

C. Emissions Unit Terms and Conditions



1. F004, Storage Piles

Operations, Property and/or Equipment Description:

Load-in, load-out and wind erosion from up to five aggregate and sand storage piles with a maximum throughput of 5,256,000 tons per year and a maximum total surface area of 50.2 acres; supersedes PTI No. 06-3929 issued on 1/12/94

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. None.
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. None.
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Fugitive particulate emissions (PE) shall not exceed 0.49 tons per year. No visible particulate emissions (PE), except for one minute 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.-e. below.
b.	OAC rule 3745-17-07(B)	See b)(2)f. below.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-08(B)	See b)(2)g. below.

(2) Additional Terms and Conditions

- a. The permittee shall employ best available control measures on all load-in and load-out operations associated with the storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's application, the permittee has committed to maintain minimal drop heights and maintain inherent moisture content, and apply chemical stabilization/dust suppressants and/or water at sufficient treatment frequencies to ensure compliance. The operator shall avoid dragging any front-end loader bucket along the ground. Nothing in this paragraph shall prohibit the permittee from employing other equally-effective control measures to ensure compliance.
- b. The above-mentioned control measure(s) shall be employed for each load-in and load-out operation of each storage pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during any such operation until further observation confirms that use of the measure(s) is unnecessary.
- c. The permittee shall employ best available control measures for wind erosion from the surfaces of all storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's application, the permittee has committed to maintain minimal drop heights and maintain inherent moisture content and to apply chemical stabilization/dust suppressants and/or water at sufficient treatment to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other equally-effective control measures to ensure compliance.
- d. The above-mentioned control measure(s) shall be employed for wind erosion from each pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Implementation of the control measure(s) shall not be necessary for a storage pile 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.
- e. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-31-05(A)(3).



- f. This emissions unit is exempt from the visible PE limitation specified in OAC rule 3745-17-07(B) pursuant to OAC rule 3745-17-07(B)(11)(e).
- g. The facility is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B)(1).

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 load-in operation at each storage pile in accordance with the following frequencies:

<u>storage pile identification</u>	<u>minimum load-in inspection frequency</u>
all	weekly

- (2) Except as otherwise provided in this section, the permittee shall perform inspections of each load-out operation at each storage pile in accordance with the following frequencies:

<u>storage pile identification</u>	<u>minimum load-out inspection frequency</u>
all	weekly

- (3) Except as otherwise provided in this section, the permittee shall perform inspections of the wind erosion from pile surfaces associated with each storage pile in accordance with the following frequencies:

<u>storage pile identification</u>	<u>minimum wind erosion inspection frequency</u>
all	weekly

- (4) No inspection shall be necessary for wind erosion from the surface of a storage pile when the pile is covered with snow and/or ice and for any storage pile activity 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.

- (5) The purpose of the inspections is to determine the need for implementing the control measures specified in this permit for load-in and load-out of a storage pile, and wind erosion from the surface of a storage pile. The inspections shall be performed during representative, normal storage pile operating conditions.



- (6) 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, for wind erosion from pile surfaces, the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measure(s).
- (7) The information required in d)(6)d. shall be kept separately for (i) the load-in operations, (ii) the load-out operations, and (iii) the pile surfaces (wind erosion), and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.
- e) Reporting Requirements
- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
 - (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.
- f) Testing Requirements
- (1) Compliance with the emissions limitations and/or control requirements specified in b)(1) of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emissions Limitation:
Fugitive PE shall not exceed 0.49 ton per year.
 - Applicable Compliance Method:
Compliance shall be determined based on the emission factor equations for drop operations associated with storage piles in AP-42 section 13.2.4 (11/06) and for wind erosion from storage piles in U.S.EPA's "Fugitive Dust Background Document and Technical Information Document for Best Available Control



Measures" (9/92). These emission limits were based on a maximum production of 5,256,000 tons per year, a maximum storage surface area less than or equal to 50.2 acres, and 95% control efficiency.

Load-in/Load-out

$$E = k (0.0032)[(U/5)^{1.3}/(M/2)^{1.4}]$$

Where:

- E = emission factor (lb/ton);
- k = particle size multiplier for TSP (dimensionless) = 0.74;
- U = mean wind speed expressed in miles per hour (MPH) = 8.02; and
- M = material moisture content = 8.5%.

Therefore, E = 0.000577 lb PE/ton

Maximum annual load-in throughput = 5,256,000 tons per year
 Maximum annual load-out throughput= 5,256,000 tons per year

$$\begin{aligned} \text{PE (tons/yr)} &= [(5,256,000 \text{ tons/yr})(0.000577 \text{ lb PE/ton}) + (5,256,000 \\ &\quad \text{tons/yr})(0.000577 \text{ lb PE/ton})] \times 1 \text{ ton}/2,000 \text{ lbs} \\ &= 3.03 \text{ tons per year uncontrolled PE} \end{aligned}$$

Assume 95% control efficiency (per permittee's application)

$$3.03 \text{ tons per year} \times (1-0.95) = 0.15 \text{ ton per year controlled PE}$$

Wind Erosion

$$E = 1.7(s/1.5)((365-p)/235)(f/15)$$

Where:

- E = emission factor expressed in pounds (lbs) /day/acre;
- s = silt content of stored material (%) = 0.7 %;
- p = number of rain days per year > 0.01 in = 136;
- f = percentage of time wind speed exceeds 12 mph (%) = 14.52; and
- A = total surface area of storage piles (acres) = 50.2

Therefore, E = 0.74834 lb/day/acre

$$\begin{aligned} \text{PE (tons/yr)} &= 0.74834 \text{ lbs/day/acre} \times 365 \text{ days/yr} \times 50.2 \text{ acres} \times 1 \\ &\quad \text{ton}/2,000 \text{ lbs} \\ &= 6.86 \text{ tons per year uncontrolled PE} \end{aligned}$$

Assume 95% control efficiency (per permittee's application)

$$6.86 \text{ tons/year} \times (1-0.95) = 0.34 \text{ ton per year controlled PE}$$



Total Emissions

0.15tons/yr + 0.34tons/yr = 0.49 ton per year PE

b. Emission Limitation:

No visible PE except for one minute during any 60-minute period.

Applicable Compliance Method:

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

g) Miscellaneous Requirements

(1) None.



2. F006, Concrete Batch Plant

Operations, Property and/or Equipment Description:

150 ton per hour concrete batch plant; includes cement silo loading controlled with bin vent(s), transfers of sand and aggregate to elevated storage bins within a building enclosure, partially enclosed weigh hopper loading of cement, sand and aggregate, and loading of transit-mix trucks controlled with an adjustable gathering hopper; supersedes PTI No. 06-3928 issued on January 5, 1994 for EUs F005 and F006

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

(a) None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

(a) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
<i>Transfer of Aggregate and Sand to Elevated Bins</i>		
a.	OAC rule 3745-31-05(A)(3)	Fugitive particulate emissions (PE) shall not exceed 0.78 ton per year. Visible PE shall not exceed 10 percent opacity, as a 3-minute average. Best available control measures to minimize or eliminate visible emissions of fugitive dust. See b)(2)a. below.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rules 3745-17-07(B) and 3745-17-08(B)	See b)(2)b. and c. below.
<i>Portland Cement Silos (2)</i>		
c.	OAC rule 3745-31-05(A)(3)	<p>The bin vent(s) serving the cement silos shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases or there shall be no visible particulate emissions from the outlet(s).</p> <p>PE shall not exceed 0.18 ton per year.</p> <p>See b)(2)d. below.</p>
d.	OAC rules 3745-17-07(B) and 3745-17-08(B)	See b)(2)b. and c. below.
e.	OAC rules 3745-17-07(A) and 3745-17-11(B)	See b)(2)e. below.
<i>Weigh Hopper Loading of Aggregate, Sand and Cement</i>		
f.	OAC rule 3745-31-05(A)(3)	<p>Fugitive PE shall not exceed 3.15 tons per year.</p> <p>Visible PE shall not exceed 10 percent opacity, as a 3-minute average.</p> <p>Best available control measures to minimize or eliminate visible emissions of fugitive dust.</p> <p>See b)(2)f. below.</p>
g.	OAC rule 3745-17-07(B) and OAC rule 3745-17-08(B)	See b)(2)b. and c. below.
h.	OAC rule 3745-17-07(A) and OAC rule 3745-17-11(B)	See b)(2)e.
<i>Truck Loading of Aggregate, Sand and Cement</i>		
i.	OAC rule 3745-31-05(A)(3)	Fugitive PE shall not exceed 36.75 tons



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		per year. Visible PE shall not exceed 10 percent opacity, as a 3-minute average. Best available control measures to minimize or eliminate visible emissions of fugitive dust. See b)(2)g. below.
j.	OAC rule 3745-17-07(B) and OAC rule 3745-17-08(B)	See b)(2)b. and c. below.
k.	OAC rule 3745-17-07(A) and OAC rule 3745-17-11(B)	See b)(2)e. below.

(2) Additional Terms and Conditions

- a. The permittee shall employ best available control measures for all transfers of sand and aggregate to elevated bins for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's application, the permittee has committed to maintain the building enclosure to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other equally-effective control measures to ensure compliance.
- b. This emissions unit is exempt from the visible PE limitation specified in OAC rule 3745-17-07(B) pursuant to OAC rule 3745-17-07(B)(11)(e).
- c. The facility is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B)(1).
- d. The permittee shall employ best available control measures for the Portland cement silos for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's application, the permittee has committed to transfer material pneumatically to the silos and to employ bin vent(s) with a control efficiency of 99.99% to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other equally-effective control measures to ensure compliance.



- e. The requirements established pursuant to OAC rule 3745-17-07(A) and OAC rule 3745-17-11(B) are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
 - f. The permittee shall employ best available control measures for the weigh hopper loading of cement, sand and aggregate for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's application, the permittee has committed to maintain the partial enclosure and maintain the inherent moisture content of the material transferred to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other equally-effective control measures to ensure compliance.
 - g. The permittee shall employ best available control measures for the truck loading of aggregate, sand, and cement for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's application, the permittee has committed to use an adjustable gathering hopper to return material to each truck to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other equally-effective control measures to ensure compliance.
- c) Operational Restrictions
- (1) None
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall perform weekly checks, when the emissions unit is in operation, and when the weather conditions allow, for any visible PE from the fabric filters serving this emissions unit. No inspections are required on days the material handling operations are not in operation. The presence or absence of any visible particulate emissions shall be recorded electronically or in an operations log. If visible particulate emissions are observed, the permittee shall also note the following in the operations log:
 - a. the total duration of any visible emission incident; and
 - b. any corrective actions taken to eliminate the visible emissions.The information above shall be kept separately for each fabric filter serving this emissions unit.
 - (2) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from each sand and/or aggregate transfer point and truck loading serving this emissions unit. No inspections are required on days the material handling operations are not in operation. The presence or absence of any visible emissions shall be noted in an operations log. If visible particulate emissions are observed, the permittee shall also note the following in the operations log:



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

The information above shall be kept separately for each sand and/or aggregate transfer point and truck loading serving this emissions unit.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

f) Testing Requirements

- (1) Compliance with the emissions limitations and/or control requirements specified in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitations:

Each bin vent serving a cement silo shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases or there shall be no visible particulate emissions from the outlet(s).

Applicable Compliance Method:

If required, particulate emissions 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/or USEPA Method 22, and the procedures specified in OAC rule 3745-17-03(B)(7).

b. Emission Limitations:

For the transfer of aggregate and sand to elevated bins, fugitive PE shall not exceed 0.78 ton per year.
For the Portland cement silos, PE shall not exceed 0.18 ton per year.



For weigh hopper loading of aggregate, sand and cement, fugitive PE shall not exceed 3.15 tons per year.

For truck loading of aggregate, sand and cement, fugitive PE shall not exceed 36.75 tons per year.

Applicable Compliance Methods:

Compliance with the annual emissions limitations shall be determined based on the emission factors in AP-42 Table 11.12.2 (6/06) and RACM (8/83) and a maximum production rate of 1,314,000 tons per year calculated as follows:

Transfer of aggregate and sand to elevated bins

$$\begin{aligned}
 \text{Fugitive PE (tons/yr)} &= [(\text{maximum aggregate transfer rate (tons/hr)} \times \text{aggregate transfer emissions factor (lb/ton)} + \\
 &\quad (\text{maximum sand transfer rate (tons/hr)} \times \text{sand transfer emissions factor})] \times \text{building settling factor} \\
 &\quad \times 8,760 \text{ hours/yr} \times 1 \text{ ton}/2,000 \text{ pounds} \\
 &= [(69.53 \text{ tons/hr} \times 0.0069 \text{ lb PE/ton}) + (53.24 \text{ tons/hr} \\
 &\quad \times 0.0021 \text{ lb PE/ton})] \times (1-0.70) \times 8,760 \text{ hours/yr} \times \\
 &\quad 1 \text{ ton}/2,000 \text{ pounds} \\
 &= 0.78 \text{ ton per year}
 \end{aligned}$$

Where:

Maximum aggregate transfer rate = 69.53 tons per hour (from permittee's application);

Maximum sand transfer rate = 53.24 tons per hour (from permittee's application);

Uncontrolled aggregate transfer emissions factor = 0.0069 lb PE/ton (AP-42 Table 11.12.2, 6/06);

Uncontrolled sand transfer emissions factor = 0.0021 lb PE/ton (AP-42 Table 11.12.2, 6/06); and

Building settling factor = 70% (RACM Table 2.1.3-3 (8/83)).

Portland Cement Silos (2)

$$\begin{aligned}
 \text{PE (tons/yr)} &= \text{number of silos} \times \text{maximum silo loading rate} \times \text{controlled} \\
 &\quad \text{silo loading emissions factor} \times 8,760 \text{ hours/yr} \times 1 \\
 &\quad \text{ton}/2,000 \text{ pounds} \\
 &= 2 \text{ silos} \times 21 \text{ tons/hr} \times 0.00099 \text{ lb PE/ton} \times 8,760 \text{ hours/yr} \\
 &\quad \times 1 \text{ ton}/2,000 \text{ pounds} \\
 &= 0.18 \text{ ton per year}
 \end{aligned}$$

Where:

Maximum silo loading rate = 21 tons per hour (from permittee's application); and

Controlled silo loading emissions factor = 0.00099 lb PE/ton (AP-42 Table 11.12.2, 6/06)

Weigh hopper loading of aggregate, sand and cement



$$\begin{aligned}
 \text{Fugitive PE (tons/yr)} &= \text{maximum weigh hopper loading rate X uncontrolled} \\
 &\quad \text{weigh hopper loading emissions factor X 8,760} \\
 &\quad \text{hours/yr X 1 ton/2,000 pounds} \\
 &= 150 \text{ tons per hour X } 0.0048 \text{ lb PE/ton X } 8,760 \\
 &\quad \text{hours/yr X 1 ton/2,000 pounds} \\
 &= 3.15 \text{ tons per year}
 \end{aligned}$$

Where:

Maximum weigh hopper loading rate = 150 tons per hour (from permittee's application); and
 Uncontrolled weigh hopper loading emissions factor = 0.0048 lb PE/ton (AP-42 Table 11.12.2, 6/06).

Truck loading of aggregate, sand and cement

$$\begin{aligned}
 \text{Fugitive PE (tons/yr)} &= \text{maximum truck loading rate X uncontrolled truck} \\
 &\quad \text{loading emissions factor X control efficiency for} \\
 &\quad \text{adjustable gathering hopper X 8,760 hours/yr X 1} \\
 &\quad \text{ton/2,000 pounds} \\
 &= 150 \text{ tons per hour X } 1.118 \text{ lb PE/ton X } (1-0.95) \text{ X} \\
 &\quad 8,760 \text{ hours/yr X 1 ton/2,000 pounds} \\
 &= 36.75 \text{ tons per year}
 \end{aligned}$$

Where:

Maximum truck loading rate = 150 tons per hour (from permittee's application);
 Uncontrolled truck loading emission factor = 1.118 lb PE/ton (AP-42 Table 11.12.2, 6/06); and
 Control efficiency of adjustable gathering hopper = 95% (RACM Table 2.22-3 (8/83)).

c. Emissions Limitation:

Visible PE shall not exceed 10 percent opacity, as a 3-minute average.

Applicable Compliance Method:

If required, visible particulate emissions shall be determined according to USEPA Method 9.

g) Miscellaneous Requirements

- (1) None.



3. F007, Concrete Block Plant

Operations, Property and/or Equipment Description:

38 ton per hour concrete block plant; includes cement silo loading controlled with bin vent(s), transfers of sand and aggregate to elevated storage bins, enclosed weigh hopper loading of cement vented to a fabric filter, sand and aggregate, an enclosed mixer loading process vented to a fabric filter and molding of concrete blocks; supersedes PTI No. 06-3928 issued on January 5, 1994 for EUs F007 and F008

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

(b) None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

(c) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
<i>Transfer of Sand and Aggregate to Elevated Bins</i>		
a.	OAC rule 3745-31-05(A)(3)	Fugitive particulate emissions (PE) shall not exceed 0.45 ton per year. Visible PE shall not exceed 10 percent opacity, as a 3-minute average. Best available control measures to minimize or eliminate visible emissions of fugitive dust. See b)(2)a. below.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rules 3745-17-07(B) and 3745-17-08(B)	See b)(2)b. and c. below.
<i>Portland Cement Silos (2)</i>		
c.	OAC rule 3745-31-05(A)(3)	<p>The bin vent(s) serving the cement silos shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases or there shall be no visible particulate emissions from the outlet(s).</p> <p>PE shall not exceed 0.44 ton per year.</p> <p>See b)(2)d. below.</p>
d.	OAC rules 3745-17-07(B) and 3745-17-08(B)	See b)(2)b. and c. below.
e.	OAC rules 3745-17-07(A) and 3745-17-11(B)	See b)(2)e. below.
<i>Weigh Hopper Loading of Aggregate, Sand and Cement</i>		
f.	OAC rule 3745-31-05(A)(3)	<p>The fabric filter serving the weigh hopper shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases or there shall be no visible particulate emissions from the outlet.</p> <p>PE shall not exceed 0.01 ton per year.</p> <p>See b)(2)f. below.</p>
g.	OAC rule 3745-17-07(B) and OAC rule 3745-17-08(B)	See b)(2)b. and c. below.
h.	OAC rule 3745-17-07(A) and OAC rule 3745-17-11(B)	See b)(2)e. below.
<i>Mixer Loading of Aggregate, Sand and Cement</i>		
i.	OAC rule 3745-31-05(A)(3)	The fabric filter serving the mixer shall achieve an outlet emission rate of not



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases or there shall be no visible particulate emissions from the outlet. PE shall not exceed 0.95 ton per year. See b)(2)g. below.
j.	OAC rule 3745-17-07(B) and OAC rule 3745-17-08(B)	See b)(2)b. and c. below.
k.	OAC rule 3745-17-07(A) and OAC rule 3745-17-11(B)	See b)(2)e. below.

(2) Additional Terms and Conditions

- a. The permittee shall employ best available control measures for all transfers of sand and aggregate to elevated bins for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's application, the permittee has committed to maintain the inherent moisture content of the material to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other equally-effective control measures to ensure compliance.
- b. This emissions unit is exempt from the visible PE limitation specified in OAC rule 3745-17-07(B) pursuant to OAC rule 3745-17-07(B)(11)(e).
- c. The facility is not located within an "Appendix A" area as identified in OAC rule 3745-17-08. Therefore, pursuant to OAC rule 3745-17-08(A), this emissions unit is exempt from the requirements of OAC rule 3745-17-08(B)(1).
- d. The permittee shall employ best available control measures for the Portland cement silos for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's application, the permittee has committed to transfer material pneumatically to the silos and to employ bin vent(s) with control efficiency of 99% to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other equally-effective control measures to ensure compliance.
- e. The requirements established pursuant to OAC rule 3745-17-07(A) and OAC rule 3745-17-11(B) are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3).
- f. The permittee shall employ best available control measures for the weigh hopper loading of cement, sand and aggregate for the purpose of ensuring compliance



with the above-mentioned applicable requirements. In accordance with the permittee's application, the permittee has committed to utilize a scavenger ducted system vented to a fabric filter with 99% control efficiency to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other equally-effective control measures to ensure compliance.

- g. The permittee shall employ best available control measures for the mixer loading of aggregate, sand, and cement for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's application, the permittee has committed to utilize a scavenger ducted system vented to a fabric filter with 99% control efficiency to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other equally-effective control measures to ensure compliance.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform weekly checks, when the emissions unit is in operation, and when the weather conditions allow, for any visible particulate emissions from the bin vents and fabric filters serving this emissions unit. No inspections are required on days the material handling operations are not in operation. The presence or absence of any visible particulate emissions shall be recorded electronically or in an operations log. If visible particulate emissions are observed, the permittee shall also note the following in the operations log:

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

The information above shall be kept separately for each fabric filter serving this emissions unit.

- (2) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from each sand and/or aggregate transfer point and building enclosure serving this emissions unit. No inspections are required on days the material handling operations are not in operation. The presence or absence of any visible emissions shall be noted in an operations log. If visible particulate emissions are observed, the permittee shall also note the following in the operations log:

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



The information above shall be kept separately for each sand and/or aggregate transfer point and truck loading serving this emissions unit.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve-months for each air contaminant source identified in this permit. It is recommended that the PER is submitted electronically through the Ohio EPA's "e-Business Center: Air Services" although PERs can be submitted via U.S. postal service or can be hand delivered.

f) Testing Requirements

- (1) Compliance with the emissions limitations and/or control requirements specified in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitations:

Thebin vents serving the cement silosand the fabric filters serving the weigh hopper and mixer shall achieve an outlet emission rate of not greater than 0.030 grain of particulate emissions per dry standard cubic foot of exhaust gases or there shall be no visible particulate emissions from the outlet(s).

Applicable Compliance Method:

If required, particulate emissions 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/or USEPA Method 22, and the procedures specified in OAC rule 3745-17-03(B)(7).

b. Emission Limitations:

For the transfer of aggregate and sand to elevated bins, fugitive PE shall not exceed 0.45 ton per year.

For the Portland cement silos, PE shall not exceed 0.44 ton per year.

For weigh hopper loading of aggregate, sand and cement, fugitive PE shall not exceed 0.01 ton per year.

For mixer loading of aggregate, sand and cement, fugitive PE shall not exceed 0.95 ton per year.



Applicable Compliance Methods:

Compliance with the annual emissions limitations shall be determined based on the emission factors in AP-42 Table 11.12.2 (6/06) and RACM (8/83) and a maximum production rate of 332,880 tons per year calculated as follows:

Transfer of aggregate and sand to elevated bins

$$\begin{aligned}
 \text{Fugitive PE (tons/yr)} &= [(\text{maximum aggregate transfer rate (tons/hr)} \times \\
 &\quad \text{uncontrolled aggregate transfer emissions factor (lb/ton)} + (\text{maximum sand transfer rate (tons/hr)} \times \\
 &\quad \text{uncontrolled sand transfer emissions factor})] \times \\
 &\quad 8,760 \text{ hours/yr} \times 1 \text{ ton}/2,000 \text{ pounds} \\
 &= [(10 \text{ tons/hr} \times 0.0069 \text{ lb PE/ton}) + (16 \text{ tons/hr} \times \\
 &\quad 0.0021 \text{ lb PE/ton})] \times 8,760 \text{ hours/yr} \times 1 \text{ ton}/2,000 \\
 &\quad \text{pounds} \\
 &= 0.45 \text{ ton per year}
 \end{aligned}$$

Where:

Maximum aggregate transfer rate = 10 tons per hour (from permittee's application);
 Maximum sand transfer rate = 16 tons per hour (from permittee's application);
 Uncontrolled aggregate transfer emissions factor = 0.0069 lb PE/ton (AP-42 Table 11.12.2, 6/06); and
 Uncontrolled sand transfer emissions factor = 0.0021 lb PE/ton (AP-42 Table 11.12.2, 6/06).

Portland Cement Silos (2)

$$\begin{aligned}
 \text{PE (tons/yr)} &= \text{number of silos} \times \text{maximum silo loading rate} \times \text{controlled} \\
 &\quad \text{silo loading emissions factor} \times 8,760 \text{ hours/yr} \times 1 \\
 &\quad \text{ton}/2,000 \text{ pounds} \\
 &= 2 \text{ silos} \times 50 \text{ tons/hr} \times 0.00099 \text{ lb PE/ton} \times 8,760 \text{ hours/yr} \\
 &\quad \times 1 \text{ ton}/2,000 \text{ pounds} \\
 &= 0.44 \text{ ton per year}
 \end{aligned}$$

Where:

Maximum silo loading rate = 50 tons per hour (from permittee's application); and
 Controlled silo loading emissions factor = 0.00099 lb PE/ton (AP-42 Table 11.12.2, 6/06)

Weigh hopper loading of aggregate, sand and cement

$$\begin{aligned}
 \text{Fugitive PE (tons/yr)} &= \text{maximum weigh hopper loading rate} \times \text{uncontrolled} \\
 &\quad \text{weigh hopper loading emissions factor} \times \text{control} \\
 &\quad \text{efficiency of fabric filter} \times 8,760 \text{ hours/yr} \times 1 \\
 &\quad \text{ton}/2,000 \text{ pounds}
 \end{aligned}$$



$$= 38 \text{ tons per hour} \times 0.0048 \text{ lb PE/ton} \times (1-0.99) \times 8,760 \text{ hours/yr} \times 1 \text{ ton}/2,000 \text{ pounds}$$

$$= 0.01 \text{ ton per year}$$

Where:

Maximum weigh hopper loading rate = 38 tons per hour (from permittee's application);
 Uncontrolled weigh hopper loading emissions factor = 0.0048 lb PE/ton (AP-42 Table 11.12.2, 6/06); and
 Control efficiency of fabric filter = 99% (RACM Table 2.22-3 (8/83)).

Mixer loading of aggregate, sand and cement

$$\text{Fugitive PE (tons/yr)} = \text{maximum mixer loading rate} \times \text{uncontrolled mixer loading emissions factor} \times \text{control efficiency of fabric filter} \times 8,760 \text{ hours/yr} \times 1 \text{ ton}/2,000 \text{ pounds}$$

$$= 38 \text{ tons per hour} \times 0.572 \text{ lb PE/ton} \times (1-0.99) \times 8,760 \text{ hours/yr} \times 1 \text{ ton}/2,000 \text{ pounds}$$

$$= 0.95 \text{ ton per year}$$

Where:

Maximum mixer loading rate = 38 tons per hour (from permittee's application);
 Uncontrolled mixer loading emission factor = 0.572 lb PE/ton (AP-42 Table 11.12.2, 6/06); and
 Control efficiency of fabric filter = 99% (RACM Table 2.22-3 (8/83)).

c. Emissions Limitation:

Visible PE shall not exceed 10 percent opacity, as a 3-minute average.

Applicable Compliance Method:

If required, visible particulate emissions shall be determined according to USEPA Method 9.

g) Miscellaneous Requirements

- (1) None