



Environmental Protection Agency

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

5/29/2012

REX DAVIS  
S H Bell - Stateline Terminal  
2217 MICHIGAN AVE  
EAST LIVERPOOL, OH 43920

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0215020225  
Permit Number: P0109730  
Permit Type: Initial Installation  
County: Columbiana

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
Yes	SYNTHETIC MINOR TO AVOID TITLE V
Yes	FEDERALLY ENFORCABLE PTIO (FEPTIO)

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install and Operate (PTIO) for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio EPA Weekly Review and the local newspaper, The Morning Journal. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc) by clicking the "Issued Air Pollution Control Permits" link. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall  
Permit Review/Development Section  
Ohio EPA, DAPC  
122 South Front Street  
Columbus, Ohio 43215

and Ohio EPA DAPC, Northeast District Office  
2110 East Aurora Road  
Twinsburg, OH 44087

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Ohio EPA DAPC, Northeast District Office at (330)425-9171.

Sincerely,

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

Cc: U.S. EPA Region 5 Via E-Mail Notification  
Ohio EPA-NEDO; Pennsylvania; West Virginia



PUBLIC NOTICE

5/29/2012 Issuance of Draft Air Pollution Permit-To-Install and Operate

S H Bell - Stateline Terminal

2217 MICHIGAN AVE,

East Liverpool, OH 43920

Columbiana County

FACILITY DESC.: General Warehousing and Storage

PERMIT #: P0109730

PERMIT TYPE: Initial Installation

PERMIT DESC: Installation of frac sand handling operation and frac sand storage.

The Director of the Ohio Environmental Protection Agency issued the draft permit above. The permit and complete instructions for requesting information or submitting comments may be obtained at: <http://epa.ohio.gov/dapc/permitsonline.aspx> by entering the permit # or: Richard Smith, Ohio EPA DAPC, Northeast District Office, 2110 East Aurora Road, Twinsburg, OH 44087. Ph: (330)425-9171





Permit Strategy Write-Up

1. Check all that apply:

[X] Synthetic Minor Determination

Netting Determination

2. Source Description:

The facility is proposing the installation of two emissions units - (F017) a frac sand handling-direct transfer with 1200 acfm fabric filter baghouse and (F018) a stored frac sand loadout with a 13,000 acfm fabric filter baghouse at the hopper and beltline transfer points and a 1200 acfm fabric filter baghouse at the loading spout.

3. Facility Emissions and Attainment Status:

The facility will be located in Columbiana County which is currently in attainment for all criteria pollutants. The facility will emit PE, PM-10, and PM-2.5 from the material handling and storage operations. The facility wide potentials to emit (PTE) for PE, PM-10, and PM-2.5 will be limited below the Title V threshold by federally enforceable limits. The facility requested federally enforceable limits to maintain PTE below the established threshold limits for Title V.

4. Source Emissions:

The installation of emission units F017 and F018 will specifically allow the facility to handle and loadout frac sand.

5. Conclusion:

The permit includes federally enforceable limits as a 12-month summation and the associated recordkeeping and reporting requirements. The limits requested by the facility are sufficient to reduce the PTE below established Title V thresholds.

6. Please provide additional notes or comments as necessary:

None

7. Total Permit Allowable Emissions Summary (for informational purposes only):

Table with 2 columns: Pollutant, Tons Per Year. Rows: PE (9.94), PM-10 (4.67), PM-2.5 (0.71)





**DRAFT**

**Division of Air Pollution Control  
Permit-to-Install and Operate  
for  
S H Bell - Stateline Terminal**

Facility ID:	0215020225
Permit Number:	P0109730
Permit Type:	Initial Installation
Issued:	5/29/2012
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance





Division of Air Pollution Control
Permit-to-Install and Operate
for
S H Bell - Stateline Terminal

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## Authorization

Facility ID: 0215020225

Application Number(s): A0044109

Permit Number: P0109730

Permit Description: Installation of frac sand handling operation and frac sand storage.

Permit Type: Initial Installation

Permit Fee: \$1,800.00 *DO NOT send payment at this time, subject to change before final issuance*

Issue Date: 5/29/2012

Effective Date: To be entered upon final issuance

Expiration Date: To be entered upon final issuance

Permit Evaluation Report (PER) Annual Date: To be entered upon final issuance

This document constitutes issuance to:

S H Bell - Stateline Terminal  
2217 MICHIGAN AVE  
East Liverpool, OH 43920

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

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

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

The above named entity is hereby granted 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



## Authorization (continued)

Permit Number: P0109730

Permit Description: Installation of frac sand handling operation and frac sand storage.

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

<b>Emissions Unit ID:</b>	<b>F017</b>
Company Equipment ID:	Frac Sand Handling - Direct Transfer
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F018</b>
Company Equipment ID:	Stored FS Loadout
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



## **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, Northeast 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 submitting<sup>1</sup> 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.

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<sup>1</sup> 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.

## **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.

## **C. Emissions Unit Terms and Conditions**



1. F017, Frac Sand Handling - Direct Transfer

Operations, Property and/or Equipment Description:

Frac Sand Handling-Direct Transfer with 1200 acfm fabric filter/baghouse.

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 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) as effective 11/30/01	<p>Particulate emissions (PE) shall not exceed 6.40 tons per year.</p> <p>The PE from the fabric filter/baghouse shall not exceed 0.02 grain/dry standard cubic foot of exhaust.</p> <p>Particulate matter equal to or less than 10 microns in diameter (PM<sub>10</sub>) shall not exceed 3.00 tons per year.</p> <p>Particulate matter equal to or less than 2.5 microns in diameter (PM<sub>2.5</sub>) shall not exceed 0.46 ton per year.</p> <p>See b)(2)c and c)(1).</p>
b.	OAC rule 3745-31-05(A)(3)(b) as effective 12/01/06	See b)(2)d and c)(1)



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-31-05(E) as effective 12/01/06	<p>The permittee will accept voluntary restrictions for PE, PM<sub>10</sub> and PM<sub>2.5</sub> to avoid modeling.</p> <p>PE shall not exceed 6.40 tons per year.</p> <p>The PE from the fabric filter/baghouse shall not exceed 0.02 grain/dry standard cubic foot of exhaust.</p> <p>PM<sub>10</sub> shall not exceed 3.00 tons per year.</p> <p>PM<sub>2.5</sub> shall not exceed 0.46 ton per year.</p> <p>See b)(2)d and c)(1).</p>
d.	OAC rule 3745-17-07(A)	Visible particulate emissions from the fabric filter/baghouse control system shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
e.	OAC rule 3745-17-07(B)(1)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity, as a 3-minute average.
f.	OAC rule 3745-17-08(B)	See b)(2)a and b)(2)b.
g.	OAC rule 3745-17-11	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

- a. This permit to install takes into account the use of a fabric filter/baghouse control system, whenever this air contaminant source is in operation, with a minimum control efficiency of 99%, by weight of PE.
- b. The permittee shall employ reasonably available control measures for the above-referenced material handling operations for the purpose of ensuring compliance with the above referenced applicable requirements. Such reasonably available control measures shall include, but not limited to, one or more of the following which are appropriate to minimize or eliminate visible particulate emissions of fugitive dust.
  - i. In accordance with the permittee’s application, the permittee has committed to containing this emissions unit
    - (a) with an enclosure for the conveyor operations;

- (b) to provide an enclosed loading spout for the bulk loading operations to ensure compliance with the emissions limitations;
- (c) the partial enclosure and seal at railroad car bottom; and
- (d) the use of a 1200 acfm fabric filter/baghouse to control particulate emissions.

The collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design, standards and practices.

- ii. The permittee shall cover, at all times, any conveyors or open bodied vehicles when transporting materials that are likely to become airborne.
- iii. The permittee shall minimize the drop heights for any related transfer points from the discharge point, conveyor, and/or loading spout.

Nothing in these paragraphs shall prohibit or limit the permittee from employing other control measures to ensure compliance.

- c. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these terms and conditions no longer apply: b)(1)a and b(2)c.
- d. This rule paragraph applies once U.S. EPA approves the December 1, 2006, version of the OAC rule 3745-31-05, as part of the State Implementation Plan.

The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE, PM<sub>10</sub> and PM<sub>2.5</sub> emissions from this air contaminate source since the potentials to emit for PE, PM<sub>10</sub> and PM<sub>2.5</sub> are less than 10 tons per year.

c) **Operational Restrictions**

- (1) The maximum annual throughput for this emissions unit is limited to 935,000 tons of frac sand per year.

## d) Monitoring and/or Recordkeeping Requirements

- (1) The acceptable range for the pressure drop across the baghouse shall be based upon the manufacturer's specifications, until such time as any required performance testing is conducted and an alternative pressure drop range and/or limit is established.
- (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the fabric filter/baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the fabric filter/baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. The acceptable pressure drop shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range is established to demonstrate compliance.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

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

- a. a description of the corrective action;
- b. the date corrective action was completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;
- e. the pressure drop readings immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

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

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

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

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

- (4) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the color of the emissions;

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

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

- (5) The permittee shall maintain monthly records of frac sand throughput from this emissions unit.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services 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 12-months for each air contaminant source identified in this permit.
- (2) The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive particulate emissions were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.
- (3) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the fabric filter/baghouse serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.
- (4) The permittee shall submit quarterly written reports identifying the following:
  - a. each period of time (start time and date, and end time and date) when the pressure drop across the fabric filter/baghouse was outside of the range



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

- b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the fabric filter/baghouse;
- c. each incident of deviation described in "a" (above) where a prompt investigation was not conducted;
- d. each incident of deviation described in "a" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
- e. each incident of deviation described in "a" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

f) Testing Requirements

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

a. Emission Limitation:

The PE from the fabric filter/baghouse shall not exceed 0.02 grain/dry standard cubic foot of exhaust.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon an emission test performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

b. Emission Limitation:

PE shall not exceed 6.40 tons per year.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$$E_T \text{ (ton/year)} = [E_1 \text{ (pounds/year)} + E_2 \text{ (pounds/year)} + E_3 \text{ (pounds/year)}] / [2000 \text{ pounds/ton}]$$

where:

$E_T$  = total annual emissions of PE from  $E_1$ ,  $E_2$ , and  $E_3$  in tons/year;

$E_1$  =  $[(EF_1) \text{ (annual throughput (tons/year)) (1-CE}_1)]$ ;

$EF_1 = 0.0265$  pound/ton, from AP-42, Section 13.2.4, Aggregate Handling and Storage Piles, November 2006;

$CE_1 =$  control efficiency (70%), from Ohio EPA RACM, Material Handling Control Efficiencies, for partial enclosure, railcar bottom seal, and minimal material drop;

$E_2 = [(EF_2) \text{ (annual throughput (tons/year))}]$ ;

$EF_2 = 0.00014$  pound/ton, from AP-42, Section 11.19.2, Crushed Stone Processing and Pulverized Mineral Processing, August 2004;

$E_3 = [(EF_3) \text{ (annual throughput (tons/year)) (1-CE}_3\text{)}]$ ;

$EF_3 = 0.0265$  pound/ton, from AP-42, Section 13.2.4, Aggregate Handling and Storage Piles, November 2006; and

$CE_3 =$  overall control efficiency (79.2%), from control efficiencies calculation, based on an 80% loading spout capture efficiency and a 99% fabric filter/baghouse control efficiency.

c. Emission Limitation:

$PM_{10}$  shall not exceed 3.00 tons per year.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$$E_T \text{ (ton/year)} = [E_1 \text{ (pounds/year)} + E_2 \text{ (pounds/year)} + E_3 \text{ (pounds/year)}] / 2000 \text{ pounds/ton}$$

where:

$E_T =$  total annual emissions of  $PM_{10}$  from  $E_1$ ,  $E_2$ , and  $E_3$  in tons/year;

$E_1 = [(EF_1) \text{ (annual throughput (tons/year)) (1-CE}_1\text{)}]$ ;

$EF_1 = 0.0125$  pound/ton, from AP-42, Section 13.2.4, Aggregate Handling and Storage Piles, November 2006;

$CE_1 =$  control efficiency (70%), from Ohio EPA RACM, Material Handling Control Efficiencies, for partial enclosure, railcar bottom seal, and minimal material drop;

$E_2 = [(EF_2) \text{ (annual throughput (tons/year))}]$ ;

$EF_2 = 0.000046$  pound/ton, from AP-42, Section 11.19.2, Crushed Stone Processing and Pulverized Mineral Processing, August 2004;

$E_3 = [(EF_3) \text{ (annual throughput (tons/year)) (1-CE}_3\text{)}]$ ;

$EF_3 = 0.0125$  pound/ton, from AP-42, Section 13.2.4, Aggregate Handling and Storage Piles, November 2006; and

$CE_3 =$  overall control efficiency (79.2%), from control efficiencies calculation, based on an 80% loading spout capture efficiency and a 99% fabric filter/baghouse control efficiency.

d. Emission Limitation:

$PM_{2.5}$  shall not exceed 0.46 ton per year.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$$E_T \text{ (ton/year)} = [E_1 \text{ (pounds/year)} + E_2 \text{ (pounds/year)} + E_3 \text{ (pounds/year)}] / 2000 \text{ pounds/ton}$$

where:

$E_T =$  total annual emissions of PE from  $E_1$ ,  $E_2$ , and  $E_3$  in tons/year;

$$E_1 = [(EF_1) \text{ (annual throughput (tons/year))} (1-CE_1)];$$

$EF_1 = 0.0019$  pound/ton, from AP-42, Section 13.2.4, Aggregate Handling and Storage Piles, November 2006;

$CE_1 =$  control efficiency (70%), from Ohio EPA RACM, Material Handling Control Efficiencies, for partial enclosure, railcar bottom seal, and minimal material drop;

$$E_2 = [(EF_2) \text{ (annual throughput (tons/year))}];$$

$EF_2 = 0.000013$  pound/ton, from AP-42, Section 11.19.2, Crushed Stone Processing and Pulverized Mineral Processing, August 2004;

$$E_3 = [(EF_3) \text{ (annual throughput (tons/year))} (1-CE_3)];$$

$EF_3 = 0.0019$  pound/ton, from AP-42, Section 13.2.4, Aggregate Handling and Storage Piles, November 2006; and

$CE_3 =$  overall control efficiency (79.2%), from control efficiencies calculation, based on an 80% loading spout capture efficiency and a 99% fabric filter/baghouse control efficiency.

e. Emission Limitation:

Visible particulate emissions from the fabric filter/baghouse control system shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.



Applicable Compliance Method:

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

f. Emission Limitation:

Visible particulate emissions of fugitive dust shall not exceed 20% opacity, as a 3-minute average.

Applicable Compliance Method:

Compliance shall be demonstrated through visible emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(3).

g) Miscellaneous Requirements

- (1) None.



2. F018, Stored Frac Sand Loadout

Operations, Property and/or Equipment Description:

Stored frac sand loadout with a 13,000 acfm fabric filter/baghouse at hopper and beltline transfer point and 1200 acfm fabric filter/baghouse at loading spout.

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 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) as effective 11/30/01	<p>Particulate emissions (PE) shall not exceed 3.54 tons per year.</p> <p>The PE from the fabric filter/baghouse shall not exceed 0.02 grain/dry standard cubic foot of exhaust.</p> <p>Particulate emissions equal to or less than 10 microns in diameter (PM<sub>10</sub>) shall not exceed 1.67 tons per year.</p> <p>Particulate emissions equal to or less than 2.5 microns in diameter (PM<sub>2.5</sub>) shall not exceed 0.25 ton per year.</p> <p>See b)(2)c, c)(1) and c)(2).</p>
b.	OAC rule 3745-31-05(A)(3)(b) as effective 12/01/06	See b)(2)d, c)(1) and c)(2).



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-31-05(E) as effective 12/01/06.	<p>The permittee will accept voluntary restrictions for PE, PM<sub>10</sub> and PM<sub>2.5</sub> to avoid modeling.</p> <p>PE shall not exceed 3.54 tons per year.</p> <p>The PE from the fabric filter/baghouse shall not exceed 0.02 grain/dry standard cubic foot of exhaust.</p> <p>PM<sub>10</sub> shall not exceed 1.67 tons per year.</p> <p>PM<sub>2.5</sub> shall not exceed 0.25 ton per year.</p> <p>See b)(2)d, c)(1) and c)(2).</p>
d.	OAC rule 3745-17-07(A)	Visible particulate emissions from the fabric filter/baghouse control system shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
e.	OAC rule 3745-17-07(B)(1)	Visible particulate emissions of fugitive dust shall not exceed 20% opacity, as a 3-minute average.
f.	OAC rule 3745-17-08(B)	See b)(2)a and b)(2)b.
g.	OAC rule 3745-17-11	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

- a. This permit to install takes into account the use of a fabric filter/baghouse control system, whenever this air contaminant source is in operation, with a minimum control efficiency of 99%, by weight of PE.
- b. The permittee shall employ reasonably available control measures for the above-referenced material handling operations for the purpose of ensuring compliance with the above referenced applicable requirements. Such reasonably available control measures shall include, but not limited to, one or more of the following which are appropriate to minimize or eliminate visible particulate emissions of fugitive dust.
  - i. In accordance with the permittee's application, the permittee has committed to containing this emissions unit:
    - (a) with an enclosure for the conveyor operations;

- (b) to provide a building enclosure for the feed hopper, vibratory feeder and conveyor beltline;
- (c) the use of a load-out shed from conveyor belt line to pneumatic (bulk) trailer via loading spout transfer point; and
- (d) the use of both a 1200 acfm and 13,000 acfm fabric filter/baghouses to control particulate emissions.

The collection efficiency shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at the point(s) of capture to the extent possible with good engineering design, standards and practices.

- ii. The permittee shall cover, at all times, any conveyors or open bodied vehicles when transporting materials that are likely to become airborne.
- iii. The permittee shall minimize the drop heights for any related transfer points from the discharge point, conveyor, and/or loading spout.

Nothing in these paragraphs shall prohibit or limit the permittee from employing other control measures to ensure compliance.

- c. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these terms and conditions no longer apply: b)(1) and b)(2)d.
- d. This rule paragraph applies once U.S. EPA approves the December 1, 2006, version of the OAC rule 3745-31-05, as part of the State Implementation Plan.

The BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the PE, PM<sub>10</sub> and PM<sub>2.5</sub> emissions from this air contaminate source since the potentials to emit for PE, PM<sub>10</sub> and PM<sub>2.5</sub> are less than 10 tons per year.

c) **Operational Restrictions**

- (1) The maximum annual throughput for this emissions unit is limited to 935,000 tons of frac sand per year.

- (2) The permittee shall only use the top and bottom static non-vibratory scalp screeners to remove foreign debris from the frac sand material and shall not use the screeners for material sizing purposes.

d) Monitoring and/or Recordkeeping Requirements

- (1) The acceptable range for the pressure drop across the fabric filter/baghouse shall be based upon the manufacturer's specifications, until such time as any required performance testing is conducted and an alternative pressure drop range and/or limit is established.
- (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the fabric filter/baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the fabric filter/baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee. The acceptable pressure drop shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate range is established to demonstrate compliance.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

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

- a. a description of the corrective action;
- b. the date corrective action was completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;

- e. the pressure drop readings immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

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

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

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

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

- (4) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust serving this emissions unit. The presence or absence of any visible emissions shall be noted in an

operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

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

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

- (5) The permittee shall maintain monthly records of frac sand throughput from this emissions unit.

e) Reporting Requirements

- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services 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 12-months for each air contaminant source identified in this permit.
- (2) The permittee shall submit semiannual written reports that (a) identify all days during which any visible fugitive particulate emissions were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible fugitive particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.
- (3) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the fabric filter/baghouse serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the Ohio EPA Northeast District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

- (4) The permittee shall submit quarterly written reports identifying the following:
- a. each period of time (start time and date, and end time and date) when the pressure drop across the fabric filter/baghouse was outside of the range specified by the manufacturer and outside of the acceptable range following any required compliance demonstration;
  - b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the fabric filter/baghouse;
  - c. each incident of deviation described in "a" (above) where a prompt investigation was not conducted;
  - d. each incident of deviation described in "a" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
  - e. each incident of deviation described in "a" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

f) Testing Requirements

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

a. Emission Limitation:

The PE from the fabric filter/baghouse shall not exceed 0.02 grain/dry standard cubic foot of exhaust.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon an emission test performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

b. Emission Limitation:

PE shall not exceed 3.54 tons per year.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$$E_T \text{ (ton/year)} = [E_1 \text{ (pounds/year)} + E_2 \text{ (pounds/year)} + E_3 \text{ (pounds/year)}] / [2000 \text{ pounds/ton}]$$

where:

$E_T$  = total annual emissions of PE from  $E_1$ ,  $E_2$ , and  $E_3$ , in tons/year;

$E_1 = 2 [(EF_1) (\text{annual throughput (tons/year)}) (1-CE_1)]$ ;

2- number of drop points;

$EF_1 = 0.0265$  pound/ton, from AP-42, Section 13.2.4, Aggregate Handling and Storage Piles, November 2006;

$CE_1$  = overall control efficiency (91.2%), from control efficiencies calculation, based on 60% building capture and a 99% fabric filter/baghouse control efficiency;

$E_2 = [(EF_2) (\text{annual throughput (tons/year)}) (1-CE_2)]$ ;

$EF_2 = 0.00014$  pound/ton, from AP-42, Section 11.19.2, Crushed Stone Processing and Pulverized Mineral Processing, August 2004;

$CE_2$  = control efficiency (60%), from covered conveyor, characteristic of minimum control efficiency;

$E_3 = [(EF_3) (\text{annual throughput (tons/year)}) (1-CE_3)]$ ;

$EF_3 = 0.0265$  pound/ton, from AP-42, Section 13.2.4, Aggregate Handling and Storage Piles, November 2006; and

$CE_3$  = overall control efficiency (89.2%), from control efficiencies calculation, based on 50% load out shed capture and a 99% fabric filter/baghouse control efficiency.

c. Emission Limitation:

$PM_{10}$  shall not exceed 1.67 tons per year.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$E_T (\text{ton/year}) = [E_1 (\text{pounds/year}) + E_2 (\text{pounds/year}) + E_3 (\text{pounds/year})] / [2000 \text{ pounds/ton}]$

where:

$E_T$  = total annual emissions of PE from  $E_1$ ,  $E_2$ , and  $E_3$ , in tons/year;

$E_1 = 2 [(EF_1) (\text{annual throughput (tons/year)}) (1-CE_1)]$ ;

2- number of drop points;

$EF_1 = 0.0125$  pound/ton, from AP-42, Section 13.2.4, Aggregate Handling and Storage Piles, November 2006;

$CE_1 =$  overall control efficiency (91.2%), from control efficiencies calculation, based on 60% building capture and a 99% fabric filter/baghouse control efficiency;

$E_2 = [(EF_2) \text{ (annual throughput (tons/year)) (1-CE}_2)];$

$EF_2 = 0.000046$  pound/ton, from AP-42, Section 11.19.2, Crushed Stone Processing and Pulverized Mineral Processing, August 2004;

$CE_2 =$  control efficiency (60%), from covered conveyor, characteristic of minimum control efficiency;

$E_3 = [(EF_3) \text{ (annual throughput (tons/year)) (1-CE}_3)];$

$EF_3 = 0.0125$  pound/ton, from AP-42, Section 13.2.4, Aggregate Handling and Storage Piles, November 2006; and

$CE_3 =$  overall control efficiency (89.2%), from control efficiencies calculation, based on 50% load out shed capture and a 99% fabric filter/baghouse control efficiency.

d. Emission Limitation:

$PM_{2.5}$  shall not exceed 0.25 ton per year.

Applicable Compliance Method:

Compliance shall be demonstrated by using the following equation:

$E_T \text{ (ton/year)} = [E_1 \text{ (pounds/year)} + E_2 \text{ (pounds/year)} + E_3 \text{ (pounds/year)}] / [2000 \text{ pounds/ton}]$

where:

$E_T =$  total annual emissions of PE from  $E_1$ ,  $E_2$ , and  $E_3$ , in tons/year;

$E_1 = 2 [(EF_1) \text{ (annual throughput (tons/year)) (1-CE}_1)];$

2- number of drop points;

$EF_1 = 0.0019$  pound/ton, from AP-42, Section 13.2.4, Aggregate Handling and Storage Piles, November 2006;

$CE_1 =$  overall control efficiency (91.2%), from control efficiencies calculation, based on 60% building capture and a 99% fabric filter/baghouse control efficiency;

$E_2 = [(EF_2) \text{ (annual throughput (tons/year)) (1-CE}_2)];$

$EF_2 = 0.000013$  pound/ton, from AP-42, Section 11.19.2, Crushed Stone Processing and Pulverized Mineral Processing, August 2004;

$CE_2 =$  control efficiency (60%), from covered conveyor, characteristic of minimum control efficiency;

$E_3 = [(EF_3) (\text{annual throughput (tons/year)}) (1-CE_3)]$ ;

$EF_3 = 0.0019$  pound/ton, from AP-42, Section 13.2.4, Aggregate Handling and Storage Piles, November 2006; and

$CE_3 =$  overall control efficiency (89.2%), from control efficiencies calculation, based on 50% load out shed capture and a 99% fabric filter/baghouse control efficiency.

e. Emission Limitation:

Visible particulate emissions from the fabric filter/baghouse control system shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

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

f. Emission Limitation:

Visible particulate emissions of fugitive dust shall not exceed 20% opacity, as a 3-minute average.

Applicable Compliance Method:

Compliance shall be demonstrated through visible emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(3).

g) Miscellaneous Requirements

(1) None.