



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

7/18/2013

Kathy Dimmerling
Christman Quarry
47248 Swazey Rd.
Lewisville, OH 43754

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0656060056
Permit Number: P0089803
Permit Type: Renewal
County: Monroe

Certified Mail

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

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
Christman Quarry**

Facility ID:	0656060056
Permit Number:	P0089803
Permit Type:	Renewal
Issued:	7/18/2013
Effective:	7/18/2013
Expiration:	7/18/2023



Division of Air Pollution Control
Permit-to-Install and Operate
for
Christman Quarry

Table of Contents

Authorization	1
A. Standard Terms and Conditions	3
1. What does this permit-to-install and operate ("PTIO") allow me to do?.....	4
2. Who is responsible for complying with this permit?	4
3. What records must I keep under this permit?	4
4. What are my permit fees and when do I pay them?.....	4
5. When does my PTIO expire, and when do I need to submit my renewal application?	4
6. What happens to this permit if my project is delayed or I do not install or modify my source?	5
7. What reports must I submit under this permit?	5
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?	5
9. What are my obligations when I perform scheduled maintenance on air pollution control equipment? ...	5
10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?	6
11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?	6
12. What happens if one or more emissions units operated under this permit is/are shut down permanently?	6
13. Can I transfer this permit to a new owner or operator?.....	7
14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?	7
15. What happens if a portion of this permit is determined to be invalid?	7
B. Facility-Wide Terms and Conditions.....	8
C. Emissions Unit Terms and Conditions	10
1. F002, Storage Piles.....	11



Final Permit-to-Install and Operate
Christman Quarry
Permit Number: P0089803
Facility ID: 0656060056
Effective Date: 7/18/2013

Authorization

Facility ID: 0656060056
Application Number(s): A0021090
Permit Number: P0089803
Permit Description: PTIO renewal for F002: Limestone Storage Piles, including 1 half-acre #2 limestone storage pile, 1 half-acre #34 limestone storage pile, 1 half-acre #46 limestone storage pile and 1 screenings limestone storage pile.
Permit Type: Renewal
Permit Fee: \$0.00
Issue Date: 7/18/2013
Effective Date: 7/18/2013
Expiration Date: 7/18/2023
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Christman Quarry
47248 Swazey Rd.
Lewisville, OH 43754

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

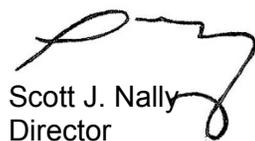
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

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

Christman Quarry

Permit Number: P0089803

Facility ID: 0656060056

Effective Date: 7/18/2013

Authorization (continued)

Permit Number: P0089803

Permit Description: PTIO renewal for F002: Limestone Storage Piles, including 1 half-acre #2 limestone storage pile, 1 half-acre #34 limestone storage pile, 1 half-acre #46 limestone storage pile and 1 screenings limestone storage pile.

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

Emissions Unit ID:	F002
Company Equipment ID:	Material Handling
Superseded Permit Number:	06-08188
General Permit Category and Type:	Not Applicable



Final Permit-to-Install and Operate
Christman Quarry
Permit Number: P0089803
Facility ID: 0656060056
Effective Date: 7/18/2013

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.

¹Permittees 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
Christman Quarry
Permit Number: P0089803
Facility ID: 0656060056
Effective Date: 7/18/2013

B. Facility-Wide Terms and Conditions



Final Permit-to-Install and Operate

Christman Quarry

Permit Number: P0089803

Facility ID: 0656060056

Effective Date: 7/18/2013

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
Christman Quarry
Permit Number: P0089803
Facility ID: 0656060056
Effective Date: 7/18/2013

C. Emissions Unit Terms and Conditions



1. F002, Storage Piles

Operations, Property and/or Equipment Description:

Limestone Storage Piles, including 1 half-acre #2's limestone storage pile, 1 half-acre #34's limestone storage pile, 1 half-acre #46's limestone storage pile and 1 half-acre screenings limestone storage pile with a maximum annual throughput of 80,000 tons per year (Supersedes PTI 06-08188, issued 01/16/2007)

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 established in PTI 06-08188, issued 01/16/2007)	Total particulate emissions (PE) shall not exceed 0.39 tons per year; There shall be no visible emissions except for one minute in any sixty minute observation period; The permittee shall implement best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections b)(2)a. through b)(2)f.).
b.	OAC rule 3745-17-07(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-08(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

- a. The storage piles that are covered by this permit and subject to the requirements of OAC rule 3745-31-05 are listed below:
 - One (1) half-acre #2's limestone
 - One (1) half-acre #34's limestone
 - One (1) half-acre #46's limestone
 - One (1) half-acre screenings limestone
- b. 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 permit application, the permittee has committed to maintaining reduced drop height and watering to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measure to ensure compliance.
- c. 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.
- d. The permittee shall employ best available control measure 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 permit application, the permittee has committed to maintaining low pile height and watering to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measure to ensure compliance.
- e. 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.

f. 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.

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>
One (1) half-acre #2's limestone	Daily
One (1) half-acre #34's limestone	Daily
One (1) half-acre #46's limestone	Daily
One (1) half-acre screenings limestone	Daily

(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>
One (1) half-acre #2's limestone	Daily
One (1) half-acre #34's limestone	Daily
One (1) half-acre #46's limestone	Daily
One (1) half-acre screenings limestone	Daily

(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>
One (1) half-acre #2's limestone	Daily
One (1) half-acre #34's limestone	Daily



One (1) half-acre #46's limestone Daily

One (1) half-acre screenings limestone Daily

- (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).

The information required in (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 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 section b) of these terms and conditions shall be determined in accordance with the following methods:



a. Emissions Limitation:

There shall be no visible emissions except for one minute in any sixty minute observation period.

Applicable Compliance Method:

If required, visible emissions of fugitive dust shall be determined according to USEPA Method 22, with the modifications found in OAC rule 3745-17-03(B)(4).

b. Emissions Limitation:

Total PE shall not exceed 0.39 TPY.

Applicable Compliance Method:

The ton per year limit was established based upon emission calculations using AP-42 (11/06) emission factors and shall be calculated using AP-42 emission factors. Should further updates in AP-42 occur, the most current equations for storage piles shall be used.

Load In/Load Out Emissions (limestone storage piles):

$$EF = k * 0.0032(U/5)^{1.3} / (M/2)^{1.4}$$

Where:

- EF = emission factor expressed in pounds (lbs) / ton
- k = particle size multiplier for TSP (dimensionless) = 0.74
- U = mean wind speed expressed in miles per hour (MPH) = 8.7
- M = material moisture content (%) = 0.7

Therefore, EF = 0.021154 lb/ton

Load-In = 4 load-in points

Load-Out = 4 load-out points

Maximum annual throughput= 80,000 tons/year

$$[(EF) * (Load-In + Load-Out) * (Maximum Annual Throughput)] / 2,000lb/ton = 6.77 TPY$$

Assume 95% control for precautionary measures (BAT)

$$(6.77 TPY)(.05) = 0.33 TPY \text{ controlled PE}$$

Wind Erosion:

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



Where:

EF = emission factor expressed in pounds (lbs) /day/acre

s = silt content of road surface material (%) = 1.4 %

p = number of rain days per year > 0.1 in = 140

f = percentage of time wind speed exceeds 12 mph (%) = 30

A = total surface area of storage piles (acres) = 2.0

Therefore, EF = 3.038298 lbs/day/acre

$(3.038298 \text{ lbs/day/acre})(365 \text{ days/yr})(2.0 \text{ acres})/2,000 \text{ lbs/ton} = 1.10 \text{ TPY}$
uncontrolled PE

Assume 95% control for precautionary operating practices (BAT)

$(1.10 \text{ TPY})(.05) = 0.055 \text{ TPY}$ controlled PE

Total Emission Summary:

Load-in/load-out = 0.33 TPY

Wind Erosion = 0.055 TPY

Total emissions = 0.39 TPY

g) Miscellaneous Requirements

(1) None.