



State of Ohio Environmental Protection Agency

STREET ADDRESS:

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50 W. Town St., Suite 700
Columbus, Ohio 43215

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www.epa.state.oh.us

MAILING ADDRESS:

P.O. Box 1049
Columbus, OH 43216-1049

1/12/2009

Terry Ellis
N and M Materials, LLC
6250 Corporate Center Dr
Dublin, OH 43016

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0125953243
Permit Number: 01-12247
Permit Type: Initial Installation
County: Franklin

Certified Mail

| | |
|-----|----------------------|
| No | TOXIC REVIEW |
| No | PSD |
| Yes | SYNTHETIC MINOR |
| No | CEMS |
| No | MACT |
| Yes | NSPS |
| No | NESHAPS |
| No | NETTING |
| No | MAJOR NON-ATTAINMENT |
| No | MODELING SUBMITTED |

Dear Permit Holder:

Enclosed please find a final 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.

Ohio EPA maintains a document entitled "Frequently Asked Questions about the PTIO". The document can be downloaded from the DAPC Web page, www.epa.state.oh.us/dapc, from the "Permits" link. This document contains additional information related to your permit, such as what activities are covered under the PTIO, who has enforcement authority over the permit and Ohio EPA's authorization to inspect your facility and records. Please contact the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469 if you need assistance.

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission ("ERAC") under Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and describe the action complained of and the grounds for the appeal. The appeal must be filed with the ERAC within thirty (30) days after notice of the Director's action. A filing fee of \$70.00 must be submitted to the ERAC with the appeal, although the ERAC, has discretion to reduce the amount of the filing fee if you can demonstrate (by affidavit) that payment of the full amount of the fee would cause extreme hardship. If you file an appeal of this action, you must notify Ohio EPA of the filing of the appeal (by providing a copy to the Director) within three (3) days of filing your appeal with the ERAC. Ohio EPA requests that a copy of the appeal also be provided to the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the ERAC at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, OH 43215

If you have any questions regarding this permit, please contact the Ohio EPA DAPC, Central District Office. This permit has been posted to the Division of Air Pollution Control (DAPC) Web page www.epa.state.oh.us/dapc.

Sincerely,

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

Cc: Ohio EPA-CDO

Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director



**State of Ohio Environmental Protection Agency
Division of Air Pollution Control**

FINAL

**Air Pollution Permit-to-Install and Operate
for
N and M Materials, LLC**

Facility ID: 0125953243
Permit Number: 01-12247
Permit Type: Initial Installation
Issued: 1/12/2009
Effective: 1/12/2009
Expiration: 1/12/2014



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Air Pollution Permit-to-Install and Operate
for
N and M Materials, LLC

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Permit Number: 01-12247
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Authorization

Facility ID: 0125953243
Application Number(s): A0001184
Permit Number: 01-12247
Permit Description: Portable rock crushing plant with crushers, screens, material handling, roadways and storage piles.
Permit Type: Initial Installation
Permit Fee: \$2,900.00
Issue Date: 1/12/2009
Effective Date: 1/12/2009
Expiration Date: 1/12/2014
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15
This document constitutes issuance to:

N and M Materials, LLC
6250 Corporate Center Drive
Dublin, OH 43016

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, Central District Office
50 West Town Street, 6th Floor
P.O. Box 1049
Columbus, OH 43216-1049
(614)728-3778

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

Chris Korleski
Director



Authorization (continued)

Permit Number: 01-12247
Permit Description: Portable rock crushing plant with crushers, screens, material handling, roadways and storage piles.

Permits for the following emissions unit(s) or groups of emissions units are in this document as indicated below:

- | | |
|-----------------------------------|--------------------|
| Emissions Unit ID: | F001 |
| Company Equipment ID: | Crusher |
| Superseded Permit Number: | |
| General Permit Category and Type: | Not Applicable |
| Emissions Unit ID: | F002 |
| Company Equipment ID: | Screen |
| Superseded Permit Number: | |
| General Permit Category and Type: | Not Applicable |
| Emissions Unit ID: | F003 |
| Company Equipment ID: | Unpaved Haul Roads |
| Superseded Permit Number: | |
| General Permit Category and Type: | Not Applicable |
| Emissions Unit ID: | F004 |
| Company Equipment ID: | Storage Piles |
| Superseded Permit Number: | |
| General Permit Category and Type: | Not Applicable |



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Final Permit-to-Install and Operate

Permit Number: 01-12247

Facility ID: 0125953243

Effective Date: 1/12/2009

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. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. 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, Central 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 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 emission 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.

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



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install and Operate

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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.



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Division of Air Pollution Control

Final Permit-to-Install and Operate

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B. Facility-Wide Terms and Conditions



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install and Operate

Permit Number: 01-12247

Facility ID: 0125953243

Effective Date: 1/12/2009

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.



State of Ohio Environmental Protection Agency
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Effective Date: 1/12/2009

C. Emissions Unit Terms and Conditions



1. F001, Crusher

Operations, Property and/or Equipment Description:

Lokotrack LT 1213 Portable Primary Impact Crusher powered by a 525 HP Caterpillar C-15 diesel-fired engine.

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. b)(1)e. and c)(1)

b) Applicable Emissions Limitations and/or Control Requirements

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

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|--|---|--|
| Emissions from portable crusher | | |
| a. | OAC rule 3745-31-05(D) [Voluntary restriction to employ control measures and restrictions equivalent to BAT] | Emissions of fugitive particulate matter from the portable crusher shall not exceed 0.7 tons as a rolling, 12-month summation. Emissions of fugitive particulate matter equal to or less than 10 microns in diameter (PM ₁₀) from the portable crusher shall not exceed 0.3 tons as a rolling, 12-month summation. Emissions of fugitive particulate matter from material handling shall not exceed 1.9 tons as a rolling, 12-month summation. Emissions of fugitive particulate matter equal to or less than 10 microns in diameter (PM ₁₀) from material handling |



| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|-------------------------------------|--|---|
| | | <p>shall not exceed 0.8 tons as a rolling, 12-month summation.</p> <p>Visible particulate emissions (PE) from the crusher shall not exceed 15% opacity as a six-minute average, except as provided by rule.</p> <p>Visible particulate emissions (PE) from any transfer point or belt conveyors (excluding truck dumping, see b)(2)h. below) shall not exceed 10% opacity as a six-minute average, except as provided by rule.</p> <p>Compliance with this visible particulate emissions limitation includes compliance with the visible particulate emissions limitations in 40 CFR Part 60, Subpart OOO.</p> <p>See b)(2)a. and c)(1) below.</p> <p>Best available control measures for the crusher and material handling. See b)(2)c., b)(2)d., b)(2)e., and b)(2)f.</p> |
| b. | OAC rule 3745-17-08(B) | The control measures and emission limitations specified by this rule are less stringent than the control measures and emissions limitations established pursuant to OAC rule 3745-31-05(D). |
| c. | OAC rule 3745-17-07(B)(1) | Visible particulate emissions from any fugitive dust source shall not exceed twenty per cent (20%) opacity as a three-minute average. |
| d. | 40 Code of Federal Regulations Part 60, Subpart OOO. | See b)(2)g., b)(2)h. and b)(2)i. |
| Emissions from diesel engine | | |
| e. | OAC rule 3745-31-05(D) [Synthetic Minor to avoid Title V] | <p>Emissions of nitrogen oxides (NO_x) from this emissions unit shall not exceed 17.2 pounds per hour and 26.9 tons as a rolling, 12-month summation.</p> <p>Emissions of carbon monoxide (CO) from this emissions unit shall not exceed 3.7 pounds per hour and 5.8 tons as a rolling, 12-month summation.</p> |



| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|-------------------------------|---|
| | | <p>Emissions of sulfur dioxide from this emissions unit shall not exceed 1.1 pounds per hour and 1.8 tons as a rolling, 12-month summation.</p> <p>Emissions of particulate matter equal to or less than 10 microns in diameter (PM₁₀) from this emissions unit shall not exceed 1.2 pounds per hour and 1.9 tons as a rolling, 12-month summation.</p> <p>Emissions of volatile organic compounds (VOC) from this emissions unit shall not exceed 1.4 pounds per hour and 2.2 tons as a rolling, 12-month summation.</p> <p>See b)(2)a. and c)(1)</p> |
| f. | OAC rule 3745-31-05(A)(3)(b) | See b)(2)b. |
| g. | OAC rule 3745-17-07(A) | Visible particulate emissions shall not exceed 20% opacity as a six minute average, except as provided by rule. |
| h. | OAC rule 3745-18-06(G) | See b)(2)j. |

(2) Additional Terms and Conditions

- a. Permit to Install 01-12247 for this air contaminant source takes into account the following voluntary restrictions as proposed by the permittee for purposes of establishing requirements that would be equivalent to Best Available Technology (BAT) requirements under OAC rule-3745-31-05(A)(3):
 - i. employ water sprays to minimize or eliminate visible emissions of fugitive dust from the crusher and material handling operations at all times this emissions unit is in operation;
 - ii. minimize free-fall distance when loading material into the crusher hopper;
 - iii. synthetic minor restrictions for annual operating hours for the diesel engine associated with this emissions unit.

The voluntary restrictions above are being defined as equivalent to BAT requirements such that this emissions unit meets the criteria in g)(1) associated with the relocation of a portable source.

- b. BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the CO, VOC, SO₂, and PM₁₀ from the diesel engine since the calculated annual emission rate for PE, PM₁₀, CO, VOC, and SO₂ is less than ten tons per year taking into account the permittee's request for voluntary restrictions equivalent to BAT



requirements and synthetic minor restrictions that limit the annual operating hours of this emissions unit.

The hourly mass emissions rates for diesel engine emissions represent the potential to emit for this emissions unit. No monitoring, recordkeeping or reporting requirements are necessary to ensure compliance with these emissions limitations

- c. The material handling operations that are covered by this permit and subject to the above-mentioned requirements are listed below:

| <u>material handling operation(s)</u> | <u>control measure(s)</u> |
|---------------------------------------|-----------------------------|
| Each load-in operation | minimize free-fall distance |
| Each crushing operation | water sprays |
| Each material conveying operation | water sprays |
| Each load-out operation | minimize free-fall distance |

- d. The permittee shall employ best available control measures on all load-in and load-out operations associated with material handling for the purpose of ensuring compliance with the above-mentioned applicable requirements and shall minimize the free fall distance of the processed material.
- e. The permittee shall employ reasonably available control measures for the material handling operations listed above, 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 use a wet spray system as necessary to maintain compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- f. For each material handling operation that is not adequately enclosed, the above-identified control measure(s) in b)(2)c and b)(2)d shall be implemented, if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during the operation of the material handling operation(s) until further observation confirms that use of the control measure(s) is unnecessary.
- g. 40 Code of Federal Regulations (CFR) Part 60 Subpart OOO requirements are applicable to the crusher and associated material handling operations (excluding truck dumping into the crusher feeder hopper, see b)(2)h) when the crusher is used to crush any non-metallic mineral* material as defined in 60.671. The provisions of 40 CFR Part 60 Subpart OOO do not apply to the crusher and associated material handling operations when used to process material that is not defined as a non-metallic mineral.

*nonmetallic mineral means any of the following minerals or any mixture of which the majority is any of the following minerals: (a) Crushed and Broken Stone, including Limestone, Dolomite, Granite, Traprock, Sandstone, Quartz, Quartzite, Marl, Marble, Slate, Shale, Oil Shale, and Shell (b) Sand and Gravel (c) Clay including Kaolin, Fireclay, Bentonite, Fuller's Earth, Ball Clay, and Common Clay (d) Rock Salt (e) Gypsum (f) Sodium Compounds, including Sodium Carbonate, Sodium Chloride, and Sodium Sulfate (g) Pumice (h) Gilsonite (i) Talc and Pyrophyllite (j) Boron, including Borax, Kernite, and Colemanite (k) Barite (l)



Fluorospar.(m) Feldspar (n) Diatomite (o) Perlite (p) Vermiculite (q) Mica (r) Kyanite, including Andalusite, Sillimanite, Topaz, and Dumortierite.

- h. On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under '60.11 of 40 CFR Part 60, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere:
 - i. from any transfer point on belt conveyors or from any other affected facility any fugitive emissions which exhibit greater than 10 percent opacity; and
 - ii. from any crusher, at which a capture system is not used, fugitive emissions which exhibit greater than 15 percent opacity.

Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of '60.672 of this part.

For the purposes of compliance with 40 CFR Part 60 Subpart OOO requirements, truck dumping means the unloading of nonmetallic minerals from movable vehicles designed to transport nonmetallic minerals from one location to another. Movable vehicles include but are not limited to: trucks, front end loaders, skip hoists, and railcars.

- i. The application and enforcement of the provisions of New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- j. OAC rule 3745-18-06(B) exempts stationary internal combustion engines, as defined in 3745-18-01(B)(19), which have rated heat input capacities equal to, or less than, 10 MMBtu per hour from the sulfur dioxide emission limit in OAC rule 3745-18-06(G). This emissions unit has a rated heat input of less than 10 MMBtu per hour.

c) Operational Restrictions

- (1) The maximum annual operating hours for this emissions unit shall not exceed 3,120 hours based upon a rolling, 12-month summation of the operating hours.

To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the operating hours levels specified in the following table:

Maximum Allowable

| <u>Month(s)</u> | <u>Cumulative Operating Hours</u> |
|-----------------|-----------------------------------|
| 1 | 720 |
| 1-2 | 1,440 |
| 1-3 | 2,160 |



| | |
|------|-------|
| 1-4 | 2,880 |
| 1-5 | 3,120 |
| 1-6 | 3,120 |
| 1-7 | 3,120 |
| 1-8 | 3,120 |
| 1-9 | 3,120 |
| 1-10 | 3,120 |
| 1-11 | 3,120 |
| 1-12 | 3,120 |

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

- (2) The crusher water spray and transfer point water spray(s) shall be in operation at all times when this emissions unit is operating to minimize or eliminate visible emissions of fugitive dust.
- (3) The oil combusted in this emissions unit shall only be number 2 diesel fuel oil, as defined by the American Society for Testing and Materials in ASTM D396-78, 89, 90, 92, 96 or 98, "Standard Specification for Fuel Oils".
- (4) The permittee shall combust only number 2 diesel oil with a sulfur content of no more than 0.5 weight percent sulfur in this emission unit.
- (5) The permittee shall install or have installed a non-resettable hour meter on the diesel engine prior to startup of this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) Except as otherwise provided in this section, for material handling operations that are not adequately enclosed, the permittee shall perform inspections of such operations in accordance with the following minimum frequencies:

| <u>material handling operation(s)</u> | <u>minimum inspection frequency</u> |
|---------------------------------------|-------------------------------------|
| Each load-in operation | daily |
| Each crushing operation | daily |
| Each material conveying operation | daily |
| Each load-out operation | daily |

- (2) The permittee may, upon receipt of written approval from Ohio EPA, CDO, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
- (3) The permittee shall maintain records of the following information:
 - a. the date and reason any required inspection was not performed;
 - b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measure(s);



- c. the dates when excess visible fugitive particulate emissions were observed and control measure(s) was (were) implemented; and
- d. on a calendar quarter basis, the total number of days the control measure(s) was (were) implemented.

The information in d)(3). shall be kept separately for each material handling operation identified in d)(1), and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

- (4) The permittee shall maintain records of the following information:
 - a. the date and reason any required inspection was not performed; and
 - b. the date when excess visible fugitive particulate emissions were observed and control measures were not implemented.

This information shall be kept separately for each material handling operation identified above, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

- (5) The permittee shall maintain monthly records of the following information:
 - a. the operating hours for each month; and
 - b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the operating hours.

Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month.

- (6) For each instance the permittee burns a fuel other than #2 fuel oil that meets the requirements of both c)(3) and c)(4) above, the permittee shall maintain a record of the type and quantity of fuel burned in this emission unit.
- (7) The permittee shall maintain records that identify any instance of the crusher water spray not operating when the crusher is in operation.
- (8) The permittee shall maintain records of fuel supplier certification to demonstrated compliance with the operational restrictions in c)(3) and c)(4). Records of fuel supplier certification shall include the following information:
 - a. the name of the fuel supplier; and
 - b. a statement from the fuel supplier that the fuel is in compliance with the operational restrictions in c)(3) and c)(4).



e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than #2 fuel oil, as specified in c)(3) and c(4), was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (2) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director 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.
- (3) The permittee shall submit quarterly deviation (excursion) reports that identify:

- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the Potential to Emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

Emissions of nitrogen oxides (NO_x) from this emissions unit shall not exceed 17.2 pounds per hour and 26.9 tons as a rolling, 12-month summation.

The rolling, 12-month limitation on the hours of operation; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative hours of operation.

- b. the probable cause of each deviation (excursion);
- c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

- (4) Pursuant to the general provisions of NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times for this emissions unit. The reporting requirements indicated in this section shall be initiated by the first instance when this emissions unit operates as an affected facility at a nonmetallic mineral processing plant as specified in 60.670(a)(1).
 - a. Construction date (no later than 30 days after such date);
 - b. Actual start-up date (within 15 days after such date); and
 - c. Date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency



State of Ohio Environmental Protection Agency
Division of Air Pollution Control

Final Permit-to-Install and Operate

Permit Number: 01-12247

Facility ID: 0125953243

Effective Date: 1/12/2009

DAPC - Permit Management Unit
Lazarus Government Center
P.O. Box 1049
Columbus, OH 43216-1049

and

Ohio Environmental Protection Agency
Central District Office, Division of Air Pollution Control
Lazarus Government Center, 6th Floor
P.O. Box 1049
Columbus, Ohio 43216-1049

- (5) Within thirty (30) days of the startup of this emissions unit, the permittee shall submit the model number and serial number of each piece of equipment associated with this emissions unit.
- f) Testing Requirements
- (1) Compliance with the emissions limitations in f)(1) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emissions limitation: Emissions of fugitive particulate matter from the portable crusher shall not exceed 0.7 tons as a rolling, 12-month summation. Emissions of fugitive particulate matter equal to or less than 10 microns in diameter (PM₁₀) from the portable crusher shall not exceed 0.3 tons as a rolling, 12-month summation. Emissions of fugitive particulate matter from material handling shall not exceed 1.9 tons as a rolling, 12-month summation. Emissions of fugitive particulate matter equal to or less than 10 microns in diameter (PM₁₀) from material handling shall not exceed 0.8 tons as a rolling, 12-month summation.

Applicable compliance method: Fugitive dust emissions associated with crushing operations were established by multiplying the maximum operating rate of 330 tons per hour by the maximum operating hours of 3,120 hours as a rolling, 12-month summation. The result of this calculation was multiplied by the appropriate emissions factors from AP-42, Chapter 11.19.2 (11/2006) [0.0054 lb PM / ton processed or 0.0024 lb PM₁₀ / ton processed] and dividing by 2000 pounds per ton. The result of this calculation was multiplied by the requested control efficiency for the use of water sprays of 75% [control factor of (1 - 0.75) = 0.25].

Calculation for fugitive PM emissions from crushing operations:

330 tons per hour * 3,120 hours as a rolling, 12-month summation = 1,029,600 tons as a rolling 12-month summation.

1,029,600 tons as a rolling 12-month summation * 0.0054 lb PM / ton processed = 5,560 lb PM as a rolling, 12-month summation.

(5,560 lb PM as a rolling, 12-month summation) / (2000 lb / ton) = 2.8 tons as a rolling, 12-month summation.



2.8 tons as a rolling, 12-month summation * (1-0.75) = 0.7 tons as a rolling, 12-month summation.

Calculation for fugitive PM₁₀ emissions from crushing operations:

330 tons per hour * 3,120 hours as a rolling, 12-month summation = 1,029,600 tons as a rolling 12-month summation.

1,029,600 tons as a rolling 12-month summation * 0.0024 lb PM / ton processed = 2,471 lb PM as a rolling, 12-month summation.

(2,471 lb PM as a rolling, 12-month summation) / (2000 lb / ton) = 1.2 tons as a rolling, 12-month summation.

1.2 tons as a rolling, 12-month summation * (1-0.75) = 0.3 tons as a rolling, 12-month summation.

In addition to these fugitive emissions are emissions from crusher loading and material handlings. Fugitive loading emissions are associated with the loading of material into the crusher hopper and material handlings onto and from conveyors.

Fugitive loading emissions associated with the loading of the crusher were established by multiplying the maximum operating rate of 330 tons per hour by the maximum operating hours of 3,120 hours as a rolling 12-month summation. The result of this calculation was multiplied by the appropriate emissions factor from AP-42, Chapter 13.2.4.3 equation 1 using the mean wind speed and moisture content values provided by the applicant and dividing by 2000 lb per ton.

Calculation for PM and PM₁₀ fugitive emissions from crusher loading:

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

- E = emissions factor in pounds per ton
- k = particle size multiplier (0.74 for PM or 0.35 for PM₁₀)
- U = mean wind speed (mph) = 7 mph
- M = material moisture content (%) = 3.0%
- E_{PM} = 0.0021 lb per ton

$$E_{PM10} = 0.00010 \text{ lb per ton}$$

At 330 tons per hour and 3,120 hour as a rolling, 12-month summation:

$$(E_{PM} * 330 * 3,120) / 2000 = 1.1 \text{ tons PM as a rolling, 12-month summation}$$

$$(E_{PM10} * 330 * 3,120) / 2000 = 0.5 \text{ tons PM as a rolling, 12-month summation}$$

Fugitive material handling emissions were established by multiplying the maximum operating rate of 330 tons per hour by the maximum operating hours of 3,120 hours as a rolling 12-month summation. The result of this calculation was multiplied by the number of transfer points (2) and the appropriate emissions factor from AP-42, Chapter 11.19.2 (11/2006) [0.0030 lb PM / ton processed or



0.0011 lb PM₁₀ / ton processed] and dividing by 2000 pounds per ton. The result of this calculation was multiplied by the requested control efficiency for the use of water sprays of 75% [control factor of (1 - 0.75) = 0.25].

Calculations for PM and PM10 fugitive emissions from transfer points:

For PM emission from material transfer points:

[330 tons per hour * 3,120 hours as a rolling, 12-month summation * 2 transfer points * 0.0030 lb PM / ton processed * (1-0.75)] / 2000 pounds per ton = 0.8 tons PM as a rolling, 12-month summation.

For PM₁₀ emission from material transfer points:

[330 tons per hour * 3,120 hours as a rolling, 12-month summation * 2 transfer points * 0.0011 lb PM / ton processed * (1-0.75)] / 2000 pounds per ton = 0.3 tons PM₁₀ as a rolling, 12-month summation.

- b. Emissions limitation: Visible particulate emissions (PE) from the crusher shall not exceed 15% opacity as a six-minute average, except as provided by rule. Visible particulate emissions (PE) from any transfer point or belt conveyors (excluding truck dumping, see b)(2)h) shall not exceed 10% opacity as a six-minute average, except as provided by rule.

Applicable compliance method: If required, the permittee shall demonstrate compliance with this emission limitation using U.S. EPA Method 9 of 40 CFR, Part 60, Appendix A.

- c. Emissions limitation: From the diesel engine - Emissions of nitrogen oxides (NO_x) from this emissions unit shall not exceed 17.2 pounds per hour. Emissions of carbon monoxide (CO) from this emissions unit shall not exceed 3.7 pounds per hour. Emissions of sulfur dioxide from this emissions unit shall not exceed 1.1 pounds per hour. Emissions of particulate matter equal to or less than 10 microns in diameter (PM₁₀) from this emissions unit shall not exceed 1.2 pounds per hour. Emissions of volatile organic compounds (VOC) from this emissions unit shall not exceed 1.4 pounds per hour.

Applicable compliance method: Hourly mass emissions rates for this emissions unit were established by multiplying the appropriate emissions factor from AP-42 Chapter 3.3 (10/1996) by the MMBtu/hr heat input rate for the diesel engine supplied by the applicant (3.7 MMBtu/hr).

If required, the permittee shall demonstrate compliance with these emissions limitations using the following test methods:

- NO_x: Methods 1-4 and 7E of 40 CFR Part 60, Appendix A
- CO: Methods 1-4 and 10 of 40 CFR Part 60, Appendix A
- SO₂: Methods 1-4 and 6 of 40 CFR Part 60, Appendix A
- PM: Methods 1-4 and 5 of 40 CFR Part 60, Appendix A
- OC: Methods 1-4 and 25 or 25A of 40 CFR Part 60, Appendix A



- d. Emissions limitation: Emissions of nitrogen oxides (NO_x) from this emissions unit shall not exceed 26.9 tons as a rolling, 12-month summation. Emissions of carbon monoxide (CO) from this emissions unit shall not exceed 5.8 tons as a rolling, 12-month summation. Emissions of sulfur dioxide from this emissions unit shall not exceed 1.8 tons as a rolling, 12-month summation. Emissions of particulate matter equal to or less than 10 microns in diameter (PM₁₀) from this emissions unit shall not exceed 1.9 tons as a rolling, 12-month summation. Emissions of volatile organic compounds (VOC) from this emissions unit shall not exceed 2.2 tons as a rolling, 12-month summation.

Applicable Compliance Method: The annual emissions limitations were established by multiplying the hourly emissions limitation for each pollutant by a maximum allowable operating schedule of 3,120 hours as a rolling, 12-month summation, and dividing the result by 2000 pounds / ton. The permittee shall demonstrate compliance with this emissions limitation based upon records from c)(1).

- (2) In the first instance when this emissions unit operates as an affected facility at a nonmetallic mineral processing plant as specified in 60.670(a)(1), the permittee shall conduct, or have conducted, emission testing for all crushing operations and transfer points of emissions unit F001.

Testing shall be conducted in accordance with the provisions of 40 CFR Part 60, Subpart A, Section 60.8 and 40 CFR Part 60, Subpart OOO, Section 60.675. Testing shall be conducted to demonstrate compliance with the visible emissions limitations set forth in this Permit to Install and 40 CFR Part 60, Subpart OOO, Section 60.672.

g) **Miscellaneous Requirements**

- (1) At the discretion and following the approval of the Director, the permittee may relocate the portable source within the State of Ohio without first obtaining a permit to install (PTI) providing the appropriate notification and exemption requirements have been met. The Director may issue a "Notice of Site Approval" through either of the following scenarios:

- a. If future location(s) of the proposed portable source are unknown, the approval to relocate the portable source shall be in accordance with OAC rule 3745-31-03(A)(1)(p)(i) and the following criteria shall be met:
 - i. the portable source has been issued a permit to install (PTI) and the permittee continues to comply with any applicable best available technology (BAT) determination;
 - ii. the portable source is operating pursuant to a currently effective PTI and/or a current permit to operate (PTO) and continues to comply with the requirements of the permit and any applicable state and/or federal rules;
 - iii. the permittee has provided a minimum of 30 days notice of the intent to relocate the portable source to the permitting authority (the Ohio EPA District Office or local air agency that has issued the effective current permit) prior to the scheduled relocation;



- iv. the Ohio EPA district office or local air agency having jurisdiction over the new site has determined that the permitted emissions would not cause a nuisance in violation of OAC rule 3745-15-07 and that the relocation of the portable source, along with any supporting permitted emissions (e.g. roadways or storage piles), would not result in the installation of a major stationary source or a modification of an existing major stationary source at the new site; and
- v. the Director has issued a Notice of Site Approval, stating that the proposed site is acceptable under OAC rule 3745-15-07 and the relocation will not result in the installation of a major stationary source or a modification of an existing major stationary source.

The portable source can be relocated upon receipt of the Director=s Notice of Site Approval for the site; **or**

- b. Pursuant to OAC rule 3745-31-03(A)(1)(p)(ii), the Director may issue a Notice of Site Approval for any pre-disclosed location(s) if the portable source meets the requirements of OAC rule 3745-31-05(E), as follows:
 - i. the portable source has been issued a permit to install (PTI) and the permittee continues to comply with any applicable best available technology (BAT) determination;
 - ii. the portable source is operating pursuant to a currently effective PTI and/or a current permit to operate (PTO) and continues to comply with the requirements of the permit and any applicable state and/or federal rules;
 - iii. the permittee has identified the proposed site(s) to the permitting District Office or local air agency;
 - iv. the permitting District Office/local air agency and the District Office/Local air agency having jurisdiction over the new site have determined that the portable source will have an acceptable environmental impact at the proposed site(s);
 - v. a public notice, meeting the requirements OAC rule 3745-47, is published in the county where the proposed site(s) is/are located;
 - vi. the owner of the proposed site(s) (if not the permittee) has provided the portable source owner with approval, or an equivalent declaration, that it is acceptable to move the portable source to the proposed site(s); and
 - vii. the permittee has provided the Ohio EPA with a minimum of a 15-day written notice of the relocation.

The portable source can be relocated upon receipt of the Director=s Notice of Site Approval for the site. Any site approval(s) issued by the Ohio EPA, pursuant to OAC rule 3745-31-03(A)(1)(p)(ii), shall be valid for no longer than 3 years and are subject to renewal. Pursuant to OAC rule 3745-31-05(F), the Director may modify the site approval to add or delete certain portable sources or add or delete certain terms and conditions as appropriate.



- (2) If the relocation of the portable source would result in the installation of a major source or the modification of a major source, as defined in OAC rule 3745-31-01, the permittee shall submit an application and obtain a PTI for the new location prior to moving the portable source.

When a portable source is located at a stationary source or at a site with multiple portable sources, the potential emissions of the portable source may be required to be added to that of the facility, in order to determine the potential to emit for Title V and PSD applicability. Relocation of any portable source that results in the creation of a major source, as defined in OAC rule 3745-77-01, must also meet all applicable requirements under the Title V program contained in OAC rule 3745-77, which may include the requirement to apply for a Title V permit.

The "Notice of Intent to Relocate" shall be submitted to the Ohio EPA District Office or local air agency responsible for issuing the permits for the portable source. Upon receipt of the notice, the permitting office shall notify the appropriate Ohio EPA District Office or local air agency having jurisdiction over the new site. Failure to submit said notification or failure to receive Ohio EPA approval prior to relocation of the portable source may result in fines and civil penalties.



2. F002, Screen

Operations, Property and/or Equipment Description:

Lokotrack ST620 Portable Screening Unit powered by a 425 HP Caterpillar C-12 diesel-fired engine

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. b)(1)e. and c)(1)

b) Applicable Emissions Limitations and/or Control Requirements

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

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|---|--|
| a. | OAC rule 3745-31-05(D) [Voluntary restriction to employ control measures and restrictions equivalent to BAT] | Emissions of fugitive particulate matter from the portable screen shall not exceed 3.2 tons as a rolling, 12-month summation. Emissions of fugitive particulate matter equal to or less than 10 microns in diameter (PM ₁₀) from the portable screen shall not exceed 1.1 tons as a rolling, 12-month summation. Emissions of fugitive particulate matter from material handling shall not exceed 5.0 tons as a rolling, 12-month summation. Emissions of fugitive particulate matter equal to or less than 10 microns in diameter (PM ₁₀) from material handling shall not exceed 1.9 tons as a rolling, 12- |



| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|--|---|
| | | <p>month summation.</p> <p>Visible particulate emissions (PE) from any fugitive dust source shall not exceed 10% opacity as a six-minute average, except as provided by rule.</p> <p>Compliance with this visible particulate emissions limitation includes compliance with the visible particulate emissions limitations in 40 CFR Part 60, Subpart OOO.</p> <p>See b)(2)a. and c)(1) below.</p> <p>Best available control measures for the screening operations and material handling. See b)(2)c., b)(2)d., b)(2)e., and b)(2)f.</p> |
| b. | OAC rule 3745-17-08(B) | The control measures and emission limitations specified by this rule are less stringent than the control measures and emissions limitations established pursuant to OAC rule 3745-31-05(D). |
| c. | OAC rule 3745-17-07(B)(1) | Visible particulate emissions from any fugitive dust source shall not exceed twenty per cent (20%) opacity as a three-minute average. |
| d. | 40 Code of Federal Regulations Part 60, Subpart OOO. | <p>The visible particulate emission limitation specified by this subpart is equivalent to the visible particulate emission limitation established pursuant to OAC rule 3745-31-05(D).</p> <p>See b)(2)f., b)(2)g. and b)(2)h. below.</p> |
| | Emissions from diesel engine | |
| e. | OAC rule 3745-31-05(D) [Synthetic Minor to avoid Title V] | <p>Emissions of nitrogen oxides (NO_x) from this emissions unit shall not exceed 13.8 pounds per hour and 21.3 tons as a rolling, 12-month summation.</p> <p>Emissions of carbon monoxide (CO) from this emissions unit shall not exceed 3.0 pounds per hour and 4.6 tons as a rolling, 12-month summation.</p> <p>Emissions of sulfur dioxide from this</p> |



| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|-------------------------------|--|
| | | <p>emissions unit shall not exceed 0.9 pounds per hour and 1.4 tons as a rolling, 12-month summation.</p> <p>Emissions of particulate matter equal to or less than 10 microns in diameter (PM₁₀) from this emissions unit shall not exceed 1.0 pounds per hour and 1.5 tons as a rolling, 12-month summation.</p> <p>Emissions of volatile organic compounds (VOC) from this emissions unit shall not exceed 1.1 pounds per hour and 1.8 tons as a rolling, 12-month summation.</p> <p>See b)(2)a. and c)(1) below.</p> |
| f. | OAC rule 3745-31-05(A)(3)(b) | See b)(2)a. and b)(2)b. below. |
| g. | OAC rule 3745-17-07(A) | Visible particulate emissions shall not exceed 20% opacity as a six minute average, except as provided by rule. |
| h. | OAC rule 3745-18-06(G) | See b)(2)j. below. |

(2) Additional Terms and Conditions

- a. Permit to Install 01-12247 for this air contaminant source takes into account the following voluntary restrictions as proposed by the permittee for purposes of establishing requirements that would be equivalent to Best Available Technology (BAT) requirements under OAC rule-3745-31-05(A)(3):
 - i. employ water sprays to minimize or eliminate visible emissions of fugitive dust from the screening and material handling operations at all times this emissions unit is in operation;
 - ii. minimize free-fall distance when loading material into the screen hopper;
 - iii. synthetic minor restrictions for annual operating hours for the diesel engine associated with this emissions unit.

The voluntary restrictions above are being defined as equivalent to BAT requirements such that this emissions unit meets the criteria in g)(1) associated with the relocation of a portable source.

BAT requirements under OAC rule 3745-31-05(A)(3) do not apply to the CO, VOC, SO₂, and PM₁₀ from the diesel engine since the calculated annual emission rate for CO, VOC, SO₂, and PM₁₀ is less than ten tons per year taking into account the synthetic minor restrictions that limit the annual operating hours of this emissions unit.



- b. The hourly mass emissions rates for diesel engine emissions represent the potential to emit for this emissions unit. No monitoring, recordkeeping or reporting requirements are necessary to ensure compliance with these emissions limitations
- c. The material handling operations that are covered by this permit and subject to the above-mentioned requirements are listed below:

| <u>material handling operation(s)</u> | <u>control measure(s)</u> |
|---------------------------------------|-----------------------------|
| Each load-in operation | minimize free-fall distance |
| Each screening operation | water sprays |
| Each material conveying operation | water sprays |
| Each load-out operation | minimize free-fall distance |

- d. The permittee shall employ best available control measures on all load-in and load-out operations associated with material handling for the purpose of ensuring compliance with the above-mentioned applicable requirements and shall minimize the free fall distance of the processed material.
- e. The permittee shall employ reasonably available control measures for the material handling operations listed above, 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 use a wet spray system as necessary to maintain compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- f. 40 Code of Federal Regulations (CFR) Part 60 Subpart OOO requirements are applicable to the screen and associated material handling operations (excluding truck dumping into the screen feeder hopper, see b)(2)g.) when the screening operations are used to screen any non-metallic mineral material as defined in 60.671. The provisions of 40 CFR Part 60 Subpart OOO do not apply to the screening operations and associated material handling operations when used to process material that is not defined as a non-metallic mineral.

*nonmetallic mineral means any of the following minerals or any mixture of which the majority is any of the following minerals: (a) Crushed and Broken Stone, including Limestone, Dolomite, Granite, Traprock, Sandstone, Quartz, Quartzite, Marl, Marble, Slate, Shale, Oil Shale, and Shell (b) Sand and Gravel (c) Clay including Kaolin, Fireclay, Bentonite, Fuller's Earth, Ball Clay, and Common Clay (d) Rock Salt (e) Gypsum (f) Sodium Compounds, including Sodium Carbonate, Sodium Chloride, and Sodium Sulfate (g) Pumice (h) Gilsonite (i) Talc and Pyrophyllite (j) Boron, including Borax, Kernite, and Colemanite (k) Barite (l) Fluorospars (m) Feldspar (n) Diatomite (o) Perlite (p) Vermiculite (q) Mica (r) Kyanite, including Andalusite, Sillimanite, Topaz, and Dumortierite.

- g. On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under ' 60.11 of this part, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any fugitive emissions which exhibit greater than 10 percent opacity.

Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of ' 60.672 of this part.



For the purposes of compliance with 40 CFR Part 60 Subpart 000 requirements, truck dumping means the unloading of nonmetallic minerals from movable vehicles designed to transport nonmetallic minerals from one location to another. Movable vehicles include but are not limited to: trucks, front end loaders, skip hoists, and railcars.

- h. The application and enforcement of the provisions of New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.
- i. OAC rule 3745-18-06(B) exempts stationary internal combustion engines, as defined in 3745-18-01(B)(19), which have rated heat input capacities equal to, or less than, 10 MMBtu per hour from the sulfur dioxide emission limit in OAC rule 3745-18-06(G). This emissions unit has a rated heat input of less than 10 MMBtu per hour.

c) Operational Restrictions

- (1) The maximum annual operating hours for this emissions unit shall not exceed 3,120 hours based upon a rolling, 12-month summation of the operating hours.

To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the operating hours levels specified in the following table:

Maximum Allowable

| <u>Month(s)</u> | <u>Cumulative Operating Hours</u> |
|-----------------|-----------------------------------|
| 1 | 720 |
| 1-2 | 1,440 |
| 1-3 | 2,160 |
| 1-4 | 2,880 |
| 1-5 | 3,120 |
| 1-6 | 3,120 |
| 1-7 | 3,120 |
| 1-8 | 3,120 |
| 1-9 | 3,120 |
| 1-10 | 3,120 |
| 1-11 | 3,120 |
| 1-12 | 3,120 |

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual operating hours limitation shall be based upon a rolling, 12-month summation of the operating hours.

- (2) The screen water spray and transfer point water spray(s) shall be in operation at all times when this emissions unit is operating to minimize or eliminate visible emissions of fugitive dust.



- (3) The permittee shall minimize free-fall distance when loading material into the screen hopper.
- (4) The oil combusted in this emissions unit shall only be number 2 diesel fuel oil, as defined by the American Society for Testing and Materials in ASTM D396-78, 89, 90, 92, 96 or 98, "Standard Specification for Fuel Oils".
- (5) The permittee shall combust only number 2 diesel oil with a sulfur content of no more than 0.5 weight percent sulfur in this emission unit.
- (6) The permittee shall install or have installed a non-resettable hour meter on the diesel engine prior to startup of this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

- (1) Except as otherwise provided in this section, for material handling operations that are not adequately enclosed, the permittee shall perform inspections of such operations in accordance with the following minimum frequencies:

| <u>material handling operation(s)</u> | <u>minimum inspection frequency</u> |
|---------------------------------------|-------------------------------------|
| Each load-in operation | daily |
| Each crushing operation | daily |
| Each material conveying operation | daily |
| Each load-out operation | daily |

- (2) The permittee may, upon receipt of written approval from Ohio EPA, CDO, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
- (3) The permittee shall maintain records of the following information:
 - a. the date and reason any required inspection was not performed;
 - b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measure(s);
 - c. the dates when excess visible fugitive particulate emissions were observed and control measure(s) was (were) implemented; and
 - d. on a calendar quarter basis, the total number of days the control measure(s) was (were) implemented.

The information in d)(3). shall be kept separately for each material handling operation identified in d)(1) above, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

- (4) The permittee shall maintain records of the following information:
 - a. the date and reason any required inspection was not performed; and



- b. the date when excess visible fugitive particulate emissions were observed and control measures were not implemented.

This information shall be kept separately for each material handling operation identified above, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

- (5) The permittee shall maintain monthly records of the following information:

- a. the operating hours for each month; and
- b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the operating hours.

Also, during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month.

- (6) For each instance the permittee burns a fuel other than #2 fuel oil that meets the requirements of both c)(4) and c)(5), the permittee shall maintain a record of the type and quantity of fuel burned in this emission unit.
- (7) The permittee shall maintain records that identify any instance of the crusher water spray not operating when the crusher is in operation.
- (8) The permittee shall maintain records of fuel supplier certification to demonstrated compliance with the operational restrictions in c)(4) and c)(5). Records of fuel supplier certification shall include the following information:
 - a. the name of the fuel supplier; and
 - b. statement from the fuel supplier that the fuel is in compliance with the operational restrictions in c)(4) and c)(5).

e) Reporting Requirements

- (1) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director 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.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the Potential to Emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

Emissions of nitrogen oxides (NO_x) from this emissions unit shall not exceed 13.8 pounds per hour and 21.3 tons as a rolling, 12-month summation.



The rolling, 12-month limitation on the hours of operation; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative hours of operation.

- b. the probable cause of each deviation (excursion);
- c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

- (3) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than #2 fuel oil, as specified in c)(4) and c)(5), was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (4) Pursuant to the general provisions of NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times for this emissions unit. The reporting requirements indicated in this section shall be initiated by the first instance when this emissions unit operates as an affected facility at a nonmetallic mineral processing plant as specified in 60.670(a)(1).
 - a. Construction date (no later than 30 days after such date);
 - b. Actual start-up date (within 15 days after such date); and
 - c. Date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
Lazarus Government Center
P.O. Box 1049
Columbus, OH 43216-1049

and

Ohio Environmental Protection Agency
Central District Office, Division of Air Pollution Control
Lazarus Government Center, 6th Floor
P.O. Box 1049
Columbus, Ohio 43216-1049

- (5) Within thirty (30) days of the startup of this emissions unit, the permittee shall submit the model number and serial number of each piece of equipment associated with this emissions unit.



f) Testing Requirements

(1) Compliance with the emissions limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions limitation: Emissions of fugitive particulate matter from the portable screen shall not exceed 3.2 tons as a rolling, 12-month summation. Emissions of fugitive particulate matter equal to or less than 10 microns in diameter (PM₁₀) from the portable screen shall not exceed 1.1 tons as a rolling, 12-month summation. Emissions of fugitive particulate matter from material handling shall not exceed 5.0 tons as a rolling, 12-month summation. Emissions of fugitive particulate matter equal to or less than 10 microns in diameter (PM₁₀) from material handling shall not exceed 1.9 tons as a rolling, 12-month summation.

Applicable compliance method: Fugitive dust emissions associated with crushing operations were established by multiplying the maximum operating rate of 330 tons per hour by the maximum operating hours of 3,120 hours as a rolling, 12-month summation. The result of this calculation was multiplied by the appropriate emissions factors from AP-42, Chapter 11.19.2 (11/2006) [0.025 lb PM / ton processed or 0.0087 lb PM₁₀ / ton processed] and dividing by 2000 pounds per ton. The result of this calculation was multiplied by the requested control efficiency for the use of water sprays of 75% [control factor of (1 - 0.75) = 0.25].

Calculation for fugitive PM emissions from screening operations:

330 tons per hour * 3,120 hours as a rolling, 12-month summation = 1,029,600 tons as a rolling 12-month summation.

1,029,600 tons as a rolling 12-month summation * 0.025 lb PM / ton processed = 25,740 lb PM as a rolling, 12-month summation.

(25,740 lb PM as a rolling, 12-month summation) / (2000 lb / ton) = 12.9 tons as a rolling, 12-month summation.

12.9 tons as a rolling, 12-month summation * (1-0.75) = 3.2 tons as a rolling, 12-month summation.

Calculation for fugitive PM₁₀ emissions from screening operations:

330 tons per hour * 3,120 hours as a rolling, 12-month summation = 1,029,600 tons as a rolling 12-month summation.

1,029,600 tons as a rolling 12-month summation * 0.0087 lb PM / ton processed = 8,957.5 lb PM as a rolling, 12-month summation.

(8,957.5 lb PM as a rolling, 12-month summation) / (2000 lb / ton) = 4.5 tons as a rolling, 12-month summation.

4.5 tons as a rolling, 12-month summation * (1-0.75) = 1.1 tons as a rolling, 12-month summation.



In addition to these fugitive emissions are emissions from crusher loading and material handlings. Fugitive loading emissions are associated with the loading of material into the crusher hopper and material handlings onto and from conveyors.

Fugitive loading emissions associated with the loading of the screen were established by multiplying the maximum operating rate of 330 tons per hour by the maximum operating hours of 3,120 hours as a rolling 12-month summation. The result of this calculation was multiplied by the appropriate emissions factor from AP-42, Chapter 13.2.4.3 equation 1 using the mean wind speed and moisture content values provided by the applicant and dividing by 2000 lb per ton.

Calculation for PM and PM₁₀ fugitive emissions from material transfer:

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

E = emissions factor in pounds per ton
 k = particle size multiplier (0.74 for PM or 0.35 for PM₁₀)
 U = mean wind speed (mph) = 7 mph
 M = material moisture content (%) = 3.0%

$$E_{PM} = 0.0021 \text{ lb per ton}$$

$$E_{PM10} = 0.00010 \text{ lb per ton}$$

At 330 tons per hour and 3,120 hour as a rolling, 12-month summation:

$$(E_{PM} * 330 * 3,120) / 2000 = 1.1 \text{ tons PM as a rolling, 12-month summation}$$

$$(E_{PM10} * 330 * 3,120) / 2000 = 0.5 \text{ tons PM as a rolling, 12-month summation}$$

Added to the fugitive screen loading emissions are fugitive material handling emissions. Fugitive material handling emissions were established by multiplying the maximum operating rate of 330 tons per hour by the maximum operating hours of 3,120 hours as a rolling 12-month summation. The result of this calculation was multiplied by the number of transfer points (10) and the appropriate emissions factor from AP-42, Chapter 11.19.2 (11/2006) [0.0030 lb PM / ton processed or 0.0011 lb PM₁₀ / ton processed] and dividing by 2000 pounds per ton. The result of this calculation was multiplied by the requested control efficiency for the use of water sprays of 75% [control factor of (1 - 0.75) = 0.25].

Calculations for PM and PM₁₀ fugitive emissions from transfer points:

For PM emission from material transfer points:

$$[330 \text{ tons per hour} * 3,120 \text{ hours as a rolling, 12-month summation} * 10 \text{ transfer points} * 0.0030 \text{ lb PM / ton processed} * (1-0.75)] / 2000 \text{ pounds per ton} = 3.9 \text{ tons PM as a rolling, 12-month summation.}$$



For PM₁₀ emission from material transfer points:

$[330 \text{ tons per hour} * 3,120 \text{ hours as a rolling, 12-month summation} * 10 \text{ transfer points} * 0.0011 \text{ lb PM} / \text{ton processed} * (1-0.75)] / 2000 \text{ pounds per ton} = 1.4 \text{ tons PM}_{10} \text{ as a rolling, 12-month summation.}$

- b. Emissions limitation: Visible particulate emissions (PE) from any fugitive dust source shall not exceed 20% opacity as a three-minute average, except as provided by rule.

Applicable compliance method: If required, the permittee shall demonstrate compliance with this emission limitation using U.S. EPA Method 9 of 40 CFR, Part 60, Appendix A.

- c. Emissions limitation: From the diesel engine - Emissions of nitrogen oxides (NO_x) from this emissions unit shall not exceed 13.8 pounds per hour. Emissions of carbon monoxide (CO) from this emissions unit shall not exceed 3.0 pounds per hour. Emissions of sulfur dioxide from this emissions unit shall not exceed 0.9 pounds per hour. Emissions of particulate matter equal to or less than 10 microns in diameter (PM₁₀) from this emissions unit shall not exceed 1.0 pounds per hour. Emissions of volatile organic compounds (VOC) from this emissions unit shall not exceed 1.1 pounds per hour.

Applicable compliance method: Hourly mass emissions rates for this emissions unit were established by multiplying the appropriate emissions factor from AP-42 Chapter 3.3 (10/1996) by the MMBtu/hr heat input rate for the diesel engine supplied by the applicant (3.7 MMBtu/hr).

If required, the permittee shall demonstrate compliance with these emissions limitations using the following test methods:

NO_x: Methods 1-4 and 7E of 40 CFR Part 60, Appendix A

CO: Methods 1-4 and 10 of 40 CFR Part 60, Appendix A

SO₂: Methods 1-4 and 6 of 40 CFR Part 60, Appendix A

PM: Methods 1-4 and 5 of 40 CFR Part 60, Appendix A

OC: Methods 1-4 and 25 or 25A of 40 CFR Part 60, Appendix A

- d. Emissions limitation: Emissions of nitrogen oxides (NO_x) from this emissions unit shall not exceed 21.3 tons as a rolling, 12-month summation. Emissions of carbon monoxide (CO) from this emissions unit shall not exceed 4.6 tons as a rolling, 12-month summation. Emissions of sulfur dioxide from this emissions unit shall not exceed 1.4 tons as a rolling, 12-month summation. Emissions of particulate matter equal to or less than 10 microns in diameter (PM₁₀) from this emissions unit shall not exceed 1.5 tons as a rolling, 12-month summation. Emissions of volatile organic compounds (VOC) from this emissions unit shall not exceed 1.8 tons as a rolling, 12-month summation.



Applicable Compliance Method: The annual emissions limitations were established by multiplying the hourly emissions limitation for each pollutant by a maximum allowable operating schedule of 3,120 hours as a rolling, 12-month summation, and dividing the result by 2000 pounds / ton. The permittee shall demonstrate compliance with this emissions limitation based upon records from II.B.1, above.

- (2) In the first instance when this emissions unit operates as an affected facility at a nonmetallic mineral processing plant as specified in 60.670(a)(1), the permittee shall conduct, or have conducted, emission testing for all crushing operations and transfer points of emissions unit F002. The emissions testing requirements of 40 CFR Part 60 Subpart OOO do not apply to this emissions unit when operated as part of a stand-alone screening operation at plants with no crushers or grinding mills, as specified in 60.670(a)(2).

Testing shall be conducted in accordance with the provisions of 40 CFR Part 60, Subpart A, Section 60.8 and 40 CFR Part 60, Subpart OOO, Section 60.675. Testing shall be conducted to demonstrate compliance with the visible emissions limitations set forth in this Permit to Install and 40 CFR Part 60, Subpart OOO, Section 60.672.

g) Miscellaneous Requirements

- (1) At the discretion and following the approval of the Director, the permittee may relocate the portable source within the State of Ohio without first obtaining a permit to install (PTI) providing the appropriate notification and exemption requirements have been met. The Director may issue a "Notice of Site Approval" through either of the following scenarios:
 - a. If future location(s) of the proposed portable source are unknown, the approval to relocate the portable source shall be in accordance with OAC rule 3745-31-03(A)(1)(p)(i) and the following criteria shall be met:
 - i. the portable source has been issued a permit to install (PTI) and the permittee continues to comply with any applicable best available technology (BAT) determination;
 - ii. the portable source is operating pursuant to a currently effective PTI and/or a current permit to operate (PTO) and continues to comply with the requirements of the permit and any applicable state and/or federal rules;
 - iii. the permittee has provided a minimum of 30 days notice of the intent to relocate the portable source to the permitting authority (the Ohio EPA District Office or local air agency that has issued the effective current permit) prior to the scheduled relocation;
 - iv. the Ohio EPA district office or local air agency having jurisdiction over the new site has determined that the permitted emissions would not cause a nuisance in violation of OAC rule 3745-15-07 and that the relocation of the portable source, along with any supporting permitted emissions (e.g. roadways or storage piles), would not result in the installation of a major stationary source or a modification of an existing major stationary source at the new site; and



- v. the Director has issued a Notice of Site Approval, stating that the proposed site is acceptable under OAC rule 3745-15-07 and the relocation will not result in the installation of a major stationary source or a modification of an existing major stationary source.

The portable source can be relocated upon receipt of the Director's Notice of Site Approval for the site; **or**

- b. Pursuant to OAC rule 3745-31-03(A)(1)(p)(ii), the Director may issue a Notice of Site Approval for any pre-disclosed location(s) if the portable source meets the requirements of OAC rule 3745-31-05(E), as follows:
 - i. the portable source has been issued a permit to install (PTI) and the permittee continues to comply with any applicable best available technology (BAT) determination;
 - ii. the portable source is operating pursuant to a currently effective PTI and/or a current permit to operate (PTO) and continues to comply with the requirements of the permit and any applicable state and/or federal rules;
 - iii. the permittee has identified the proposed site(s) to the permitting District Office or local air agency;
 - iv. the permitting District Office/local air agency and the District Office/Local air agency having jurisdiction over the new site have determined that the portable source will have an acceptable environmental impact at the proposed site(s);
 - v. a public notice, meeting the requirements OAC rule 3745-47, is published in the county where the proposed site(s) is/are located;
 - vi. the owner of the proposed site(s) (if not the permittee) has provided the portable source owner with approval, or an equivalent declaration, that it is acceptable to move the portable source to the proposed site(s); and
 - vii. the permittee has provided the Ohio EPA with a minimum of a 15-day written notice of the relocation.

The portable source can be relocated upon receipt of the Director's Notice of Site Approval for the site. Any site approval(s) issued by the Ohio EPA, pursuant to OAC rule 3745-31-03(A)(1)(p)(ii), shall be valid for no longer than 3 years and are subject to renewal. Pursuant to OAC rule 3745-31-05(F), the Director may modify the site approval to add or delete certain portable sources or add or delete certain terms and conditions as appropriate.

- (2) If the relocation of the portable source would result in the installation of a major source or the modification of a major source, as defined in OAC rule 3745-31-01, the permittee shall submit an application and obtain a PTI for the new location prior to moving the portable source.

When a portable source is located at a stationary source or at a site with multiple portable sources, the potential emissions of the portable source may be required to be



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added to that of the facility, in order to determine the potential to emit for Title V and PSD applicability. Relocation of any portable source that results in the creation of a major source, as defined in OAC rule 3745- 77-01, must also meet all applicable requirements under the Title V program contained in OAC rule 3745-77, which may include the requirement to apply for a Title V permit.

The "Notice of Intent to Relocate" shall be submitted to the Ohio EPA District Office or local air agency responsible for issuing the permits for the portable source. Upon receipt of the notice, the permitting office shall notify the appropriate Ohio EPA District Office or local air agency having jurisdiction over the new site. Failure to submit said notification or failure to receive Ohio EPA approval prior to relocation of the portable source may result in fines and civil penalties.



3. F003, Unpaved Haul Roads

Operations, Property and/or Equipment Description:

Unpaved Haul Roads

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

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|---|---|
| a. | OAC rule 3745-31-05(D) [Voluntary restriction to employ control measures and restrictions equivalent to BAT] | Emissions of fugitive particulate matter from unpaved roadways and parking areas shall not exceed 7.4 tons per year. Emissions of fugitive particulate matter equal to or less than 10 microns in diameter (PM ₁₀) from unpaved roadways and parking areas shall not exceed 2.3 tons per year. No visible PE from unpaved roadways and parking areas except for a period of time not to exceed 3 minutes during any 60-minute observation period. Best available control measures that are sufficient to minimize or eliminate visible PE of fugitive dust (See b)(2)a. through b)(2)f.) |
| b. | OAC rule 3745-17-08(B) | The emission limitation specified by this rule is less stringent than the emission |



| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|-------------------------------|---|
| | | limitation established pursuant to OAC rule 3745-31-05(D). |
| c. | OAC rule 3745-17-07(B)(5) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D). |

(2) Additional Terms and Conditions

- a. Permit to Install 01-12247 for this air contaminant source takes into account the following voluntary restrictions as proposed by the permittee for purposes of establishing requirements equivalent to Best Available Technology (BAT) requirements under OAC rule-3745-31-05(A)(3):
 - i. The permittee shall employ best available control measures on all unpaved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements, including the following requirements:
 - (a) treat the unpaved roadways and parking areas by application of chemical stabilization/dust suppressants and/or watering at sufficient treatment frequencies to ensure compliance.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- b. The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for unpaved roadways and parking areas that are covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.
- c. The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.
- d. Any unpaved roadway or parking area that is subsequently paved, will require a Permit to Install for paved roadways and parking areas.
- e. Open-bodied vehicles transporting materials likely to become airborne shall have such materials covered at all times if the control measure is necessary for the materials being transported.



f. The permittee shall post and enforce on the property, a maximum speed limit of 10 miles per hour.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

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

| <u>unpaved roadways and parking areas</u> | <u>minimum inspection frequency</u> |
|---|-------------------------------------|
| all roads and parking areas | daily |

(2) The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

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

- a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;
- b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;
- c. the dates the control measures were implemented; and
- d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

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

e) Reporting Requirements

(1) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director 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.



f) Testing Requirements

(1) Compliance with the emission limitations in section f)(1). of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitations: Emissions of fugitive particulate matter from unpaved roadways and parking areas shall not exceed 7.4 tons per year. Emissions of fugitive particulate matter equal to or less than 10 microns in diameter (PM₁₀) from unpaved roadways and parking areas shall not exceed 2.3 tons per year.

Applicable compliance method: Compliance with fugitive particulate matter and PM₁₀ limitations shall be demonstrated using the emission factor equations in AP-42 Chapter 13.2.2(11/2006) equation 1a for unpaved roadways. Should further updates in AP-42 occur, the most current equations for unpaved roads shall be used. The emission limits in this permit to install were based on a maximum of 19,500 vehicle miles traveled (VMT) per year and a 95 % control efficiency for PE and PM₁₀.

Calculations for fugitive PM and PM₁₀ from unpaved roadways:

$$E = k (s/12)^a (W/3)^b$$

E = size-specific emissions factor (lb / VMT)

k = 4.9 for PM or 1.5 for PM₁₀

s = surface material silt content (%) = 13%

a = 0.7 for PM or 0.9 for PM₁₀

W = mean vehicle weight (in tons) = 32.9 tons

b = 0.45 for PM and PM₁₀

$$E_{PM} = 15.2 \text{ lb / VMT}$$

$$E_{PM10} = 4.7 \text{ lb / VMT}$$

For 19,500 VMT per year:

$$(E_{PM} * 19,500) / 2000 \text{ pounds per ton} = 148.2 \text{ tons PM per year}$$

$$(E_{PM10} * 19,500) / 2000 \text{ pounds per ton} = 45.8 \text{ tons PM}_{10} \text{ per year}$$

Using a control efficiency of 95% for water application for dust control:

$$148.2 \text{ tons PM per year} * (1-0.95) = 7.4 \text{ tons PM per year}$$

$$45.8 \text{ tons PM}_{10} \text{ per year} * (1-0.95) = 2.3 \text{ tons PM}_{10} \text{ per year}$$

b. Emission limitation: No visible PE from unpaved roadways and parking areas except for a period of time not to exceed 3 minutes during any 60-minute observation period.

Applicable compliance method: If required, compliance with the visible PE limitation listed above shall be determined in accordance with Test Method 22 as set forth in "Appendix on Test Methods" in 40 CFR, Part 60 ("Standards of Performance for New Stationary Sources").



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g) Miscellaneous Requirements

- (1) Emission unit F003 (Haul roads) is associated only with portable emissions units F001 and F002 of this permit.



4. F004, Storage Piles

Operations, Property and/or Equipment Description:

Storage Piles

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

| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|---|---|
| a. | OAC rule 3745-31-05(D) [Voluntary restriction to employ control measures and restrictions equivalent to BAT] | Emissions of fugitive particulate matter from load-out from storage piles shall not exceed 1.1 tons per year. Emissions of fugitive particulate matter equal to or less than 10 microns in diameter (PM ₁₀) from load-out from storage piles shall not exceed 0.5 tons per year. Emissions of fugitive particulate matter from wind erosion of storage piles shall not exceed 0.3 tons per year. Emissions of fugitive particulate matter equal to or less than 10 microns in diameter (PM ₁₀) from wind erosion of storage piles shall not exceed 0.1 tons per year. No visible PE from unpaved roadways |



| | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|-------------------------------|---|
| | | <p>and parking areas except for a period of time not to exceed 3 minutes during any 60-minute observation period.</p> <p>Best available control measures that are sufficient to minimize or eliminate visible PE of fugitive dust (See b)(2)a. through b)(2)d.)</p> |
| b. | 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(D). |
| c. | OAC rule 3745-17-07(B)(5) | The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D). |

(2) Additional Terms and Conditions

- a. Permit to Install 01-12247 for this air contaminant source takes into account the following voluntary restrictions as proposed by the permittee for purposes of establishing requirements equivalent to Best Available Technology (BAT) requirements under OAC rule-3745-31-05(A)(3):
 - i. The permittee shall employ best available control measures on all load-out operations associated with the storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements:
 - (a) In accordance with the permittee=s application, the permittee has committed to maintain minimal drop heights for stackers and front-loaders, and chemical stabilization/dust suppressants and/or watering/sprinkling systems at sufficient treatment frequencies to ensure compliance.
 - (b) The operator shall avoid dragging any front-end loader bucket along the ground.
 - ii. The permittee shall employ best available control measures for wind erosion from the surfaces of all storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements:
 - (a) In accordance with the application, the permittee has committed to perform one or more of the following: (chemical stabilization, watering/sprinkling systems/hoses, covering the storage piles) to ensure compliance.

Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.



- b. The above-mentioned control measure(s) shall be employed for each load-in and load-out operation of each storage pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during any such operation until further observation confirms that use of the measure(s) is unnecessary.
- c. The 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.
- d. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-31-05(A)(3).

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

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

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

| | |
|------------------------------------|--|
| <u>storage pile identification</u> | <u>minimum wind erosion inspection frequency</u> |
| all | daily |

- (3) 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.

- (4) 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.

- (5) 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 5.d. shall be kept separately for the load-out operations, and 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) Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the director 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.

f) Testing Requirements

- (1) Compliance with the emission limitations in Section A.I. of the terms and conditions of this permit shall be determined in accordance with the following methods:
- a. Emissions limitation: Emissions of fugitive particulate matter from load-out from storage piles shall not exceed 1.1 tons per year. Emissions of fugitive particulate matter equal to or less than 10 microns in diameter (PM₁₀) from load-out from storage piles shall not exceed 0.5 tons per year. Emissions of fugitive particulate matter from wind erosion of storage piles shall not exceed 0.3 tons per year. Emissions of fugitive particulate matter equal to or less than 10 microns in diameter (PM₁₀) from wind erosion of storage piles shall not exceed 0.1 tons per year.

Applicable compliance method: Compliance with fugitive PE limitations shall be demonstrated using the emission factor equations in AP-42 Chapters 13.2.4 and 13.2.5 (revised 11/06), for load-out operations and wind erosion. These emission limits in this permit to install were based on a maximum storage pile surface area of 3 acres, 95% control efficiency for PM and PM₁₀ and information provided in the permittee's application.



Calculation for PM and PM₁₀ fugitive emissions from storage pile load-out:

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

E = emissions factor in pounds per ton
 k = particle size multiplier (0.74 for PM or 0.35 for PM₁₀)
 U = mean wind speed (mph) = 7 mph
 M = material moisture content (%) = 3.0%

$$E_{PM} = 0.0021 \text{ lb per ton}$$

$$E_{PM10} = 0.00010 \text{ lb per ton}$$

At 330 tons per hour and 3,120 hour as a rolling, 12-month summation:

$$(E_{PM} * 330 * 3,120) / 2000 = 1.1 \text{ tons PM as a rolling, 12-month summation}$$

$$(E_{PM10} * 330 * 3,120) / 2000 = 0.5 \text{ tons PM as a rolling, 12-month summation}$$

Calculations for PM and PM₁₀ emissions from wind erosion from storage piles:

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

E = emissions factor in lb / acre / day
 s = silt content (%) = 10%
 p = number of dry days per year = 140 (default value)
 f = % of time wind speed is > 12 mph = 30 (default value)
 k = constant, 0.74 for PM or 0.35 for PM₁₀
 E_{PM} = 9.4 pounds per acre per day

$$E_{PM10} = 4.5 \text{ pounds per acre per day}$$

For 3 acres of storage piles over 365 days per year, and 95% control for water application:

$$(E_{PM} * 3 \text{ acres} * 365 \text{ days} * (1 - 0.95)) / 2000 \text{ pounds per ton} = 0.3 \text{ tons PM per year}$$

$$(E_{PM10} * 3 \text{ acres} * 365 \text{ days} * (1 - 0.95)) / 2000 \text{ pounds per ton} = 0.1 \text{ tons PM10 per year}$$

g) Miscellaneous Requirements

- (1) Emission unit F004 (Storage piles) is associated only with portable emissions units F001 and F002 of this permit.