



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL  
HIGHLAND COUNTY**

**CERTIFIED MAIL**

Street Address:

122 S. Front Street

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049

**Application No: 05-11369**

**DATE: 9/25/2001**

Martin Marietta Materials-Lynchburg  
Jim Pennington  
4770 Duke Drive  
Mason, OH 45040

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
236 East Town Street, Room 300  
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo, Manager  
Field Operations and Permit Section  
Division of Air Pollution Control

cc: USEPA

SWDO



**Permit To Install  
Terms and Conditions**

**Issue Date: 9/25/2001  
Effective Date: 9/25/2001**

**FINAL PERMIT TO INSTALL 05-11369**

Application Number: 05-11369  
APS Premise Number: 0536010116  
Permit Fee: **\$1800**  
Name of Facility: Martin Marietta Materials-Lynchburg  
Person to Contact: Jim Pennington  
Address: 4770 Duke Drive  
Mason, OH 45040

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**3791 Sharpville Road  
Lynchburg, Ohio**

Description of proposed emissions unit(s):  
**Aggregate processing plant including 3 crushers, 10 screens and 39 conveyors.**

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) 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 above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

## **Part I - GENERAL TERMS AND CONDITIONS**

### **A. Permit to Install General Terms and Conditions**

#### **1. Compliance Requirements**

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

#### **2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements**

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

#### **3. Records Retention Requirements**

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

#### **4. Inspections and Information Requests**

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized

representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

**5. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

**6. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

**7. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

**8. Termination of Permit to Install**

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

**9. Construction of New Sources(s)**

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio

Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

**10. Public Disclosure**

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

**11. Applicability**

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit to Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

**12. Best Available Technology**

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

**13. Source Operation and Operating Permit Requirements After Completion of Construction**

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the emissions unit(s) covered by this permit.

**Martin Marietta Materials-Lynchburg**  
**PTI Application: 05-11369**  
**Issued: 9/25/2001**

**Facility ID: 0536010116**

**14. Construction Compliance Certification**

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

**15. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

**B. Permit to Install Summary of Allowable Emissions**

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

**SUMMARY (for informational purposes only)**  
**TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

<u>Pollutant</u>	<u>Tons Per Year</u>
Particulate Emissions	60.6

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F001 - Aggregate Processing and Material Handling (Terms in this permit supersede those of PTI 05-05739 issued on April 28, 1993.)	OAC rule 3745-31-05(A)(3)	14.7 pounds per hour and 14.6 tons per year particulate emissions.  The requirements of this rule also include compliance with the requirements of NSPS 40 CFR Part 60, Subpart OOO.  See A.2.a. through A.2.h.
	NSPS 40 CFR Part 60, Subpart OOO	0.05 g/dscm  The limit based on this rule is less stringent than the particulate limit established above as Best Available Technology (BAT) under 3745-31-05(A)(3).
	OAC rule 3745-17-11(B)(3)	

**2. Additional Terms and Conditions**

- 2.a Compliance with OAC rule 3745-31-05 (A)(3) shall be demonstrated by the use of water sprays when necessary on crusher(s), screens and transfer points such that the material is maintained in a moist condition during processing. The moisture content shall be sufficient to minimize or eliminate visible emissions of fugitive dust so that compliance with the opacity requirements specified under section A. is continuously maintained.
- 2.b Fugitive particulate emissions from any transfer point on belt conveyors and from any other emissions point (excluding crushers and truck unloading/loading) where process materials are not saturated, shall not exceed 10 percent opacity, except as provided by rule 40 CFR 60.672.

- 2.c Fugitive particulate emissions from the controlled crusher where a capture system is not used (i.e. primary crusher) shall not exceed 15 percent opacity.
- 2.d Particulate emissions from the controlled crushers (i.e. secondary and tertiary crushers) shall not exceed 7 percent opacity nor emit particulate matter in excess of 0.05 g/dscm from the baghouse stack.

The discharge of any visible particulate emissions at the point of capture found between the crusher(s) and baghouse collection hood is prohibited.

- 2.e The discharge of any visible particulate emissions from wet screening operations and subsequent screening operations, bucket elevators, and belt conveyors that process saturated material in the production line up to the next crusher, grinding mill or storage bin is prohibited.
- 2.f The discharge of any visible particulate emissions from screening operations, bucket elevators, and belt conveyors in the production line downstream of wet mining operations, where such screening operations, bucket elevators, and belt conveyors process saturated materials up to the first crusher, grinding mill, or storage bin in the production line is prohibited.
- 2.g The hourly mass emissions limitations outlined above are based upon the emissions unit's potential to emit. Therefore, it is not necessary to develop recordkeeping and/or reporting requirements to demonstrate compliance with these limits.
- 2.h The application and enforcement of the provisions of the 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.

## **B. Operational Restrictions**

1. The maximum aggregate production rate for this facility shall not exceed 2,460,938 tons per year.
2. The pressure drop across the baghouse shall be maintained within the range of 2 -5 inches of water while the emissions unit is in operation.

## **C. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain monthly records of the total aggregate materials produced in this

facility.

2. The permittee shall conduct visible emissions evaluations for each affected facility. The visible emission evaluations shall be conducted according to Method 9 methodology as outlined under 40 CFR 60.11. The visible emission performance tests shall be performed during the period of May 1 through September 30.
3. The permittee shall perform daily checks, when each piece of crushing equipment is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from each crushing, screening and conveying operation. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. whether the emissions are representative of normal operations;
  - b. if the emissions are not representative of normal conditions, the cause of the abnormal emissions;
  - c. the estimated total duration of any visible emissions incident which exceeds the specified opacity limitations under Part II. A.; and
  - d. any corrective actions taken to eliminate the visible emissions.
4. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on daily basis.

#### **D. Reporting Requirements**

1. The permittee shall submit annual reports that identify any exceedances of the annual production rate limitation for the facility, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year.
2. The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) of any Method 9 evaluation that did not demonstrate compliance with the opacity requirement(s) specified above. The notification shall be in writing and shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days after the exceedance occurs.

3. The permittee shall submit quarterly deviation (excursion) reports which identify the occurrences identified below:
  - a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and
  - b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.
4. The permittee shall submit pressure drop quarterly deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above

These reports are due by the date described in Part 1-General Terms and Conditions of this permit under section (A)(2).

5. A screening operation, bucket elevator, or belt conveyor that processes saturated material and is subject to 40 CFR 60.672(h) and subsequently processes unsaturated material shall submit a report of this change within 30 days following such change to the Ohio EPA -Southwest District Office. This screening operation, bucket elevator, or belt conveyor is then subject to the 10 percent opacity limit in 40 CFR 60.672(b) and the emission test requirements of 40 CFR 60.11 and 60.675. A screening operation, bucket elevator, or belt conveyor that processes unsaturated material but subsequently processes saturated material shall submit a report of this change within 30 days following such change. This screening operation, bucket elevator, or belt conveyor is then subject to the no visible emission limit in 40 CFR 60.672(h).

#### **E. Testing Requirements**

1. Compliance with the emissions limitations in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):
  - 1.a Emission Limitation-  
14.7 lbs/hr particulates  
  
Applicable Compliance Method-  
Compliance shall be determined by multiplying the maximum hourly production rate for

Emissions Unit ID: **F001**

each affected facility by the respective emissions factor, as identified below:

<u>No.</u>	<u>Source</u>	<u>Emissions Factors</u> AP-42, Fifth Edition, Table 11-19.2-2
3	Crushers	7.0 E-4 lb/ton;
3	Primary Screens	1.764 E-3 lb/ton; *
3	Secondary Screens	1.764 E-3 lb/ton x (100-99.9) baghouse efficiency: 3.15 E-5 lb/ton; *
16	Primary Conveyors/Hoppers	1.008 E-4 lb/ton; *

<u>No.</u>	<u>Source</u>	<u>Emissions Factors</u> AP-42, Fifth Edition, Table 11-19.2-2
5	Secondary Feeders	1.764 E-3 lb/to; *
13	Secondary Conveyor/ Feed Box	1.008 E-4 lb/ton; *
5	Secondary Conveyors	2.94 E-6 lb/ton x (100-99.9) baghouse efficiency: 3.15 E-5 lb/ton; *
1	Storage Silo	0.25 lb/ton

\* AP-42 Factors have been adjusted to reflect total particulate.

- 1.b Emission Limitation-  
14.6 tons/yr particulates

Applicable Compliance Method-  
 Compliance with the tons per year particulate emissions limitations in section A.1. of these terms and conditions shall be demonstrated by calculations using the emission factors (EF) from AP-42, Table 11.19.2-2, Fifth Edition, September, 1995.

- 1.c Emission Limitation-  
0, 7, 10, and 15 percent opacity

Applicable Compliance Method-  
 Compliance with the visible emissions limitations in section A.1. of these terms and conditions shall be determined by Method 9 and the procedures in 40 CFR 60.11 with the following additions:

- a. The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet);
- b. The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9, Section 2.1) must be followed; and

- c. For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.
2. The permittee shall conduct, or have conducted, fugitive particulate emission testing for the appropriate equipment permitted under emissions unit F001 in accordance with the following requirements:
  - a. The emission testing shall be conducted within 60 days after achieving maximum production but no later than 180 days after initial startup.
  - b. The emission testing shall be conducted to demonstrate compliance with 40 CFR 60 Subpart OOO;
  - c. Compliance with the opacity limits of this permit shall be determined by using US EPA Reference Test Method 9.
  - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency;
  - e. Not later than 30 days prior to the proposed test date(s), this facility shall submit an Intent to Test notification to the Ohio EPA, Southwest District Office. The Intent to Test notification shall describe in detail the proposed test methods and procedures, the source operating parameters, the time(s) and the date(s) of the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in Ohio EPA, Southwest District Office's refusal to accept the results of the opacity test(s).
  - f. Personnel from Ohio EPA, Southwest District Office shall be permitted to witness the test(s). Personnel from this facility shall acquire data and information regarding the source operating parameters (including but not limited to, water flow rates and pressure employed for particulate emissions and opacity control at this plant).
  - g. A comprehensive written report on the results of the opacity test(s) (including opacity levels and the source operating parameters) shall be submitted to Ohio EPA, Southwest District Office within 30 days following completion of the test(s).
3. The permittee shall conduct, or have conducted, emission testing for the baghouse unit in

accordance with the following requirements:

- a. The emission testing shall be conducted within 60 days after issuance of the permit to install and within 6 months prior to the renewal of the permit to operate.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for particulate matter (0.05g/dscm).
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate: Method 5 or Method 17. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

## **F. Miscellaneous Requirements**

The permittee shall implement and observe the Preventative Maintenance and Malfunction Abatement Plan as prescribed in the Director's Final Findings and Orders, dated October 2000.

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F002 - Mineral Extraction: Overburden Removal and Blasting (Terms in this permit supersede those of PTI 05-05739 issued on April 28, 1993.)	OAC rule 3745-31-05(A)(3)	24.8 tons per year particulate emissions.  See A.2.a., A.2.b., and A.2.c.

**2. Additional Terms and Conditions**

- 2.a The permittee shall minimize disturbance of land surface area during overburden and mineral removal operations to minimize the generation of fugitive particulate emissions.
- 2.b The permittee shall reclaim disturbed area with vegetation as expeditiously as possible to reduce erosion and the generation of fugitive emissions.
- 2.c The permittee shall reduce the drop height of loading operations into haul vehicles and prevent the overloading of haul vehicles to control the generation of fugitive emissions. If needed, the permittee shall cover the loads to control excessive fugitive emissions.

**B. Operational Restrictions**

The maximum number of blasts completed at the facility shall not exceed 200 per calendar year.

**C. Monitoring and/or Recordkeeping Requirements**

- 1. The permittee shall maintain annual records of the number of blasts completed at the facility.

Issued

Emissions Unit ID: F002

- 2. The permittee shall maintain annual records of the area stripped for overburden activities.
- 3. The permittee shall maintain annual records of the quantity, in acres, of land reclaimed per year.

**D. Reporting Requirements**

None

**E. Testing Requirements**

- 1. Compliance with the emission limitations in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):

- 1.a Emission Limitation-  
24.8 tons per year particulate emissions.

Applicable Compliance Method-

Compliance with the tons per year particulate emissions shall be determined by multiplying the emissions factor identified below by the recordkeeping requirement in Section c.

<u>Source</u>	<u>Emissions Factor</u>
Blasting	49.8 lbs/blast; RACM Table 2.1.4-4
Loading Operations (9/85) *	0.00021 lb/ton; AP-42, Fifth Edition, Table 11-19.2-2
Reclamation Operations	0.04 lb/ton; AP-42, Fifth Edition, Table 11.9-4 (10/98)
Overburden Removal	20.2 lbs/VMT; AP-42, Fifth Edition, Table 13.2.3.1 (1/95)

\* AP-42 Factors have been adjusted to reflect total particulate.

**F. Miscellaneous Requirements**

The permittee shall implement and observe the Preventative Maintenance and Malfunction Abatement Plan as prescribed in the Director's Final Findings and Orders, dated October 2000.

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F003 - Aggregate Storage Piles (Terms in this permit supersede those of PTI 05-05739 issued on April 28, 1993.)	OAC rule 3745-31-05(A)(3)	2.6 pounds per hour and 11.2 tons per year particulate emissions.
	OAC rule 3745-17-07(B)(6)	See A.2.a through A.2.e. below  There shall be no visible particulate emissions from storage pile and associated material handling activities, except for a period of time not to exceed one minute during any sixty-minute observation period.

**2. Additional Terms and Conditions**

- 2.a The permittee shall employ best available technology on all material handling and removal activities for the purpose of ensuring compliance with the above-mentioned applicable requirements. This includes activities used to form, develop and remove material from each storage pile. In accordance with the permittee's permit application, the permittee has committed to prevent the generation of fugitive dust with water and/or any other suitable dust suppression chemicals to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 2.b The above-mentioned control measure(s) shall be employed for each material handling and removal activity at 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.

- 2.c The permittee shall employ best available technology for wind erosion from the surfaces of all storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to treat wind erosion from each storage pile with water to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 2.d The above-mentioned control measure(s) shall be employed for wind erosion from each pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Implementation of the control measure(s) shall not be necessary for a storage pile that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements.
- 2.e Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rules 3745-31-05.
- 2.f The 1.9 lbs/hr emission limitation was established to reflect the potential to emit for F003. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.

## B. Operational Restrictions

None

## C. Monitoring and/or Recordkeeping Requirements

- 1. Except as otherwise provided in this section, the permittee shall perform inspections of the wind erosion from pile surfaces associated with each storage pile, each day the plant is open for sale of product or is engaged in activity where the operation(s) can cause visible particulate emissions from these sources.
- 2. 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.

3. The purpose of the inspections is to determine the need for implementing the control measures specified in this permit for activities used to form, develop and remove material from each storage pile. The inspections shall be performed during representative, normal storage pile operating conditions.
4. The permittee may, upon receipt of written approval from the Ohio EPA Southwest District Office, 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.
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 (i) activities used to form, develop and remove material from each storage pile, and (ii) the pile surfaces (wind erosion), and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

6. The permittee shall maintain monthly records of the total tons of sand and aggregate loaded and unloaded from the storage piles.

#### **D. Reporting Requirements**

1. The permittee shall submit deviation reports that identify any of the following occurrences:
  - a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and
  - b. each instance when a control measure, that was to be implemented as a result of an

inspection, was not implemented.

## **E. Testing Requirements**

1. Emission Limitation-  
 Particulate emissions shall not exceed 2.6 pound per hour

Applicable Compliance Method-

Compliance shall be determined by the summing the results of the following equation:

- i. Aggregate load-in and load-out (2,460,938 tons/yr); AP-42, Fifth Edition, Chapter 13.2.4 (1/95)

$$E = k(0.0032) (U/5)^{1.3}/(M/2)^{1.4} \text{ lbs/ton}$$

E = emission factor for sand unloading

k = particle size multiplier = 0.74 for PM <30 um

U = mean wind speed (mph) = 9.1

M = material moisture content = 1.5%

$$E = 0.74(0.0032) (10/5)^{1.3}/(1.5/2)^{1.4} \text{ lbs/ton} = 0.0087 \text{ lbs PM/ton}$$

$$\text{Particulate Emissions} = 0.0087 \text{ lbs/ton} * 2,460,938 \text{ tons/yr} * 1 \text{ yr}/8760 \text{ hrs} = 2.4 \text{ lbs PM/hr}$$

- ii. Storage piles-wind erosion (25 storage piles with a surface area of 1 acre per storage pile); AP-42, Fifth Edition, Chapter 13.2.4. (1/95)

$$E = 1.7 (s/1.5) * (365-p)/235 * (f/15) \text{ lb/day/acre}$$

s = silt content = 2.99 % average of processed and unprocessed

p = no. of days w/> 0.01 in rain = 225 days

f = % of time wind exceeds 12 mph = 30% default value

$$E = 1.7 * (2.99/1.5) * (365-p)/235 * (30/15)$$

$$1.7 * 1.99 * 0.59 * 2 = 4.0 \text{ lb/day/acre}$$

$$4.0 \text{ lb/day/acre} * 1 \text{ acre} * 1 \text{ day}/24 \text{ hr} = 0.17 \text{ lb PM/hr}$$

2. Emission Limitation-  
 Particulate emissions shall not exceed 11.2 ton per year

Applicable Compliance Method-

Compliance shall be determined by totaling the following products:

- i. Maximum sand and gravel unloaded = 2,460,938 ton/year  
 $0.0087 \text{ lb/ton} * 2,460,938 \text{ ton/yr} * 1 \text{ ton}/2,000 \text{ lb} = 10.7 \text{ ton PM/yr}$
- ii. Storage piles-wind erosion (25 storage piles with a total surface area of 1 acre) AP-42, Fifth Edition, Chapter 13.2.4.(1/95)

$$E = 1.7 (s/1.5) * (365-p)/235 * (f/15) \text{ lb/day/acre}$$

s = silt content = 2.99 % average of processed and unprocessed

p = no. of days w/> 0.01 in rain = 225 days

f = % of time wind exceeds 12 mph = 30% default value

$$E = 1.7 * (2.99/1.5) * (365-p)/235 * (30/15)$$

$$1.7 * 1.99 * 0.59 * 2 = 4.0 \text{ lb/day/acre}$$

$$4.0 \text{ lb/day/acre} * 1 \text{ acre} * 225 \text{ days} * 1 \text{ ton}/2,000 \text{ lbs} = 0.45 \text{ ton PM/yr}$$

3. Emission limitation-

There shall be no visible particulate emissions from the storage piles and associated material handling activities, except for a period of time not to exceed one minute during any sixty-minute observation period.

Applicable Compliance Method

Compliance with the visible emission limitations for the storage piles identified 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"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(c) of OAC rule 3745-17-03.

**F. Miscellaneous Requirements**

1. The permittee shall implement and observe the Preventative Maintenance and Malfunction Abatement Plan as prescribed in the Director's Final Findings and Orders, dated October 2000.
2. Visible particulate emission readings for each storage pile shall be taken at the same point during the observation period.

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	areas	<u>Applicable Rules/Requirements</u>
F004 - Plant Roadways and Parking Areas (Terms in this permit supersede those of PTI 05-05739 issued on April 28, 1993.)		
Paved roadways and parking areas		OAC rule 3745-31-05(A)(3)
		OAC rule 3745-17-07(B)(4)
Unpaved roadways and parking		OAC rule 3745-31-05(A)(3)

Applicable Emissions  
Limitations/Control Measures

Best available technology that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.c, and A.2.d through A.2.i)

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05.

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05.

OAC rule 3745-17-07(B)(5)

Particulate emissions shall not exceed 5.2 ton per year.

There shall be no visible particulate emissions from any paved roadway or parking area, except for a period of one minute during any 60 minute observation period.

OAC rule 3745-17-08(B)

Best available technology (BAT) that is sufficient to minimize or eliminate visible emissions of fugitive dust (see Sections A.2.c., through A.2.k.)

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05.

Particulate emissions shall not exceed and 8.0 ton per year.

There shall be no visible particulate emissions from any unpaved roadway or parking area, except for a period of time not to exceed six minutes during any sixty-minute observation.

**2. Additional Terms and Conditions**

- 2.a** The paved roadways and parking areas that are covered by this permit and subject to the above-mentioned requirements are listed below:

paved roadways:

Entrance and exit roadways  
Secondary haul loop

paved parking area:

Office parking

- 2.b** The unpaved roadways and parking areas that are covered by this permit and subject to the above-mentioned requirements are listed below:

unpaved roadways:

Primary haul roads  
Secondary haul roads (except for the paved entrance/exit roadways and paved haul loop)

unpaved parking areas:

None

- 2.c** The permittee shall employ best available technology on all paved roadways and parking areas 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 treat the paved roadways and parking areas by applying water and/or wet sweeping at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing equally or more effective control measures to ensure compliance.
- 2.d** The permittee shall employ best available technology on the unpaved roadways and loading areas 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 treat the unpaved roadways and parking areas by monthly application of chemical stabilizers and daily application of water to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 2.e** Any unpaved roadway or parking area, which during the term of this permit is paved or takes the characteristics of a paved surface due to the application of certain types of dust suppressants, may be controlled with the control measure(s) specified above for paved surfaces. Any unpaved roadway or parking area that takes the characteristics of a paved

roadway or parking area due to the application of certain types of dust suppressants shall remain subject to the visible emission limitation for unpaved roadways and parking areas. Any unpaved roadway or parking area that is paved shall be subject to the visible emission limitation for paved roadways and parking areas.

- 2.f** 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 a paved or unpaved 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. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.
- 2.g** 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.
- 2.h** 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. Signs mandating the covering of all on-road, open-bodied vehicles shall be placed in conspicuous areas for drivers of such vehicles.
- 2.i** 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 3745-17-08.
- 2.j** The use of used oil as a dust suppressant is prohibited per OAC rule 3745-279-82.
- 2.k** Any unpaved roadway or parking area, which during the term of this permit is paved or takes the characteristics of a paved surface due to the application of certain types of dust suppressants, may be controlled using appropriate dust control measures for paved surfaces. Any unpaved roadway or parking area that takes the characteristics of a paved roadway or parking area due to the application of certain types of dust suppressants shall remain subject to the visible emission limitation for unpaved roadways and parking areas. Any unpaved roadway or parking area that is paved shall be subject to the visible emission limitation for paved roadways and parking areas specified in OAC rule 3745-17-07(B)(4).

## **B. Operational Restrictions**

1. A maximum speed limit of 15 miles per hour for vehicular traffic shall be posted and enforced on the roadways and parking areas of this facility.
2. The permittee shall apply chemical dust suppressants to unpaved roadways during freezing conditions when the application of water is not practical or safe. Implementation of this control measure may be suspended when sufficient moisture content exists such that emissions limitations are in compliance with those established in Part II. A.1.
3. The permittee shall water plant roadways at a minimum of once per day, unless it is below freezing or unless precipitation precludes the need for watering. Paved roadways shall be swept weekly, or as needed.

### C. Monitoring and/or Recordkeeping Requirements

1. Except as otherwise provided in this section, the permittee shall perform inspections of the roadways and parking areas in accordance with the following frequencies:

<u>Paved roadways and parking areas</u>	<u>Minimum inspection frequency</u>
Entrance and Exit Roadways	Daily, except when facility is closed
Office Parking	Daily, except when facility is closed
Haul and Secondary Loop Roadways	Daily, except when facility is closed
<u>Unpaved roadways and parking areas</u>	<u>Minimum inspection frequency</u>
Plant and Quarry Roadways	Daily, except when facility is closed

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.

2. The permittee may, upon receipt of written approval from the Ohio EPA Southwest District Office, 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, including those inspections that were not performed due to snow and/or ice cover or precipitation;

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

The information required in 3.d. shall be kept separately for (i) the load-in operations, (ii) the load-out operations, and (iii) the pile surfaces (wind erosion), and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

#### **D. Reporting Requirements**

- 1. The permittee shall submit deviation reports that identify any of the following occurrences:
  - a. each day during which an inspection was not performed by the required frequency, excluding an inspection which was not performed due to an exemption for snow and/or ice cover or precipitation; and
  - b. each instance when a control measure, that was to be implemented as a result of an inspection, was not implemented.

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

#### **E. Testing Requirements**

- 1. Compliance with the emission limitation(s) in Section A.1. of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation-  
Particulate emissions from paved roadways shall not exceed 5.2 ton/yr.  
  
Applicable Compliance Method-  
Compliance shall be determined by multiplying the vehicle travel miles per year times a calculated AP-42 emission factor and a control efficiency for water flushing:

Paved roadways AP-42, Fifth Edition, Chapter 13.2.1 (10/97)

$$EF = k(sL/2)^{0.65} (W/3)^{1.5} \text{ lbs/VMT}$$

k = particle size multiplier = 0.082 lb/VMT (PM-30 Table 13.2.1-1 AP-42)

sL = silt loading on road surface = 0.572 gr/ft<sup>2</sup> (Table 13.2.1-5)

W = average vehicle weight (tons) = 20

$$EF = 0.082(0.572/2)^{0.65} (20/3)^{1.5} = 0.082 * 0.44 * 17.2 = 0.62 \text{ lb/VMT}$$

$$0.62 \text{ lb/VMT} * (33,301 \text{ m/yr}) * 1 \text{ ton}/2,000 \text{ lb} = 10.3 \text{ ton PM/yr}$$

$$\text{Annual emissions} = 10.3 \text{ ton PM} * (1 - 0.50 \text{ for water flushing}) = 5.2 \text{ ton PM/yr}$$

- b. Emission Limitation-  
Particulate emissions from unpaved roadways shall not exceed 8.0 ton/yr.

Applicable Compliance Method-

Compliance shall be determined by multiplying the vehicle travel miles per year times a calculated AP-42 emission factor and a control efficiency for dust suppression:

Unpaved roadways AP-42, Fifth Edition, Chapter 13.2.2 (9/98)

$$E = k(s/12)^{0.8} (W/3)^{0.5} / (M/0.2)^{0.4} \text{ lbs/VMT}$$

k = particle size multiplier = 10 (PM-30 Table 13.2.2-2 AP-42)

s = surface material silt content = 10% (supplied by permittee)

W = average vehicle weight (tons) = 20.0 ( gravel truck)

M = surface material moisture content = 0.2 %

$$E = [10(10/12)^{0.8} (20.0/3)^{0.5} / (0.2/0.2)^{0.4} * ((365-137)/365)]$$

$$E = 10(1.37/1) * (0.1) = 1.38 \text{ lb/VMT} * (1-0.9) \text{ control efficiency-water}$$

$$\text{Miles traveled} = 117,134 \text{ miles (gravel truck)}$$

$$1.38 \text{ lb/VMT} * 117,134 \text{ miles/yr} * 1 \text{ ton}/2,000 \text{ lbs} = 8.0 \text{ ton PM per year}$$

- c. Emission limitation-  
There shall be no visible emissions except for a period not to exceed one minute during any 60 minute observation period from paved roadways.

Applicable Compliance Method-

Compliance with the emission limitation for the paved roadways and parking areas 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," as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

d. Emission limitation-

There shall be no visible emissions except for a period of time not to exceed six minutes during any sixty-minute observation period from unpaved roadways.

Applicable Compliance Method-

Compliance with the emission limitation for the unpaved roadways and parking areas 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," as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(4)(a) through (B)(4)(d) of OAC rule 3745-17-03.

**F. Miscellaneous Requirements**

1. The permittee shall implement and observe the Preventative Maintenance and Malfunction Abatement Plan as prescribed in the Director's Final Findings and Orders, dated October 2000.