



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL CERTIFIED MAIL
KNOX COUNTY**

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: 01-08300

DATE: 1/23/2001

Newcastle Stone Division
Mike Davis
Route 4 Box 179-1A
Marietta, OH 45750

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

CDO



Permit To Install

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

FINAL PERMIT TO INSTALL 01-08300

Application Number: 01-08300
APS Premise Number: 0142010085
Permit Fee: **\$2800**
Name of Facility: Newcastle Stone Division
Person to Contact: Mike Davis
Address: Route 4 Box 179-1A
Marietta, OH 45750

Location of proposed air contaminant source(s) [emissions unit(s)]:
30467 Rabbit Run Road
Howard, Ohio

Description of proposed emissions unit(s):
Jaw crusher, screen box, stacker and conveyor.

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

Newcastle Stone Division
PTI Application: 01-08300
Issued: 1/23/2001

Facility ID: 0142010085

Environmental Protection Agency if the proposed sources are inadequate 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 prove to be inadequate 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.

Newcastle Stone Division
PTI Application: 01-08300
Issued: 1/23/2001

Facility ID: 0142010085

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>
PM	116.7

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 - Primary Crushing Unit (200 ton/hr)	OAC rule 3745-31-05(A)(3)	Particulate emissions shall not exceed 0.14 lbs/hr and 0.6 tons per year. See II.A.2 a-b below. The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart OOO.
	OAC rule 3745-17-11(B)(1)	The emission limitation specified in this rule is less stringent than the emissions limitations established pursuant to 3745-31-05(A)(3).
	40 CFR Part 60, Subpart OOO	Visible emissions of fugitive dust shall not exceed 15% opacity, except as provided by the rule.

2. Additional Terms and Conditions

- 2.a The hourly and annual emission limitations were established to reflect the potential to emit for this emissions unit. Therefore it is not necessary to develop recordkeeping and/or reporting requirements to ensure compliance with these limits.
- 2.b The permittee shall employ best available control measures during all crushing operations

Emissions Unit ID: F001

for the purpose of ensuring compliance with the above-mentioned applicable requirements. Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by applying water at sufficient frequencies to maintain the material in a moist condition and ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

B. Operational Restrictions

1. Water shall be applied at all points necessary to ensure compliance with the visible emission limitations.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform daily checks when each piece of crushing equipment is in operation and when weather conditions allow, for any visible particulate emissions from each crushing 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 operation 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 total duration of any visible emission incident; and
 - d. any corrective action taken to eliminate the visible emissions.

D. Reporting Requirements

1. The permittee shall submit semiannual reports which (a) identify all days during which any abnormal visible fugitive particulate emissions were observed from crushing operations and (b) describe any corrective actions taken to eliminate the abnormal visible fugitive particulate emissions. These reports shall be submitted to the Central District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. Testing Requirements

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

9

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PTI A

Issued: 1/23/2001

Emissions Unit ID: **F001**

Particulate emissions shall not exceed 0.14 lbs/hr.

Applicable Compliance Method

Compliance shall be demonstrated for the crusher by multiplying the maximum hourly production rate (application, 11/28/00) by the appropriate emission factor specified in USEPA reference document AP-42, 11.19.2-2 (1/95) by the quantity of the specific operation:

primary crusher - $200 \text{ tons/hr} * 0.0007 \text{ lb PM/ton} * (1) = 0.14 \text{ lbs PM/hr}$

b. Emission Limitation

Particulate emissions shall not exceed 0.6 tons/yr.

Applicable Compliance Method

Compliance shall be demonstrated by multiplying the maximum annual production rate (application, 11/28/00) by the appropriate emission factor specified in USEPA reference document AP-42, 11.19.2-2 (1/95) and converting to tons.

primary crusher - $1,752,000 \text{ ton/yr} * 0.0007 \text{ lb/hr} * .0005 \text{ ton/lb} = .61 \text{ ton/yr}$

c. Emission limitation:

Visible emission of fugitive dust shall not exceed 15% opacity, except as provided by the rule.

Applicable Compliance Method:

The permittee shall conduct, or have conducted, emission testing for the crusher in accordance with the following requirements:

- i. On or after the sixtieth day of achieving the maximum production rate at which the unit will be operated, but not later than 180 days after initial startup, emissions testing shall be conducted.
- ii. The emission testing shall be conducted to demonstrate compliance with the opacity limitation.
- iii. The following test method shall be employed to demonstrate compliance with 40 CFR Part 60 Subpart OOO: 40 CFR Part 60, Appendix A, Method 9. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- iv. 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 Central District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the the Central District Office. 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 Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Central District Office 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 Central District Office 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 Central District Office.

F. Miscellaneous Requirements

- 1. The following source is subject to the applicable provisions of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60.

<u>Source Number</u>	<u>Source Description</u>	<u>NSPS Regulation (Subpart)</u>
F001	Primary Crushing Unit (200 ton/hr)	Subpart OOO

The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

- a. construction date (no later than 30 days after such date);
- b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
- c. actual start-up date (within 15 days after such date); and
- d. date of performance testing (If required, at least 30 days prior to testing).

12

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PTI A

Issued: 1/23/2001

Emissions Unit ID: **F001**

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Air Quality Modeling and Planning
P.O. Box 1049
Columbus, OH 43216-1049

and

Central District Office
Division of Air Pollution Control
3232 Alum Creek Drive
Columbus, OH 43207

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 - Primary Screening Unit (200 ton/hr)	OAC rule 3745-31-05(A)(3)	Particulate emissions shall not exceed 3.00 lbs/hr and 13.1 tons/yr.
		See II.A.2.a-b below.
	OAC rule 3745-17-11(B)(1)	The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart OOO.
	40 CFR Part 60, Subpart OOO	The emission limitation specified in this rule is less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).
		Visible emissions of fugitive dust shall not exceed 10% opacity, except as provide by this rule.

2. Additional Terms and Conditions

- 2.a The hourly and annual emission limitations were established to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop recordkeeping and/or reporting requirements to ensure compliance with these limits.

- 2.b** The permittee shall employ best available control measures during screening operation for the purpose of ensuring compliance with the above-mentioned applicable requirements. Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by applying water at sufficient frequencies to maintain the material in a moist condition and ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

B. Operational Restrictions

1. Water shall be applied at all points necessary to ensure compliance with the visible emission limitations.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform daily checks, when the screening unit is in operation and when the weather conditions allow, for any visible fugitive particulate emissions from the screening unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. 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 total duration of any visible emission incident; and
 - d. any corrective actions taken to eliminate the visible emissions.

D. Reporting Requirements

1. The permittee shall submit semiannual reports which (a) identify all days during which any abnormal visible fugitive particulate emissions were observed from any screening unit and (b) describe any corrective actions taken to eliminate the abnormal visible fugitive particulate emissions. These reports shall be submitted to the Director (The Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. Testing Requirements

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

- a. Emission Limitation:
Particulate emissions shall not exceed 3.00 lbs/hr.
- Applicable Compliance Method:
Compliance shall be demonstrated by multiplying the maximum hourly production rate (application, 11/28/00) by the appropriate emission factor specified in USEPA reference document AP-42, 11.19.2-2 (1/95):
primary screening- $200 \text{ tons/hr} * 0.015 \text{ lb/ton} = 3.00 \text{ lbs/hr}$
- b. Emission Limitation:
Particulate emissions shall not exceed 13.1 tons/yr
- Applicable Compliance Method:
Compliance shall be demonstrated by multiplying the maximum annual production rate (application, 11/28/00) by the appropriate emission factor specified in USEPA reference document AP-42, 11.19.2-2 (1/95) and converting to tons.
primary screening- $1,752,000 \text{ tons/yr} * 0.015 \text{ lb/ton} = 13.1 \text{ tons/yr}$
- c. Emission Limitation:
Visible emissions of fugitive dust shall not exceed 10% opacity, except as provided by rule.
- Applicable Compliance Method
The permittee shall conduct, or have conducted, emission testing for the screening unit in accordance with the following requirements:
- i. On or after the sixtieth day of achieving the maximum production rate at which the unit will be operated, but not later than 180 days after initial startup, emissions testing shall be conducted.
 - ii. The emission testing shall be conducted to demonstrate compliance with the opacity limitation.
 - iii. The following test method shall be employed to demonstrate compliance with 40 CFR Part 60 Subpart OOO: 40 CFR Part 60, Appendix A, Method 9. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
 - iv. The test(s) shall be conducted while the emissions unit is operating at or near its

Emissions Unit ID: F002

maximum capacity, unless otherwise specified or approved by the Central District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Central District Office. 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 these 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 Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Central District Office 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 Central District Office 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 Central District Office.

F. Miscellaneous Requirements

1. The following sources are subject to the applicable provisions of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60.

<u>Source Number</u>	<u>Source Description</u>	<u>NSPS Regulation (Subpart)</u>
F002	Primary Screening Unit (200 ton/hr)	Subpart OOO

The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR part 60 are also federally enforceable.

Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

- a. construction date (no later than 30 days after such date);
- b. anticipated start-up date (not more than 60 days or less than 30 days prior to such date);

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PTI A

Issued: 1/23/2001

Emissions Unit ID: **F002**

- c. actual start-up date (within 15 days after such date); and
- d. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC- Air Quality Modeling and Planning
P.O. Box 1049
Columbus, OH 43216-1049

and

Central District Office
Division of Air Pollution Control
3232 Alum Creek Drive
Columbus, OH 43207

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 - Conveying and Handling-hopper, conveying points and transfer points.	OAC rule 3745-31-05(A)(3)	Particulate emissions shall not exceed 5.04 lbs/hr and 22.1 tons/yr. See II.A.2.a-c below. The requirements of this rule also include compliance with the requirements of 40 CFR Part 60, Subpart OOO.
	OAC rule 3745-17-11(B)(1)	The emission limitation specified in this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	40 CFR Part 60, Subpart OOO	Visible emissions of fugitive dust shall not exceed 10% opacity, except as provided by rule.

2. Additional Terms and Conditions

- 2.a The hourly and annual emission limitations were established to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop recordkeeping and/or

Emissions Unit ID: F003

reporting requirements to ensure compliance with these limits.

2.b The permittee shall employ best available control measures during conveying and handling operations for the purpose of ensuring compliance with the above-mentioned applicable requirements. Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by applying water at sufficient frequencies to maintain the material in a moist condition and ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

2.c The following conveying and handling operations are included in this emissions unit and subject to the above referenced applicable rules/requirements, applicable emission limitations and control measures:

Feed Hopper (1)= 200 tons/hr
Conveying Points (5)= 200 tons/hr
Transfer Points (12)= 200 tons/hr

B. Operational Restrictions

1. Water shall be applied at all points necessary to ensure compliance with the visible emission limitations.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform daily checks, when each conveying and/or handling point is operating and when the weather conditions allow, for any visible fugitive particulate emissions from each conveying and/or handling 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 total duration of any visible emission incident; and
- d. any corrective actions taken to eliminate the visible emissions.

D. Reporting Requirements

1. The permittee shall submit semiannual reports which (a) identify all days during which any abnormal visible fugitive particulate emissions were observed from any conveying and handling operation and (b) describe any corrective actions taken to eliminate the abnormal visible fugitive particulate emissions. These reports shall be submitted to the Director (the Central District Office) by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. Testing Requirements

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

- a. Emission Limitation

Particulate emissions shall not exceed 5.04 lbs/hr.

Applicable Compliance Method

Compliance shall be demonstrated by summing the calculated hourly emission rate for each conveying or handling operation as determined by multiplying the maximum hourly production rate (application, 11/28/00) by the appropriate emission factor specified in USEPA reference document AP-42, 11.19.2-2 (1/95) by the quantity of the specific operation:

Hopper $200 \text{ ton/hr} * 0.0014 \text{ lb/ton} * (1) = 0.28 \text{ lb/hr}$

Conveyor Pts $200 \text{ ton/hr} * 0.0014 \text{ lb/ton} * (12) = 1.4 \text{ lb/hr}$

Transfer Pts $200 \text{ ton/hr} * 0.0014 \text{ lb/ton} * (5) = 3.36 \text{ lb/hr}$

- b. Emission Limitation:

Particulate emission shall not exceed 22.1 tons/yr

Applicable Compliance Method:

Compliance shall be demonstrated by summing the calculated annual emission rate for each conveying and handling operation as determined by multiplying the maximum annual production rate (application, 11/28/2000) by the appropriate emission factor specified in USEPA reference document AP-42, 11.19.2-2 (1/95), converting to tons and multiplying by the quantity of the specific operation:

Hopper $1752000 \text{ hr/yr} * 0.0014 \text{ lb/ton} * 0.0005 \text{ ton/lb} * (1) = 1.23 \text{ ton/yr}$

Conveyor Pts $1752000 \text{ hr/yr} * 0.0014 \text{ lb/ton} * 0.0005 \text{ ton/lb} * (5) = 6.13 \text{ ton/yr}$

Transfer Pts $1752000 \text{ hr/yr} * 0.0014 \text{ lb/ton} * 0.0005 \text{ ton/lb} * (12) = 14.72 \text{ ton/yr}$

- c. Emission Limitation:

Visible emissions of fugitive dust shall not exceed 10% opacity, except as provided by

rule.

Applicable Compliance Method

The permittee shall conduct, or have conducted, emission testing for each conveying operation in accordance with the following requirements.

- i. On or after the sixtieth day of achieving the maximum production rate at which the unit will be operated, but not later than 180 days after initial startup, emissions testing shall be conducted.
- ii. The emission testing shall be conducted to demonstrate compliance with the opacity limitation.
- iii. The following test method shall be employed to demonstrate compliance with the 40 CFR Part 60 Subpart OOO: 40 CFR Part 60, Appendix A, Method 9. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- iv. 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 Central District Office.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Central District Office. 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 these 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 Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Central District Office 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 Central District Office 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 Central District Office.

F. Miscellaneous Requirements

The following sources are subject to the applicable provisions of the New Source Performance Standard (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60.

<u>Source Number</u>	<u>Source Description</u>	<u>NSPS Regulation (Subpart)</u>
F003	Conveying and Handling- hopper, conveying points and transfer points.	Subpart OOO

The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to the NSPS, the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

- a. Construction date (no later than 30 days after such date);
- b. Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
- c. Actual start-up date (within 15 days after such date); and
- d. Date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC- Air Quality Modeling and Planning
P.O. Box 1049
Columbus, OH 43216-1049

and

Central District Office
Division of Air Pollution Control
3232 Alum Creek Drive
Columbus, OH 43207

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>
F004 - Material loading/unloading with a front end loader (200 ton/hr)	OAC rule 3745-31-05(A)(3)	<p>Particulate emissions shall not exceed 8.46 lbs/hr and 37.1 tons/yr.</p> <p>Best available control measures that are sufficient to minimize or eliminate visible emission of fugitive dust (see section A.2.c through A.2.e).</p> <p>Visible emissions of fugitive dust shall not exceed 20% opacity as a 3 minute average.</p>

2. Additional Terms and Conditions

- 2.a The hourly and annual emission limitations were established to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop recordkeeping and/or reporting requirements to ensure compliance with these limits.
- 2.b The loading and unloading operations that are covered by this permit and subject to the above-mentioned requirements are listed below:

Material loading and unloading from a front-end loader

- 2.c The permittee shall employ best available control measures for the above-identified unloading and loading operations 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 perform the following control measures to

24

Newca

PTI A

Issued: 1/23/2001

Emissions Unit ID: **F004**

ensure compliance:

Material Loading/Unloading
Front End Loader

Control Measures
Maintain Sufficient Moisture Control
Maintain Sufficient Drop Height
Use variable height stacker

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

- 2.d For each loading/unloading operation that is not adequately enclosed, the above-identified control measures 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 measures are necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measures shall continue during the operation of the product loading/unloading until further observation confirms that use of the control measures is unnecessary.
- 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(A)(3).

B. Operational Restrictions

None.

C. Monitoring and/or Recordkeeping Requirements

- 1. Except as otherwise provided in this section, for loading and unloading operations that are not adequately enclosed, the permittee shall perform inspections of such operations in accordance with the following minimum frequencies:

<u>Material Loading and Unloading</u>	<u>Minimum Inspection Frequency</u>
Front End Loader	Daily

- 2. The above-mentioned inspections shall be performed during representative, normal operating conditions.
- 3. The permittee may, upon receipt of written approval from the Central 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.

4. 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 the 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.

D. Reporting Requirements

1. The permittee shall submit semiannual deviation reports that identify the following:
 - a. each day during which an inspection was not performed by the required frequency; and
 - b. each instance when a control measure, that was to be performed as a result of an inspection, was not implemented.

E. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):
 - a. Emission Limitation
Particulate emissions shall not exceed 8.46 lbs/hr.

Applicable Compliance Method
Compliance will be based on the emission factors in AP-42 11.13.2.4 (1995) and the actual hourly production rate.
 - b. Emission Limitation:
Particulate emissions shall not exceed 37.7 tons/yr.

Applicable Compliance Method:
Compliance shall be determined from the emission factors in AP-42 11.13.2.4 (1995) and

the actual annual production rate.

- c. Emission Limitation:
Visible emissions of fugitive dust shall not exceed 20% opacity, as a 3 minute average.

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(3) using the methods and procedures specified in USEPA Method 9.

F. Miscellaneous Requirements

None.

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>
F005 - Load-in and load-out of storage piles (see Section A.2.a for identification of storage piles)	OAC rule 3745-31-05(A)(3)	<p>Particulate emissions shall not exceed 37.6 tons per year(storage piles and load-in/load-out).</p> <p>No visible emissions except for one minute in any hour.</p> <p>Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Section A.2.b, A.2.c and A.2.f)</p>
Wind erosion from storage (see Section A.2.a for identification of storage piles)	OAC rule 3745-31-05(A)(3)	<p>No visible emissions except for one minute in any hour.</p> <p>Best available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust (see Section A.2.d through A.2.f).</p>

2. Additional Terms and Conditions

- 2.a The storage piles that are covered by this permit and subject to the requirements of OAC rule 3745-31-05(A)(3) are listed below:

Sandstone Piles (4)

- 2.b** The permittee shall employ best available control measures on all load-in and load-out operations associated with the storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to use precautionary operating practices to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 2.c** The above-mentioned control measure(s) shall be employed for each load-in and load-out operation of each storage pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during any such operation until further observation confirms that use of the measure(s) is unnecessary.
- 2.d** The permittee shall employ best available control measures for wind erosion from the surfaces of all storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to precautionary operating practices such as maintenance of as low a pile height as possible.
- 2.e** The above-mentioned control measure(s) shall be employed for wind erosion from each pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Implementation of the control measure(s) shall not be necessary for a storage pile that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements.
- 2.f** Implementation of the above-mentioned control measures in accordance with the terms and condition of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-31-05.

B. Operational Restrictions

None

C. Monitoring and/or Recordkeeping Requirements

1. Except as otherwise provided in this section, the permittee shall perform inspections of each

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

<u>Storage pile identification</u>	<u>Minimum Load-in inspection frequency</u>
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All Storage Piles	Daily
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2. Except as otherwise provided in this section, the permittee shall perform inspections of each load-out operation at each storage pile in accordance with the following frequencies:

<u>Storage pile identification</u>	<u>Minimum Load-out inspection frequency</u>
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All Storage Piles	Daily
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3. Except as otherwise provided in this section, the permittee shall perform inspections of the wind erosion from pile surfaces associated with each storage pile in accordance with the following frequencies:

<u>Storage pile identification</u>	<u>Minimum wind erosion inspection frequency</u>
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All Storage Piles	Daily
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4. No inspection shall be necessary for wind erosion from the surface of a storage pile when the pile is covered with snow and/or ice and for any storage pile activity if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.

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

6. The permittee may upon receipt of written approval from the appropriate Ohio EPA District Office or local air agency, 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.

7. 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 7.d shall be kept separately for (i) the load in operation, (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 semiannual 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. Compliance with the emission limitations specified in section A.I of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:
Particulate emissions shall not exceed 37.6 tons per year (storage piles and load-in/load-out).

Applicable Compliance Method:

Compliance with the emission limitation for the storage piles identified above shall be

Emissions Unit ID: **F005**

determined by using the emission factor for storage piles as stated in AP-42, 5th Edition, January 1995, Chapter 13.2.4, Equation (1). This equation will provide the particulate emission factor for the load-in and load-out operations in pounds per ton. The emission factor for wind erosion from the storage piles shall be determined by using the emission factor equation stated in "Control of Open Fugitive Dust Sources," U.S. EPA, September 1988, Chapter 4.1.3, Equation (4-9). The associated emission factors shall be multiplied by the appropriate production capacities to obtain the emission rates. The emissions from all load-in and load-out operations and wind erosion shall be summed to obtain the total annual PM emissions.

- b. Emission Limitation:
Visible emission of fugitive dust shall not exceed one minute in any hour.

Applicable Compliance Method:

Compliance with the visible emission limitations for 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.

33

Newca

PTI A

Issued: 1/23/2001

Emissions Unit ID: **F005**

F. Miscellaneous Requirements

None

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>
F006 - Unpaved Roadway	OAC rule 3745-31-05	<p>Particulate emissions shall not exceed 6.3 tons per year.</p> <p>Best available control measures that are sufficient to eliminate visible emissions of fugitive dust (see Section A.2.b through A.2.g).</p> <p>No visible particulate emissions except for 3 minutes during any 60 minute period.</p>

2. Additional Terms and Conditions

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

unpaved roadways:
 New Castle Stone

- 2.b 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. In accordance with the permittee's permit application, the permittee has committed to treat the unpaved roadways and parking areas with water at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

- 2.c 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 an 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.d 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 watering. 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 a visible emission limitation of no visible particulate emissions except for one minute during any 60-minute period.
- 2.e 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.f Open-bodied vehicles transporting material likely to become airborne shall have such material covered at all times if the control measure is necessary for the materials being transported.
- 2.g 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.

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 unpaved roadways and parking areas in accordance with the following frequencies:

Unpaved RoadwaysMinimum Inspection Frequency

All

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 may, upon receipt of written approval from the Central 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.
4. 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 the 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 4.d 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 semiannual 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. Compliance with the emission limitation(s) in section A.1 of these terms and conditions shall be determined in accordance with the following methods(s):

- a. Emission Limitation:
Particulate emissions shall not exceed 6.3 tons per year.

Applicable Compliance Method

Compliance with the emission limitation for the unpaved roadway identified above shall be determined by using the emission factor for unpaved roadways as stated in AP-42, 5th Edition, September 1998, Chapter 13.2.2, Equation (2). This equation will provide the emission factor for particulate matter in pounds per vehicle mile traveled. This emission factor is then multiplied by the total annual vehicle miles traveled and divided by 2000 pounds to obtain the total annual uncontrolled PM emissions (in tons per year).

- b. Emission Limitation:
No visible particulate emissions except for 3 minutes during any 60 minute period.

Applicable Compliance Method:

Compliance with the emission limitation for the unpaved roadways and parking areas 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)(d) of OAC rule 374-17-03.

F. Miscellaneous Requirements

None

NEW SOURCE REVIEW FORM B

PTI Number: 01-08300 Facility ID: 0142010085

FACILITY NAME Newcastle Stone Division

FACILITY DESCRIPTION Jaw crusher. screen box. stacker and CITY/TWP Howard

Emissions Unit ID: F006

SIC CODE 1429 SCC CODE 3-05-020-01 EMISSIONS UNIT ID F001

EMISSIONS UNIT DESCRIPTION Primary Crushing Unit (200 ton/hr)

DATE INSTALLED After permit is issued

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter		.14 lb/hr	0.07 ton/yr	0.14 lb/hr	0.61 ton/yr
PM ₁₀					
Sulfur Dioxide					
Organic Compounds					
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? Subpart OOO NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination See additional terms and conditions

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? NO

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ N/A

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? YES X NO

IDENTIFY THE AIR CONTAMINANTS: N/A

NEW SOURCE REVIEW FORM B

PTI Number: 01-08300 Facility ID: 0142010085

FACILITY NAME Newcastle Stone Division

FACILITY DESCRIPTION Jaw crusher. screen box. stacker and CITY/TWP Howard

Emissions Unit ID: **F006**

SIC CODE 1429 SCC CODE 3-05-040-20 EMISSIONS UNIT ID F004

EMISSIONS UNIT DESCRIPTION Product loading/unloading with a front end loader (200 ton/hr)

DATE INSTALLED After permit is issued

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter		8.46 lb/hr	37.05 ton/yr	8.46 lb/hr	37.05 ton/yr
PM ₁₀					
Sulfur Dioxide					
Organic Compounds					
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? **Subpart OOO** NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination See additional terms and conditions

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$N/A

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? YES X NO

IDENTIFY THE AIR CONTAMINANTS: N/A

NEW SC

PTI Num

FACILITY

Emissions Unit ID: **F006**

FACILITY DESCRIPTION Jaw crusher, screen box, stacker and conveyor.

CITY/TWP Howard

SIC CODE 1429 SCC CODE 3-05-025-07 EMISSIONS UNIT ID F005

EMISSIONS UNIT DESCRIPTION Storage Piles

DATE INSTALLED After permit is issued

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter		8.7 lb/hr	37.6 ton/yr	8.7 lb/hr	37.6 ton/yr
PM ₁₀					
Sulfur Dioxide					
Organic Compounds					
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? _____ NESHAP? _____ PSD? _____ OFFSET POLICY? _____

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination See additional terms and conditions

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No
OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$N/A

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? _____ YES X NO

IDENTIFY THE AIR CONTAMINANTS: N/A

NEW SOURCE REVIEW FORM B

PTI Number: 01-08300

Facility ID: 0142010085

FACILITY NAME Newcastle Stone Division

FACILITY DESCRIPTION Jaw crusher, screen box, stacker and

CITY/TWP Howard

Emissions Unit ID: **F006**

Ohio EPA Permit to Install Information Form Please describe below any documentation which is being submitted with this recommendation (must be sent the same day). Electronic items should be submitted with the e-mail transmitting the PTI terms, and in software that CO can utilize. If mailing any hard copy, this section must be printed as a cover page. All items must be clearly labeled indicating the PTI name and number. Submit **hard copy items to Pam McGraner**, AQM&P, DAPC, Central Office, and electronic files to airpti@epa.state.oh.us

Please fill out the following. If the checkbox does not work, replace it with an 'X'

	<u>Electronic</u>	<u>Additional information File Name Convention (your PTI # plus this letter)</u>	<u>Hard Copy</u>	<u>None</u>
<u>Calculations (required)</u>	<input checked="" type="checkbox"/>	000000c.wpd	<input type="checkbox"/>	
<u>Modeling form/results</u>	<input type="checkbox"/>	000000s.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>PTI Application (complete or partial)*</u>	<input type="checkbox"/>	000000a.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>BAT Study</u>	<input type="checkbox"/>	000000b.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Other/misc.</u>	<input type="checkbox"/>	000000t.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>

* Mandatory for netting, PSD, nonattainment NSR, 112(g), 21-07(G)(9)(g) and 21-09(U)(2)(f) - 2 complete copies.

Please complete (see comment bubble to the left for additional instructions):

NSR Discussion

Newcastle stone division is located in Howard, Ohio (Knox County) and has submitted a PTI application for an aggregate processing plant. They have not started construction and will wait until the permit is issued to do so. The plant will crush and screen sandstone for distribution. The process will include a jaw crusher, screen box, stacker and conveyor. Emissions were based upon their maximum hourly throughput of 200 tons per hour and annual limits were based on 8760 operating hours. The application also includes roadways, storage piles and material handling whose terms and conditions were drafted with templates 102, 124 and 129, respectively.

Applicable rules include: 3745-31-05, 3745-17-11, and 40 CFR Part 60, Subpart 000.

Calculations for the emissions units are as follows:

F001: Primary Crushing Unit

F002: Primary Screening Unit

F003: Conveying and Handling

F004: Material Loading/Unloading

F005: Storage Piles

F006: Unpaved Roadways

Calculations

NEW SC

PTI Num

FACILITY

Emissions Unit ID: **F006**

FACILITY DESCRIPTION Jaw crusher, screen box, stacker and conveyor.

CITY/TWP Howard

F001: Primary Crushing Unit

AP-42 section 11.19.2 (1/95 ed.)

Primary Crushing Emission Factor for PM= 0.00070 lb/ton of material throughput

Hourly emissions:

200 ton/hr material throughput * 0.00070 lb/ ton material throughput = 0.14 lb/hr PM emissions

Actual Annual Emissions:

200,000 ton/yr * 0.00070 lb/ton * 0.0005 ton/lb = 0.07 ton/yr PM emissions

Maximum Annual Emissions:

0.14 lb/hr PM emissions * 8760 hr/yr * .0005 ton/lb = 0.61 ton/yr PM emissions

F002: Primary Screening Unit

AP- 42 section 11.19.2 (1/95 ed.)

Primary Screening Emission Factor for PM= 0.015 lb/ton of material throughput

Hourly emissions:

200 ton/hr material throughput * 0.015 lb/ton material throughput = 3 lb/hr PM emissions

Actual annual emissions:

200,000 ton/yr * 0.015 lb/ton * 0.0005 ton/lb = 1.5 ton/yr PM emissions

Maximum Annual Emissions:

3 lb/hr PM emissions * 8760 hr/yr * 0.0005 ton/lb = 13.14 ton/yr PM emissions

F003: Conveying and Handling

AP- 42 section 11.19.2 (1/95 ed.)

Conveyor Transfer Points Emission Factor for PM: 0.0014 lb/ton material throughput

(1) Hopper

(5) Conveying Points

(12) Transfer Points

Hourly Emissions

Hopper: 200 ton/hr * 0.0014 lb/ton * (1) = 0.28 lb/hr

Conveying Points: 200 ton/yr * 0.0014 lb/ton * (5) = 1.40 lb/hr

NEW SOURCE REVIEW FORM B

PTI Number: 01-08300

Facility ID: 0142010085

FACILITY NAME Newcastle Stone Division

FACILITY DESCRIPTION Jaw crusher, screen box, stacker and

CITY/TWP Howard

Emissions Unit ID: **F006**

Transfer Points: 200 ton/yr * 0.0014 lb/ton * (12) = 3.36 lb/hr

Total Hourly emission rate = Hopper + Conveyor + Transfer emissions = 5.04 lb/hr PM

Maximum Annual Emissions:

Total Hourly emission rate * 8760 hours/yr * .0005 ton/lb

5.04 lb/hr * 8760 hr/yr * .0005 ton/lb = 22 tons/yr

F004: Material Loading/Unloading

AP-42, section 13.2.4 "Aggregate Handling and Storage Piles" (1/95 ed.)

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

where:

E= emission factor (pound/ton)

k= particle size multiplier (dimensionless)

U= mean wind speed (mph), and

M= material moisture content (%)

E= ?

k= 0.74 (from application, 11/28/00)

U= 8.7 mph (from application, 11/28/00)

M= 0.7% (from application, 11/28/00)

$$E = 0.74(0.0032) * ((8.7/5)^{1.3} / (0.7/2)^{1.4})$$

$$E = 0.00237 * (2.0545) / (0.22998)$$

E= .021 Pounds/ton of material throughput

Hourly Emissions:

Loading: 0.021 lbs/ton of material throughput * 200 tons/hr material throughput = 4.23 lb/hr

Unloading: 0.021 lbs/ton of material throughput * 200 tons/hr material throughput = 4.23 lb/hr

Hourly emissions = Loading + Unloading = 4.23 + 4.23 = 8.46 lb/hr

Maximum Annual Emissions:

NEW SC

PTI Num

FACILITY

Emissions Unit ID: **F006**

FACILITY DESCRIPTION Jaw crusher, screen box, stacker and conveyor.

CITY/TWP Howard

8.46 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 37.05 ton/yr of PM emissions

F005: Storage Piles

AP-42, section 13.2.4 "Aggregate Handling and Storage Piles" (1/95 ed.)

USEPA's Control of Open Fugitive Dust Sources September 1988

Load-in and Load-out of Storage Piles

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

where:

E= emission factor (pound/ton)

k= particle size multiplier (dimensionless)

U= mean wind speed (mph), and

M= material moisture content (%)

E= ?

k= 0.74 (from application, 11/28/00)

U= 8.7 mph (from application, 11/28/00)

M= 0.7% (from application, 11/28/00)

$$E = 0.74(0.0032) * ((8.7/5)^{1.3}/(0.7/2)^{1.4})$$

$$E = 0.00237*(2.0545)/(0.22998)$$

E= .021 Pounds/ton of material throughput

Hourly Emissions:

Loading: 0.021 lbs/ton of material throughput * 200 tons/hr material throughput = 4.23 lb/hr

Unloading: 0.021 lbs/ton of material throughput * 200 tons/hr material throughput= 4.23 lb/hr

Hourly emissions = Loading + Unloading = 4.23 + 4.23 = 8.46 lb/hr

Maximum Annual Emissions:

8.46 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 37.05 ton/yr of PM emissions

FACILITY DESCRIPTION Jaw crusher, screen box, stacker and
conveyor.

CITY/TWP Howard

Wind Erosion

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

E= total suspended particulate emission factor (lb/day/acre)

s= silt content of the stored material, weight percent (see Table 4-1 of Control of Open Fugitive Dust Sources)

p= number of days with >0.01 inches of precipitation per year (see Figure 3-1 of Control of Open Fugitive Dust Sources), and

f= percentage of time wind speed exceed 12mph

E= ?

s= 2 (from application, 11/28/00)

p= 120 (from application, 11/28/00)

f= 60 (from application, 11/28/00)

$$E = 1.7 * (2/1.5) * [(365-120)/235] * (60/15)$$

$$E = 1.7 * 1.33 * 1.04 * 4$$

$$E = 9.4 \text{ lb/day/acre}$$

The surface area of each storage pile is 0.076 acres (from application, 11/28/00).

Thus, 9.4 lb/day/acre * 0.076 acres = 0.72 lbs tsp/day.

There are four storage piles so the daily emissions = 0.72 lbs tsp/ day * 4 = 2.88 lbs tsp/day

This is 0.53 tons tsp annually.

Storage piles + load-in and load out = 0.53 ton/yr + 37.05 ton/yr = 37.6 ton/yr

F006: Unpaved Roadway

AP-42, section 13.2.2 "Unpaved Roads" (1/95 ed.)

$$E = \{ [k * (s/12)^a * (W/3)^b] / (M_{dry}/0.2)^c \}$$

E= Annual size specific emission factor extrapolated for natural mitigation, lb/VMT

s= Surface material silt content (%)

NEW SOURCE REVIEW FORM B

PTI Number: 01-08300

Facility ID: 0142010085

FACILITY NAME Newcastle Stone Division

FACILITY DESCRIPTION Jaw crusher. screen box. stacker and

CITY/TWP Howard

Emissions Unit ID: **F006**

W= Mean vehicle weight in tons

M_{dry}= surface material moisture content under dry, uncontrolled conditions, %

k,a,b & c [constants from Table 13.2.2-2]

E= ?

s= 10 (from application, 11/28/00)

W= 24.25 (from application, 11/28/00)

M_{dry}= 0.7 (from application, 11/28/00)

k= 10 (from application, 11/28/00)

a= 0.8 (from application, 11/28/00)

b= 0.5 (from application, 11/28/00)

c= 0.4 (from application, 11/28/00)

$$E = \{ [10 * (10/12)^{0.8} * (24.25/3)^{0.5}] / (0.7/0.2)^{0.4} \}$$

$$E = (10 * 0.86428 * 2.8431) / 1.651$$

$$E = 14.8473 \text{ lb/VMT}$$

Speed correction, 14.87473 (10/15)= 9.89 lb/VMT

At 1262 VMT/yr,

$$9.89 \text{ lb/VMT} * 1262 \text{ VMT/yr} * 0.0005 \text{ ton/lb} = 6.25 \text{ tons/yr}$$

Please complete for these type permits (For PSD/NSR Permit, place mouse over this text):

Synthetic Minor Determination and/or Netting Determination
Permit To Install ENTER PTI NUMBER HERE

A. Source Description

B. Facility Emissions and Attainment Status

C. Source Emissions

D. Conclusion

PLEASE PROVIDE ADDITIONAL NOTES OR COMMENTS AS NECESSARY:

NONE

50 **NEW SC**

PTI Num

FACILITY

FACILITY DESCRIPTION

Jaw crusher, screen box, stacker and conveyor.

CITY/TWP

Emissions Unit ID: **F006**

Howard

Please complete:

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

Pollutant

Tons Per Year

PM

116.7