



Environmental Protection Agency

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

4/26/2011

Certified Mail

James Conlon  
Stein, Inc.  
1929 East Royalton Road  
Broadview Heights, OH 44147

|     |                                    |
|-----|------------------------------------|
| No  | TOXIC REVIEW                       |
| No  | PSD                                |
| Yes | SYNTHETIC MINOR TO AVOID MAJOR NSR |
| No  | CEMS                               |
| No  | MACT/GACT                          |
| No  | NSPS                               |
| No  | NESHAPS                            |
| No  | NETTING                            |
| No  | MAJOR NON-ATTAINMENT               |
| No  | MODELING SUBMITTED                 |

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL  
Facility ID: 0247080619  
Permit Number: P0106779  
Permit Type: OAC Chapter 3745-31 Modification  
County: Lorain

Dear Permit Holder:

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

Andrew Hall  
Permit Review/Development Section  
Ohio EPA, DAPC  
50 West Town Street, Suite 700  
P.O. Box 1049  
Columbus, Ohio 43216-1049

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

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

Sincerely,

Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 - *Via E-Mail Notification*  
Ohio EPA-NEDO; Canada





## Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination

Netting Determination

2. Source Description:

Stein Inc. has been in business for over 60 years, operating at Republic Engineered Products' Lorain, Ohio, steel works, since 1980. It provides slag processing and steel mill services as well as aggregate materials sales.

This application is for modifying existing permits-to-install for the following emissions units: facility-wide roadways and parking areas, facility-wide storage piles, main BOF slag processing plant, blast furnace slag processing plant and mill scale plant.

3. Facility Emissions and Attainment Status:

The facility is currently operating as a support facility for Republic Engineered Products, which is major for particulate matter, carbon monoxide and nitrogen oxides.

This facility is located in Lorain County, which is designated as non-attainment for PM 2.5.

4. Source Emissions:

Existing permits-to-install were modified to include the installation of a plant roadway, generators and material handling equipment.

For the main BOF slag processing plant (F003), the applicant has agreed to maintain their existing restriction of 1,000,000 tons of slag processed in a 12-month rolling average, and add a new restriction for operating the generator to 3,432 hours, based on a 12-month rolling average.

For the blast furnace slag processing plant (F004), the applicant has agreed to the new restriction of 650,000 tons of slag processed in 12-month rolling average. This is an increase from the existing restriction of 460,500 tons, based on a 365-day rolling average.

For the mill scale plant (F005), the applicant has agreed to the new restriction of 200,000 tons of mill scale processed in 12-month rolling average, and a new restriction for operating the generator to 3,000 hours, based on a 12-month rolling average.

All emission units were re-evaluated for potential and actual emissions, using updated emission factors from US EPA AP42.

5. Conclusion:

With the use of updated US AP-42 emission factors and federally enforceable restrictions, this synthetic minor permit has terms and conditions to limit actual emissions below major source thresholds in the Prevention of Significant Deterioration (PSD) program and Nonattainment New Source Review (NSR) program.

- 6. Please provide additional notes or comments as necessary:
- 7. Total Permit Allowable Emissions Summary (for informational purposes only):

| <u>Pollutant</u> | <u>Tons Per Year</u> |
|------------------|----------------------|
| PE               | 54.1                 |
| PM10             | 26.3                 |

PUBLIC NOTICE  
Issuance of Draft Air Pollution Permit-To-Install  
Stein, Inc.

Issue Date: 4/26/2011  
Permit Number: P0106779  
Permit Type: OAC Chapter 3745-31 Modification  
Permit Description: Permit for modifying operations for the following emissions units: facility-wide roadways and parking areas, facility-wide storage piles, main BOF slag processing plant, blast furnace slag processing plant and mill scale plant.  
Facility ID: 0247080619  
Facility Location: Stein, Inc.  
1807 East 28th Street,  
Lorain, OH 44052  
Facility Description: Iron and Steel Mills

Scott J. Nally, Director of the Ohio Environmental Protection Agency, 50 West Town Street, Columbus Ohio, has issued a draft action of an air pollution control permit-to-install (PTI) for an air contaminant source at the location identified above on the date indicated. Installation of the air contaminant source may proceed upon final issuance of the PTI. Comments concerning this draft action, or a request for a public meeting, must be sent in writing no later than thirty (30) days from the date this notice is published. All comments, questions, requests for permit applications or other pertinent documentation, and correspondence concerning this action must be directed to Anthony Becker at Ohio EPA DAPC, Northeast District Office, 2110 East Aurora Road, Twinsburg, OH 44087 or (330)425-9171. The permit can be downloaded from the Web page: [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc)





**DRAFT**

**Division of Air Pollution Control  
Permit-to-Install  
for  
Stein, Inc.**

|                |                                   |
|----------------|-----------------------------------|
| Facility ID:   | 0247080619                        |
| Permit Number: | P0106779                          |
| Permit Type:   | OAC Chapter 3745-31 Modification  |
| Issued:        | 4/26/2011                         |
| Effective:     | To be entered upon final issuance |





Division of Air Pollution Control
Permit-to-Install
for
Stein, Inc.

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## Authorization

Facility ID: 0247080619  
Facility Description: Steel slag processing  
Application Number(s): A0040086  
Permit Number: P0106779  
Permit Description: Permit for modifying operations for the following emissions units: facility-wide roadways and parking areas, facility-wide storage piles, main BOF slag processing plant, blast furnace slag processing plant and mill scale plant.  
Permit Type: OAC Chapter 3745-31 Modification  
Permit Fee: \$4,100.00 *DO NOT send payment at this time, subject to change before final issuance*  
Issue Date: 4/26/2011  
Effective Date: To be entered upon final issuance

This document constitutes issuance to:

Stein, Inc.  
1807 East 28th Street  
Lorain, OH 44052

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

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

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

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the 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

Scott J. Nally  
Director



## Authorization (continued)

Permit Number: P0106779  
Permit Description: Permit for modifying operations for the following emissions units: facility-wide roadways and parking areas, facility-wide storage piles, main BOF slag processing plant, blast furnace slag processing plant and mill scale plant.

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

- Emissions Unit ID: F001**  
Company Equipment ID: Roads and Parking  
Superseded Permit Number: 19-092  
General Permit Category and Type: Not Applicable
- Emissions Unit ID: F002**  
Company Equipment ID: Storage Piles  
Superseded Permit Number: 19-092  
General Permit Category and Type: Not Applicable
- Emissions Unit ID: F003**  
Company Equipment ID: Main Plant  
Superseded Permit Number: 19-092  
General Permit Category and Type: Not Applicable
- Emissions Unit ID: F004**  
Company Equipment ID: BF Plant  
Superseded Permit Number: 02-7566  
General Permit Category and Type: Not Applicable
- Emissions Unit ID: F005**  
Company Equipment ID: Refuse Plant  
Superseded Permit Number: 02-7645  
General Permit Category and Type: Not Applicable



## **A. Standard Terms and Conditions**



## **1. Federally Enforceable Standard Terms and Conditions**

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
  - (1) Standard Term and Condition A.2.a), Severability Clause
  - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
  - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
  - (4) Standard Term and Condition A.9., Reporting Requirements
  - (5) Standard Term and Condition A.10., Applicability
  - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
  - (7) Standard Term and Condition A.14., Public Disclosure
  - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
  - (9) Standard Term and Condition A.16., Fees
  - (10) Standard Term and Condition A.17., Permit Transfers

## **2. Severability Clause**

- a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

## **3. General Requirements**

- a) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.

- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) 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 or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

#### **4. Monitoring and Related Record Keeping and Reporting Requirements**

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
  - (1) The date, place (as defined in the permit), and time of sampling or measurements.
  - (2) The date(s) analyses were performed.
  - (3) The company or entity that performed the analyses.
  - (4) The analytical techniques or methods used.
  - (5) The results of such analyses.
  - (6) The operating conditions existing at the time of sampling or measurement.
- b) 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.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
  - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Northeast District Office.
  - (2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, and (ii) operational restrictions.

and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Northeast District Office. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.

- (3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the Ohio EPA DAPC, Northeast District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
  - (4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

## 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, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Ohio EPA DAPC, Northeast District Office in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to 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 emission unit(s) that is (are) served by such control system(s).

## 6. Compliance Requirements

- a) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.
- b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

- (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
  - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- d) The permittee shall submit progress reports to the Ohio EPA DAPC, Northeast District Office concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
- (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

## **7. Best Available Technology**

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

## **8. 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.

## **9. Reporting Requirements**

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Northeast District Office.
- 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 state-only required 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 Ohio EPA DAPC, Northeast District Office. 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 (i.e., postmarked) quarterly, 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.)

## 10. 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).

## 11. Construction of New Sources(s) and Authorization to Install

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. 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 this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit 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.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. 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.
- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).
- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All



records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

## 12. Permit-To-Operate Application

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

## 13. Construction Compliance Certification

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

## 14. 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.

## 15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

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., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.



**16. 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 any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

**17. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in Air Services once the transfer is legally completed. The change must be submitted through Air Services within thirty days of the ownership transfer date.

**18. Risk Management Plans**

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

**19. Title IV Provisions**

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

## **B. Facility-Wide Terms and Conditions**

**Effective Date:** To be entered upon final issuance

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
  - a) None.

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



1. F001, Roads and Parking

Operations, Property and/or Equipment Description:

Facility-wide Roadways and Parking areas

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

|  | Applicable Rules/Requirements                                  | Applicable Emissions Limitations/Control Measures  |
|--|--|--|
| <b><i>(paved and unpaved roadways and parking areas)</i></b> |  |  |
| a.   | OAC rule 3745-31-05(A)(3)                                      | <p>Particulate emissions (PE) shall not exceed 7.1 tpy and particulate matter less than or equal to 10 microns in diameter (PM<sub>10</sub>) shall not exceed 2.1 tpy from unpaved roadways and parking areas.</p> <p>PE shall not exceed 2.2tpy and PM<sub>10</sub> shall not exceed 0.4tpy from paved roadways and parking areas.</p> <p>The permittee shall employ best available control measures that are sufficient to minimize or eliminate visible PE of fugitive dust. See b)(2)b through b)(2)g.</p> |
| <b><i>(unpaved roadways and parking areas)</i></b>           |  |  |
| b.   | OAC rule 3745-17-07(B)(8)(a)                                   | <p>Visible particulate emissions from any unpaved roadway or parking area shall not exceed 10 percent opacity.</p> <p>A data set shall consist of twelve observations based on four uninterrupted vehicle passes, three observations per vehicle pass.</p>   |
| c.   | OAC rules 3745-17-08(B), 3745-17-08(B)(2) and 3745-17-08(B)(7) | <p>The permittee shall employ reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. See b)(2)b through b)(2)g.</p>  |
| <b><i>(paved and unpaved roadways and parking areas)</i></b> |  |  |



|    | Applicable Rules/Requirements  | Applicable Emissions Limitations/Control Measures   |
|----|--|---|
| d. | OAC rule 3745-17-07(B)(8)(a)   | Visible particulate emissions from any paved roadway or parking area shall not exceed 10 percent opacity.<br><br>A data set shall consist of twelve observations based on four uninterrupted vehicle passes, three observations per vehicle pass. |
| e. | OAC rules 3745-17-08(B), 3745-17-08(B)(7), 3745-17-08(B)(8) and 3745-17-08(B)(9) | The permittee shall employ reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. See b)(2)b, b)(2)c and b)(2)e through b)(2)g.   |

(2) Additional Terms and Conditions

a. The unpaved and paved roadways and parking areas that are covered by this permit and subject to the requirements of OAC rules 3745-17-07, 3745-17-08 and 3745-31-05 are listed below:

unpaved roadways:

- i. main plant road
- ii. east plant road
- iii. roadways in and around main BOF processing plant
- iv. roadways in and around main BF processing plant
- v. roadways in and around Mill scale processing plant
- vi. roadways around all storage piles

unpaved parking areas:

- i. parking lot by the office
- ii. parking lot by main BOF processing plant
- iii. parking lot by main BF processing plant
- iv. parking lot by Mill scale processing plant
- v. parking lot by east plant area

paved roadways:

- vi. main plant road
- vii. east plant entrance

paved parking areas:

- viii. parking lot by the office

b. The permittee shall employ best available control measures on all unpaved roadways and parking areas and 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 unpaved roadways and parking areas and

paved roadways and parking areas with water and/or any other suitable dust suppression chemicals at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

- 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 or a paved roadway and 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.
- 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 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).
- 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. Any material carried off of the permittee's property and deposited onto public streets by vehicular traffic or by erosion by water, etc., shall be promptly removed and disposed of properly to minimize or prevent resuspension.
- f. 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.
- g. Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit are appropriate and sufficient to satisfy the requirements of OAC rules 3745-17-08 and 3745-31-05.

c) Operational Restrictions

- (1) None

d) Monitoring and/or Recordkeeping Requirements

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

unpaved roadways:

all

minimum inspection frequency:

from May 1 to September 30: daily, when in use  
from October 1 to April 30: weekly, when in use

unpaved parking areas:

all

minimum inspection frequency:

from May 1 to September 30: daily, when in use  
from October 1 to April 30: weekly, when in use

paved roadways:

all

minimum inspection frequency:

from May 1 to September 30: daily, when in use  
from October 1 to April 30: weekly, when in use

paved parking areas:

all

minimum inspection frequency:

from May 1 to September 30: daily, when in use  
from October 1 to April 30: weekly, when in use

- (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 Ohio EPA, 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, 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 d)(4)d shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) 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 quarterly deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

f) Testing Requirements

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

a. Emission Limitation:

Visible particulate emissions from any unpaved roadway or parking area shall not exceed 10 percent opacity.

Visible particulate emissions from any paved roadway or parking area shall not exceed 10 percent opacity.

Applicable Compliance Method:

If required, compliance with the limitations for visible emissions of fugitive dust shall be demonstrated based upon visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(3)(d).

b. Emission Limitation:

PE shall not exceed 7.1 tpy and PM<sub>10</sub> shall not exceed 2.1 tpy from unpaved roadways and parking areas.

Applicable Compliance Method:

Compliance shall be determined by using the following equation:

$$EF = k \left[ \left( \frac{s}{12} \right)^a \right] x \left[ \left( \frac{W}{3} \right)^b \right] x \left[ \frac{(365 - P)}{365} \right] \quad \boxed{\text{AP-42 section 13.2.2., Eq. 2 (11/06)}}$$

where:

EF = annual sized-specific emission factor, lb/VMT;  
 k = (empirical constants, lb/VMT), TSP = 4.9, PM<sub>10</sub> = 1.5;  
 s = surface material silt content (%), s = 10.2%;

W = mean vehicle weight (tons), W = 33 tons;  
 a = (empirical constants), TSP = 0.7, PM10 = 0.9;  
 b = (empirical constants), TSP = 0.45, PM10 = 0.45; and  
 P = number of days with > 0.01 in. of precipitation, 158 (avg CY 2008 and 2009 at KLPR).

$$EF(PE) = 4.9 \times \left[ \left( \frac{10.2}{12} \right)^{0.7} \times \left( \frac{33}{3} \right)^{0.45} \right] \times \left[ 1 - \frac{158}{365} \right] = 7.3 \text{ lbs} \frac{PE}{VMT}$$

$$EF(PM10) = 1.5 \times \left[ \left( \frac{10.2}{12} \right)^{0.9} \times \left( \frac{33}{3} \right)^{0.45} \right] \times \left[ 1 - \frac{158}{365} \right] = 2.2 \text{ lbs} \frac{PM10}{VMT}$$

The calculated emission factor (EF) shall be multiplied by the total miles traveled (in miles/yr), and by applying a control efficiency of 80% for the application of water (1 - 0.80) and divided by 2,000 lbs/ton, annual estimated emissions shall be calculated as follows:

$$\text{Annual emissions (PE)} = \left( 7.3 \frac{\text{lbs}}{\text{mi}} \right) \times \left( \frac{\text{miles}}{\text{yr}} \right) \times (1 - 0.80) \times \left( \frac{1}{2000} \right)$$

$$\text{Annual emissions (PM10)} = \left( 2.2 \frac{\text{lbs}}{\text{mi}} \right) \times \left( \frac{\text{miles}}{\text{yr}} \right) \times (1 - 0.80) \times \left( \frac{1}{2000} \right)$$

c. Emission Limitation:

PE shall not exceed 2.2 tpy and PM<sub>10</sub> shall not exceed 0.4 tpy from paved roadways and parking areas.

Applicable Compliance Method:

Compliance shall be determined by using the following equation:

$$EF = [k \times (sL)^{0.91} \times (W)^{1.02}] \times \left[ 1 - \frac{P}{4N} \right] \quad \boxed{\text{(AP-42 section 13.2.1., Eq. 2(1/11))}}$$

where:

EF = annual sized-specific emission factor, lb/VMT;

k = (empirical constants, lb/VMT), PE = 0.011, PM10 = 0.0022;

sL = road silt loading content (%), sL = 9.7%;

W = mean vehicle weight (tons), W = 33 tons;

P = number of days with > 0.01 in. of precipitation, 158 (avg CY 2008 and 2009 at KLPR); and

N = number of days in the averaging period, 365.

$$EF(PE) = [0.011 \times (9.7)^{0.91} \times (33)^{1.02}] \times \left[ 1 - \frac{158}{4 \times 365} \right] = 2.7 \text{ lbs} \frac{PE}{VMT}$$

$$EF(PM10) = [0.0022 \times (9.7)^{0.91} \times (33)^{1.02}] \times \left[1 - \frac{158}{4 \times 365}\right] = 0.55 \text{ lbs} \frac{PM10}{VMT}$$

The calculated emission factor (EF) shall be multiplied by the total miles traveled (in miles/yr), and by applying a control efficiency of 80% for the application of water (1 - 0.80) and divided by 2,000 lbs/ton, annual estimated emissions shall be calculated as follows:

$$\text{Annual emissions (PE)} = \left(2.7 \frac{\text{lbs}}{\text{mi}}\right) \times \left(\frac{\text{miles}}{\text{yr}}\right) \times (1 - 0.80) \times \left(\frac{1}{2000}\right)$$

$$\text{Annual emissions (PM10)} = \left(0.55 \frac{\text{lbs}}{\text{mi}}\right) \times \left(\frac{\text{miles}}{\text{yr}}\right) \times (1 - 0.80) \times \left(\frac{1}{2000}\right)$$

g) Miscellaneous Requirements

(1) None.



2. F002, Storage Piles

Operations, Property and/or Equipment Description:

Facility-wide Storage Piles

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

|  | Applicable Rules/Requirements                | Applicable Emissions Limitations/Control Measures   |
|--|--|---|
| <b>load-in and load-out of storage piles, wind erosion of storage piles and truck loading operations (loading materials in trucks)</b> |  |   |
| a.   | OAC rule 3745-31-05(A)(3)                    | Particulate emissions (PE) shall not exceed 32 tpy and particulate matter less than or equal to 10 microns in diameter (PM <sub>10</sub> ) shall not exceed 19 tpy from load-in and load-out of storage piles, wind erosion of storage piles and truck loading operations.<br><br>The permittee shall employ best available control measures that are sufficient to minimize or eliminate visible PE of fugitive dust. See b)(2)a through b)(2)i. |
| <b>load-in and load-out of storage piles, and wind erosion of storage piles</b>  |  |   |
| b.   | OAC rule 3745-17-07(B)(8)(b)                 | Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average. (load-in and load-out from storage piles)  |
| c.   | OAC rule 3745-17-07(B)(8)(d)                 | Visible emissions of fugitive dust from wind erosion shall not exceed 10% opacity as a 3-minute average. (wind erosion from storage piles)  |
| d.   | OAC rules 3745-17-08(B) and 3745-17-08(B)(6) | The permittee shall employ reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. See b)(2)a through b)(2)d and b)(2)i.   |
| <b>storage piles (pile working operations on top of storage piles, including compacting, grading or transporting materials)</b>        |  |   |



|   | Applicable Rules/Requirements                | Applicable Emissions Limitations/Control Measures   |
|---|--|---|
| e.  | OAC rule 3745-17-07(B)(8)(c)                 | Visible emissions of fugitive dust from the operation of vehicles on top of any material storage pile, including compacting, grading or transporting materials shall not exceed 10 percent opacity as a 3-minute average.<br><br>A data set shall consist of twelve observations based on four uninterrupted vehicle passes, three observations per vehicle pass. |
| f.  | OAC rules 3745-17-08(B) and 3745-17-08(B)(6) | The permittee shall employ reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. See b)(2)e through b)(2)f and b)(2)i.   |
| <b>truck loading operations (loading materials in trucks)</b> |  |   |
| g.  | OAC rule 3745-17-07(B)(8)(b)                 | Visible emissions of fugitive dust from this emissions unit shall not exceed 20% opacity as a 3-minute average. (truck loading operations: loading materials in trucks)   |
| h.  | OAC rule 3745-17-08(B)                       | The permittee shall employ reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust. See b)(2)g through b)(2)i.  |

(2) Additional Terms and Conditions

- a. 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 application, the permittee has committed to maintain minimal drop heights for stackers and front-loaders, and chemical stabilization/dust suppressants and/or watering/sprinkling systems at sufficient treatment frequencies to ensure compliance.

The operator shall avoid dragging any front-end loader bucket along the ground. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

- b. The above-mentioned control measure(s) shall be employed for each load-in and load-out operation of each storage pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-

mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during any such operation until further observation confirms that use of the measure(s) is unnecessary.

- c. The 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 application, the permittee has committed to perform one or more of the following: watering/sprinkling systems/ to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- 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.
- e. The permittee shall employ best available control measures on all working operations on top of storage piles for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's application, the permittee has committed to employ precautionary operating practices and/or treat the pile working operations with watering at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- f. The above-mentioned control measure(s) shall be employed for working operations on top of each storage piles 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.
- g. The permittee shall employ best available control measures on all truck loading operations for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's application, the permittee has committed to maintain minimal drop heights for front-loaders to ensure compliance.

The operator shall avoid dragging any front-end loader bucket along the ground. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.

- h. The above-mentioned control measure(s) shall be employed for each truck loading operation 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.

- i. Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit are appropriate and sufficient to satisfy the requirements of OAC rules 3745-17-08 and 3745-31-05.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) Except as otherwise provided in this section, the permittee shall perform inspections of each load-in operation at each storage pile in accordance with the following frequencies:

storage pile identification

minimum load-in inspection frequency

all, including surge piles

from May 1 to September 30: daily, when operating  
from October 1 to April 30: weekly, when operating

- (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:

storage pile identification

minimum load-out inspection frequency

all, including surge piles

from May 1 to September 30: daily, when operating  
from October 1 to April 30: weekly, when operating

- (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:

storage pile identification

minimum wind erosion inspection frequency

all, including surge piles

from May 1 to September 30: daily, when operating  
from October 1 to April 30: weekly, when operating

- (4) Except as otherwise provided in this section, the permittee shall perform inspections of working operations on top of each storage piles (compacting, grading or transporting materials) in accordance with the following frequencies:

storage pile identification:

minimum working pile inspection frequency:

all, including surge piles

from May 1 to September 30: daily, when operating  
from October 1 to April 30: weekly, when operating

- (5) Except as otherwise provided in this section, the permittee shall perform inspections of loading materials in trucks at each truck loading area in accordance with the following frequencies:

truck loading area identification

minimum truck loading inspection frequency

all

from May 1 to September 30: daily, when operating  
from October 1 to April 30: weekly, when operating

- (6) 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.

- (7) 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, wind erosion from the surface of a storage pile, working pile operations, and truck loading (loading materials into trucks). The inspections shall be performed during representative, normal storage pile operating conditions.

- (8) 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).

- (9) The information required in d)(8)d shall be kept separately for (i) the load-in operations, (ii) the load-out operations, (iii) the pile surfaces (wind erosion), (iv) working pile operations, and (v) truck loading operations and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

e) Reporting Requirements

- (1) The permittee shall submit quarterly 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.
- (2) The deviation reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

f) Testing Requirements

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

a. Emission Limitation (load-in and load-out operation of storage piles):

Visible emissions of fugitive dust shall not exceed 20% opacity as a 3-minute average. (load-in and load-out from storage piles)

Visible emissions of fugitive dust from wind erosion shall not exceed 10% opacity as a 3-minute average. (wind erosion from storage piles)

Visible emissions of fugitive dust from the operation of vehicles on top of any material storage pile, including compacting, grading or transporting materials shall not exceed 10 percent opacity as a 3-minute average.

Visible emissions of fugitive dust from this emissions unit shall not exceed 20% opacity as a 3-minute average. (truck loading operations: loading materials in trucks)

Applicable Compliance Method:

If required, compliance with the limitations for visible emissions of fugitive dust shall be demonstrated based upon visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(3)(d).

b. Emission Limitation:

PE shall not exceed 32 tpy and PM<sub>10</sub> shall not exceed 19 tpy from load-in and load-out of storage piles, wind erosion of storage piles and truck loading operations.

Applicable Compliance Method:

Compliance shall be demonstrated by applying the emission factors from AP-42, Section 13.2.4 (11/06) and US EPA document "Control of Open Fugitive Dust" (9/88) as follows:

$$E(TPY) = \left(\frac{1}{2000}\right) \times \sum_i^n EF \times PWR \times \left(1 - \frac{ER}{100}\right) + \left(\frac{1}{2000}\right) \times \sum_j^m EF(2) \times Acres \times Duration \times \left(1 - \frac{ER}{100}\right)$$

where:

E = emission rate (TPY), summation of emissions from all load-in, load-out operations, truck loading and wind erosion;

i = each storage pile operation type (i.e., load-in, load-out and truck loading);

n = number of storage pile operation types;

PWR = process weight rate, in tons per year, for each storage pile operation type (i.e., load-in, load-out and truck loading);

ER = overall emission reduction efficiency, in % (ER = 80%);

EF = emission factor from AP-42, in lb/ton, for each storage pile operation type;

EF(2) = emission factor for wind erosion from USEPA, "Control of Open Fugitive Dust", in lb/day/acre, for each storage pile;

Acres = size of storage pile, in acres;

Duration = average time of each material stored, in days;

j = each storage pile, acres of each pile and duration of each materials stored; and

m = number of storage piles.

EFs are listed below:

$$i. \quad EF = k(0.0032) \left[ \frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}} \right]$$

AP-42, section 13.2.4, Eq 1,  
(load-inoperations)

where:

EF = emission factor, for load-in operations, (lb/ton);

k = particle size multiplier for particulate (dimensionless): TSP = 0.74 and PM<sub>10</sub> = 0.35;

U = mean wind speed, mph = 10.8; and

M = material moisture content.

$$ii. \quad EF = k(0.0032) \left[ \frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}} \right]$$

AP-42, section 13.2.4, Eq 1,  
(load-outoperations)

where:

EF = emission factor, for load-out operations, (lb/ton);

k = particle size multiplier for particulate (dimensionless): TSP = 0.74 and PM<sub>10</sub> = 0.35;

U = mean wind speed, mph = 10.8; and

M = material moisture content.

$$iii. \quad EF = k(0.0032) \left[ \frac{\left(\frac{U}{5}\right)^{1.3}}{\left(\frac{M}{2}\right)^{1.4}} \right]$$

AP-42, section 13.2.4, Eq 1,  
(truck loading)

where:

EF = emission factor, for load-out operations, (lb/ton);

k = particle size multiplier for particulate (dimensionless): TSP = 0.74 and PM<sub>10</sub> = 0.35;

U = mean wind speed, mph = 10.8; and

M = material moisture content.

iv. 
$$EF(2) = 1.7 \left[ \left( \frac{s}{1.5} \right) \left( \frac{365-p}{235} \right) \left( \frac{f}{15} \right) \right]$$

USEPA, Control of Open Fugitive Dust Sources, 9/88, (wind erosion of storage piles)

where:

EF(2) = emission factor, for wind erosion (lb/day/acre);

s = surface material silt content, in %;

p = number of days with > 0.01 in. of precipitation, p = 158;

f = percentage of time that the unobstructed wind speed exceeds 12 mph at the mean height, % f = 30; and

50.0% TSP = PM<sub>10</sub>.

g) Miscellaneous Requirements

- (1) None.



3. F003, Main Plant

Operations, Property and/or Equipment Description:

Main BOF Slag Processing Plant

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

|  | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures  |
|--|-------------------------------|--|
| <b><i>(Main BOF slag processing plant)</i></b>     |                               |  |
| a.   | OAC rule 3745-31-05(D)        | Particulate emissions (PE) shall not exceed 7.5 tons per rolling, 12-month period.<br><br>Particulate matter less than or equal to 10 micrometers in diameter (PM <sub>10</sub> ) shall not exceed 3.2tons per rolling, 12-month period.<br><br>See c)(3). |
| b.   | OAC rule 3745-31-05(A)(3)     | The permittee shall employ best available control measures that are sufficient to minimize or eliminate visible PE and PM <sub>10</sub> of fugitive dust. See b)(2)b through b)(2)d.   |
| c.   | OAC rule 3745-17-07(B)(1)     | Visible emissions of fugitive dust shall not exceed 20 percent opacity, as a 3-minute average.   |
| d.   | OAC rule 3745-17-08(B)        | The permittee shall employ reasonably available control measures that are sufficient to minimize or eliminate visibleemissions of fugitive dust from this emissions unit. See b)(2)b through b)(2)d.   |
| <b><i>(450 HP diesel electrical generator)</i></b> |                               |  |
| e.   | OAC rule 3745-31-05(D)        | Nitrogen oxides (NO <sub>x</sub> ) emissions shall not exceed 13.95lbs/hr and 24 tons per rolling, 12-month period.<br><br>Carbon monoxide (CO) emissions shall  |



|    | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures   |
|----|-------------------------------|---|
|    |                               | <p>not exceed 3.01lbs/hr and 5.2tons per rolling, 12-month period.</p> <p>Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 0.92lb/hr and 1.6tons per rolling, 12-month period.</p> <p>Organic compound (OC) emissions shall not exceed 1.13lbs/hr and 2tons per rolling, 12-month period.</p> <p>PE (PE = PM<sub>10</sub>) shall not exceed 0.99lb/hr and 1.7tons per rolling, 12-month period.</p> <p>See c)(2).</p> |
| f. | OAC rule 3745-31-05(D)        | The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1) and 3745-17-11(B)(5)(a).  |
| g. | OAC rule 3745-17-07(A)(1)     | Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a 6-minute average, except as provided by the rule.  |
| h. | OAC rule 3745-17-11(B)(5)(a)  | PE shall not exceed 0.310 pound per million Btu of actual heat input.   |
| i. | OAC rule 3745-18-06(F)        | Exempt in accordance with OAC rule 3745-18-06(B).   |

(2) Additional Terms and Conditions

- a. The material handling operation(s) that are covered by this permit and subject to the above-mentioned requirements are listed below:
  - i. Grizzly feeder
  - ii. Crusher
  - iii. Screens
  - iv. Conveyors and associated transfer points
  - v. Slag pits: load-in and load-out operations
  - vi. Dropping cooled slag into pots ("slagging or cushioning")
- b. The permittee shall employ reasonably available control measures for the above-identified material handling operation(s) 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 measure(s) to ensure compliance:



Material handling operations:

Grizzly feeder, crusher, screens, conveyors and associated transfer points

Control measures:

Minimize drop heights at grizzly feeder and apply sufficient water, as needed, to control dust

Material handling operations:

“slagging or cushioning” of pots

Control measures:

Minimize drop heights

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

- c. For each material handling operation that is not adequately enclosed, the above-identified control measure shall be implemented if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure is necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure shall continue during the operation of the material handling operations until further observation confirms that use of the control measure is unnecessary.
- d. Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit are appropriate and sufficient to satisfy the requirements of OAC rules 3745-17-08 and 3745-31-05.

c) Operational Restrictions

- (1) The permittee shall burn only diesel fuel in the electrical generator for this emissions unit.
- (2) The diesel electrical generator shall operate at a maximum of 3,432 hours per rolling, 12-month period.
- (3) The permittee shall not process more than 1,000,000 tons of slag per rolling, 12-month period.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than diesel, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) Except as otherwise provided in this section, for material handling operations that are not adequately enclosed, the permittee shall perform inspections of such operations in accordance with the following minimum frequencies:

| <u>Material handling operation(s)</u> | <u>Minimum inspection frequency</u> |
|---------------------------------------|-------------------------------------|
| Grizzly feeder                        | daily, when operating               |



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|  |                       |
|--|-----------------------|
| Crusher                                    | daily, when operating |
| Screens                                    | daily, when operating |
| Conveyers and associated transfer points   | daily, when operating |
| Slag pits: load-in and load-out operations | daily, when operating |
| “Slagging or cushioning” of pots           | daily, when operating |

- (3) The above-mentioned inspections shall be performed during representative, normal operating conditions.
- (4) 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.
- (5) 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 d)(4)d shall be kept separately for each material handling operation identified above, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

- (6) The permittee shall maintain monthly records of the following information:
  - a. the hours of operation of the diesel electrical generator, in hours per month; and
  - b. the rolling, 12-month summation of hour of operation of the diesel electrical generator, calculated by adding the current month's operating hour to the preceding eleven calendar months.
- (7) The permittee shall maintain monthly records of the following information:
  - a. the amount of slag processed, in tons per month; and
  - b. the rolling, 12-month summation of slag processed, calculated by adding the current month's ton of slag processed to the preceding eleven calendar months.

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than diesel was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

- (2) 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; and
  - b. each instance when a control measure, that was to be performed as a result of an inspection, was not implemented.

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

- (3) The permittee shall submit deviation reports that identify any of the following occurrences:
  - a. identify the actual hours of operation each month and when the hours of operation of the diesel electrical generator exceeded the operating restriction of 3,432 hours per rolling, 12-month period; and
  - b. identify the actual amount of slag processed each month and when the slag processed exceeded the throughput restriction of 1,000,000 tons per rolling, 12-month period.

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

f) **Testing Requirements**

- (1) Compliance with the emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation (Main BOF slag processing plant):

PE shall not exceed 7.5 tons per rolling, 12-month period.

PM<sub>10</sub> shall not exceed 3.2 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated by applying the emission factors from AP-42, Section 11.19.2 (Crushed Stone Processing and Pulverized Mineral Processing, 8/04) and Section 13.2.4, Eqn. 1 (load-in and load-out operations, 11/06) as follows:

$$E(TPY) = \left(\frac{1}{2000}\right) \times \sum_i^n EF \times PWR \times \left(1 - \frac{ER}{100}\right)$$

where:

E = emission rate (TPY), summation of emissions from all operations listed in b)(2)a;

i = operation type;

n = number of operations;

PWR = process weight rate, in tons per rolling, 12-month period, for each operation type listed in b)(2)a;

ER = overall emission reduction efficiency, in %, for each operation type listed in b)(2)a; and

EF = emission factor from AP-42, in lb/ton, for each operation type listed in b)(2)a. EFs are listed below:

- i. EF = 0.0191 PM, 0.00904 PM<sub>10</sub>, (dumping slag in pits)  
Section 13.2.4, Eqn. 1  
where U=10.8 mph and M=0.92% moisture content  
ER = 50%
- ii. EF = 0.0024 PM, 0.00115 PM<sub>10</sub>, (load-out at pits)  
Section 13.2.4, Eqn. 1  
where U=10.8 mph and M=4.0% moisture content  
ER = 80%
- iii. EF = 0.0024 PM, 0.00115 PM<sub>10</sub>, (load-in at Grizzley)  
Section 13.2.4, Eqn. 1  
where U=10.8 mph and M=4.0% moisture content  
ER = 80%
- iv. EF = 0.0012 PM, 0.00054 PM<sub>10</sub>, Table 11.19.2-2 (each crusher)  
ER = 0%
- v. EF = 0.00014 PM, 0.000046 PM<sub>10</sub>, Table 11.19.2-2 (each conveyor transfer point)  
ER = 0%
- vi. EF = 0.0022 PM, 0.00074 PM<sub>10</sub>, Table 11.19.2-2 (each screen)  
ER = 0%

EFs for crushing, conveyor transfer points and screening are based on controlled emissions. Therefore, each ER will be equal to zero (0) for those material handling operation types, when using the above equation for calculating emissions.

There are not separate EFs (PM and PM<sub>10</sub>) for "Slagging or cushioning". Those emissions are included with the above EFs for "dumping slag in pits".

b. Emission Limitation (Main BOF slag processing plant):

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

Applicable Compliance Method:

If required, compliance with the limitations for visible emissions of fugitive dust shall be demonstrated based upon visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(3).

c. Emission Limitations (450 HP diesel generator):

NO<sub>x</sub> emissions shall not exceed 13.95lbs/hr and 24 tons per rolling, 12-month period.

CO emissions shall not exceed 3.01lbs/hr and 5.2tons per rolling, 12-month period.

SO<sub>2</sub> emissions shall not exceed 0.92lb/hr and 1.6tons per rolling, 12-month period.

OC emissions shall not exceed 1.13lbs/hr and 2tons per rolling, 12-month period.

PE (PE = PM<sub>10</sub>) shall not exceed 0.99lb/hr and 1.7tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated by applying the emission factors from AP-42, Section 3.3, for "Gasoline and Diesel Industrial Engines", found in Table 3.3-1 as follows:

$$E = EF \times 450\text{hp}$$

where:

E = emission rate (pounds per hour); and

EF = emission factors from AP-42, Fifth edition, Section 3.3 for "Gasoline and Diesel Industrial Engines", 10/96, Table 3.3-1 and are listed below:

- i. 0.031 lb/hp-hr NO<sub>x</sub>
- ii. 0.00668 lb/hp-hr CO
- iii. 0.00205 lb/hp-hr SO<sub>2</sub>
- iv. 0.00251 lb/hp-hr OC
- v. 0.0022 lb/hp-hr PE

450 hp = power output (hp)

Each type emission limitation was developed by multiplying the short-term allowable emission limitation, in lbs/hr, by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

d. Emission Limitations (450 HP diesel generator):

PE shall not exceed 0.310 pound per million Btu of actual heat input.

Applicable Compliance Method:

The particulate emission limitation for this emissions unit has been established using the emission factor of 0.0022 pound/hp-hr or 0.310 pound/MMBtu, as outlined in AP-42, Section 3.3 for "Gasoline and Diesel Industrial Engines", Table 3.3-1; and this limit is also set by rule.

e. Emission Limitation (450 HP diesel generator):

Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance with the limitation for visible particulate emissions shall be demonstrated based upon visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(1).

g) **Miscellaneous Requirements**

(1) None.



4. F004, BF Plant

Operations, Property and/or Equipment Description:

Blast Furnace Slag Processing Plant

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

|    | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures  |
|----|-------------------------------|--|
| a. | OAC rule 3745-31-05(D)        | Particulate emissions (PE) shall not exceed 1.2ton per rolling, 12-month period.<br><br>Particulate Matter less than or equal to 10 micrometers in diameter (PM <sub>10</sub> ) shall not exceed 0.9 ton per rolling, 12-month period.<br><br>See c)(1).                                   |
| b. | OAC rule 3745-31-05(A)(3)     | Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 6-minute average.<br><br>The permittee shall employ best available control measures that are sufficient to minimize or eliminate visible PE and PM <sub>10</sub> of fugitive dust. See b)(2)b through b)(2)d. |
| c. | OAC rule 3745-17-07(B)(1)     | The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).   |
| d. | OAC rule 3745-17-08(B)        | They permittee shall employ reasonably available control measures that are sufficient to minimize or eliminate visibleemissions of fugitive dust from this emissions unit. See b)(2)b through b)(2)d.  |

(2) Additional Terms and Conditions

- a. The operation(s) that are covered by this permit and subject to the above-mentioned requirements are listed below:
  - i. Grizzly feeder
  - ii. Crushers
  - iii. Screens
  - iv. Conveyors and associated transfer points

- b. The permittee shall employ best available control measures for the above-identified operations for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the submitted permit application, the permittee has committed to perform the following control measure to ensure compliance:

Operations:

Grizzly feeder, crushers, screens, conveyors and associated transfer points

Control measures:

Minimize drop heights at grizzly feeder and apply sufficient water, as needed, to control dust

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

- c. For each operation that is not adequately enclosed, the above-identified control measure(s) shall be implemented at all times during operation. If the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that additional control measure(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements, such additional control measures shall be implemented immediately. Any required implementation of the additional control measure(s) shall continue during operation until further observation confirms that use of these additional control measure(s) is unnecessary.
- d. Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit are appropriate and sufficient to satisfy the requirements of OAC rules 3745-17-08 and 3745-31-05.

c) Operational Restrictions

- (1) The permittee shall not process more than 650,000 tons of slag per rolling, 12-month period.

d) Monitoring and/or Recordkeeping Requirements

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



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| <u>Operation(s)</u>                      | <u>Minimum inspection frequency</u> |
|--|-------------------------------------|
| Grizzley feeder                          | daily, when operating               |
| Crushers                                 | daily, when operating               |
| Screens                                  | daily, when operating               |
| Conveyers and associated transfer points | daily, when operating               |

- (2) The above-mentioned inspections shall be performed during representative, normal operating conditions.
- (3) 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.
- (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 d)(4)d shall be kept separately for each operation identified above, and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

- (5) The permittee shall maintain monthly records of the following information:
  - a. the amount of slag processed, in tons per month; and
  - b. the rolling, 12-month summation of slag processed, calculated by adding the current month's tons of slag processed to the preceding eleven calendar months.

e) 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; and
  - b. each instance when a control measure, that was to be performed as a result of an inspection, was not implemented.

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

- (2) The permittee shall submit deviation reports that identify any of the following occurrences:
  - a. identify the actual amount of slag processed each month and when the slag processed exceeded the throughput restriction of 650,000 tons per rolling, 12-month period.

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

f) Testing Requirements

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

- a. Emission Limitation (Main BF slag processing plant):

PE shall not exceed 1.2 ton per rolling, 12-month period.

PM<sub>10</sub> shall not exceed 0.9 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated by applying the emission factors from AP-42, Section 11.19.2 (Crushed Stone Processing and Pulverized Mineral Processing, 8/04) and Section 13.2.4, Eqn. 1 (load-in and load-out operations, 11/06) as follows:

$$E(TPY) = \left(\frac{1}{2000}\right) \times \sum_i^n EF \times PWR \times \left(1 - \frac{ER}{100}\right)$$

where:

E = emission rate (TPY), summation of emissions from all operations listed in b)(2)a;

i = operation type;

n = number of operations;

PWR = process weight rate, in tons per rolling, 12-month period, for each operation type listed in b)(2)a;

ER = overall emission reduction efficiency, in %, for each operation type listed in b)(2)a; and

EF=emission factor from AP-42, in lb/ton, for each operation type listed in b)(2)a.  
EFs are listed below:

- i. EF = 0.0024 PM, 0.00115 PM<sub>10</sub>, (load-in at Grizzley)  
Section 13.2.4, Eqn. 1  
where U=10.8 mph and M=4.0% moisture content  
ER = 80%
- ii. EF = 0.0012 PM, 0.00054PM<sub>10</sub>, Table 11.19.2-2 (each crusher)  
ER = 0%
- iii. EF = 0.00014 PM, 0.000046 PM<sub>10</sub>, Table 11.19.2-2 (each conveyor  
transfer point)  
ER = 0%
- iv. EF = 0.0022 PM, 0.00074 PM<sub>10</sub>, Table 11.19.2-2 (each screen)  
ER = 0%

EFs for crushing, conveyor transfer points and screening are based on controlled emissions. Therefore, each ER will be equal to zero (0) for those material handling operation types, when using the above equation for calculating emissions.

b. Emission Limitation (Main BF slag processing plant):

Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 6-minute average.

Applicable Compliance Method:

If required, compliance with the limitation for visible particulate emissions shall be demonstrated based upon visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

g) Miscellaneous Requirements

- (1) None.



5. F005, Refuse Plant

Operations, Property and/or Equipment Description:

Mill Scale Plant, including grit operation

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

|   | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures  |
|---|-------------------------------|--|
| <b><i>(Mill scale processing plant, including grit operation)</i></b> |                               |  |
| a.  | OAC rule 3745-31-05(D)        | Particulate emissions (PE) shall not exceed 0.3ton per rolling, 12-month period.<br><br>Particulate Matter less than or equal to 10 micrometers in diameter (PM <sub>10</sub> ) shall not exceed 0.1ton per rolling, 12-month period.<br><br>See c)(2).                                    |
| b.  | OAC rule 3745-31-05(A)(3)     | Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 6-minute average.<br><br>The permittee shall employ best available control measures that are sufficient to minimize or eliminate visible PE and PM <sub>10</sub> of fugitive dust. See b)(2)b through b)(2)d. |
| c.  | OAC rule 3745-17-07(B)(1)     | The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).   |
| d.  | OAC rule 3745-17-08(B)        | The permittee shall employ reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust from this emissions unit. See b)(2)b through b)(2)d.  |
| <b><i>(320 HP diesel generator)</i></b>                               |                               |  |



|    | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures   |
|----|-------------------------------|---|
| e. | OAC rule 3745-31-05(D)        | <p>Nitrogen oxides (NO<sub>x</sub>) emissions shall not exceed 9.92lbs/hr and 15 tons per rolling, 12-month period.</p> <p>Carbon monoxide (CO) emissions shall not exceed 2.14lbs/hr and 3.2 tons per rolling, 12-month period.</p> <p>Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 0.66lb/hr and 1 ton per rolling, 12-month period.</p> <p>Organic compound (OC) emissions shall not exceed 0.8 lb/hr and 1.2 tons per rolling, 12-month period.</p> <p>PE (PE = PM<sub>10</sub>) shall not exceed 0.7lb/hr and 1.1 tons per rolling, 12-month period.</p> <p>See c)(3).</p> |
| f. | OAC rule 3745-31-05(A)(3)     | The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A)(1) and 3745-17-11(B)(5)(a).  |
| g. | OAC rule 3745-17-07(A)(1)     | Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a 6-minute average, except as provided by the rule.  |
| h. | OAC rule 3745-17-11(B)(5)(a)  | PE shall not exceed 0.310 pound per million Btu of actual heat input.   |
| i. | OAC rule 3745-18-06(F)        | Exempt in accordance with OAC 3745-18-06(B).  |

(2) Additional Terms and Conditions

- a. The operation(s) that are covered by this permit and subject to the above-mentioned requirements are listed below:
  - i. Grizzley feeder
  - ii. Screen
  - iii. Conveyors and associated transfer points
  
- b. The permittee shall employ best available control measures for the above-identified operations for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the submitted permit application, the permittee has committed to perform the following control measure to ensure compliance:



Operations:

Grizzly feeder, screen, conveyors and associated transfer points

Control measures:

Minimize drop heights at grizzly feeder and apply sufficient water, as needed, to control dust

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

- c. For each operation that is not adequately enclosed, the above-identified control measure(s) shall be implemented at all times during operation. If the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that additional control measure(s) is (are) necessary to ensure compliance with the above-mentioned applicable requirements, such additional control measures shall be implemented immediately. Any required implementation of the additional control measure(s) shall continue during operation until further observation confirms that use of these additional control measure(s) is unnecessary.
- d. Implementation of the above-mentioned control measure(s) in accordance with the terms and conditions of this permit are appropriate and sufficient to satisfy the requirements of OAC rules 3745-17-08 and 3745-31-05.

c) Operational Restrictions

- (1) The permittee shall burn only diesel fuel in this emissions unit.
- (2) The permittee shall not process more than 200,000 tons of mill scale per rolling, 12-month period.
- (3) The diesel electrical generator shall operate at a maximum of 3,000 hours per rolling, 12-month period.

d) Monitoring and/or Recordkeeping Requirements

- (1) For each day during which the permittee burns a fuel other than diesel, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (2) Except as otherwise provided in this section, for operations that are not adequately enclosed, the permittee shall perform inspections of such operations in accordance with the following minimum frequencies:

| <u>Operation(s)</u>                      | <u>Minimum inspection frequency</u> |
|--|-------------------------------------|
| Grizzly feeder                           | daily, when operating               |
| Screen                                   | daily, when operating               |
| Conveyors and associated transfer points | daily, when operating               |

- (3) The above-mentioned inspections shall be performed during representative, normal operating conditions.

- (4) 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.
- (5) The permittee shall maintain records of the following information:
- the date and reason any required inspection was not performed;
  - the date of each inspection where it was determined by the permittee that it was necessary to implement the control measure(s);
  - the dates the control measure(s) was (were) implemented; and
  - on a calendar quarter basis, the total number of days the control measure(s) was (were) implemented.

The information in d)(5)d shall be kept separately for each operation identified above, 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 following information:
- the hour of operation of the diesel electrical generator, in hours per month; and
  - the rolling, 12-month summation of hours of operation of the diesel electrical generator, calculated by adding the current month's operating hour to the preceding eleven calendar months.
- (7) The permittee shall maintain monthly records of the following information:
- the amount of slag processed, in tons per month; and
  - the rolling, 12-month summation of slag processed, calculated by adding the current month's tons of slag processed to the preceding eleven calendar months.

e) Reporting Requirements

- (1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than diesel was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (2) The permittee shall submit deviation reports that identify any of the following occurrences:
- each day during which an inspection was not performed by the required frequency; and
  - each instance when a control measure, that was to be performed as a result of an inspection, was not implemented.



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

- (3) The permittee shall submit deviation reports that identify any of the following occurrences:
a. identify the actual hours of operation each month and when the hours of operation of the diesel electrical generator exceeded the operating restriction of 3,000 hours per rolling, 12-month period; and
b. identify the actual amount of slag processed each month and when the slag processed exceeded the throughput restriction of 200,000 tons per rolling, 12-month period.

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

f) Testing Requirements

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

a. Emission Limitation (Mill Scale processing plant):

PE shall not exceed 0.3 ton per rolling, 12-month period.

PM10 shall not exceed 0.1 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated by applying the emission factors from AP-42, Section 11.19.2 (Crushed Stone Processing and Pulverized Mineral Processing, 8/04) and Section 13.2.4 (load-in and load-out operations, 11/06) as follows:

E(TPY) = (1/2000) x sum\_i^n EF x PWR x (1 - ER/100)

where:

E = emission rate (TPY), summation of emissions from all operations listed in b)(2)a;

i = operation type;

n = number of operations;

PWR = process weight rate, in tons per rolling 12-month period, for each operation type listed in b)(2)a;

ER = overall emission reduction efficiency, in %, for each operation type listed in b)(2)a; and

EF=emission factor from AP-42, in lb/ton, for each operation type listed in b)(2)a. EFs are listed below:

- i. EF = 0.0024 PM, 0.00115 PM<sub>10</sub>, (load-in at Grizzley)  
Section 13.2.4, Eqn. 1  
where U=10.8 mph and M=4.0% moisture content  
ER = 80%
- ii. EF = 0.00014 PM, 0.000046 PM<sub>10</sub>, Table 11.19.2-2 (each conveyor transfer point)  
ER = 0%
- iii. EF = 0.0022 PM, 0.00074 PM<sub>10</sub>, Table 11.19.2-2 (each screen)  
ER = 0%

EFs for crushing, conveyor transfer points and screening are based on controlled emissions. Therefore, each ER will be equal to zero (0) for those material handling operation types, when using the above equation for calculating emissions.

b. Emission Limitation (Mill scale processing plant):

Visible emissions of fugitive dust shall not exceed 10 percent opacity, as a 6-minute average.

Applicable Compliance Method:

If required, compliance with the limitation for visible emissions of fugitive dust shall be demonstrated based upon visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

c. Emission Limitations (320 HP diesel generator):

NO<sub>x</sub> emissions shall not exceed 9.92lbs/hr and 15 tons per rolling, 12-month period.

CO emissions shall not exceed 2.14lbs/hr and 3.2tons per rolling, 12-month period.

SO<sub>2</sub> emissions shall not exceed 0.66lb/hr and 1ton per rolling, 12-month period.

OC emissions shall not exceed 0.8 lb/hr and 1.2 tons per rolling, 12-month period.

PE (PE = PM<sub>10</sub>) shall not exceed 0.7lb/hr and 1.1tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated by applying the emission factors from AP-42, Section 3.3, for "Gasoline and Diesel Industrial Engines", found in Table 3.3-1 as follows:

$$E = EF \times 320\text{hp}$$

where:

E = emission rate (pounds per hour)

EF = emission factors from AP-42, Fifth edition, Section 3.3 for "Gasoline and Diesel Industrial Engines", 10/96, Table 3.3-1 and are listed below:

- i. 0.031 lb/hp-hrNO<sub>x</sub>
- ii. 0.00668 lb/hp-hr CO
- iii. 0.00205 lb/hp-hr SO<sub>2</sub>
- iv. 0.00251lb/hp-hr OC
- v. 0.0022 lb/hp-hr PE

320 hp = power output (hp)

Each type emission limitation was developed by multiplying the short-term allowable emission limitation, in lbs/hr, by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

d. Emission Limitation(320 HP diesel generator):

PE shall not exceed 0.310 pound per million Btu of actual heat input.

Applicable Compliance Method:

The particulate emission limitation for this emissions unit has been established using the emission factor of 0.0022 pound/hp-hr or 0.310 pound/MMBtu, as outlined in AP-42, Section 3.3 for "Gasoline and Diesel Industrial Engines", Table 3.3-1; and this limit is also set by rule.

e. Emission Limitation (320 HP diesel generator):

Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance with the limitation for visible particulate emissions shall be demonstrated based upon visible particulate emission observations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(1).

(1) None.