



John R. Kasich, Governor  
 Mary Taylor, Lt. Governor  
 Craig W. Butler, Director

7/14/2015

Mark Mummert, PE, CIH  
 Harsco Minerals - Warren, OH  
 5000 Ritter Road, Suite 205  
 Mechanicsburg, PA 17055

Certified Mail

No	TOXIC REVIEW
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MODELING SUBMITTED
No	SYNTHETIC MINOR TO AVOID TITLE V
No	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0278080692  
 Permit Number: P0118996  
 Permit Type: Renewal  
 County: Trumbull

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

**How to appeal this permit**

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
 77 South High Street, 17th Floor  
 Columbus, OH 43215

## **How to save money, reduce pollution and reduce energy consumption**

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: [www.ohioairquality.org/clean\\_air](http://www.ohioairquality.org/clean_air)

## **How to give us feedback on your permitting experience**

Please complete a survey at [www.epa.ohio.gov/survey.aspx](http://www.epa.ohio.gov/survey.aspx) and give us feedback on your permitting experience. We value your opinion.

## **How to get an electronic copy of your permit**

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc) by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Ohio EPA DAPC, Northeast District Office at (330)963-1200 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael E. Hopkins, P.E.  
Assistant Chief, Permitting Section, DAPC

Cc: Ohio EPA-NEDO



**FINAL**

**Division of Air Pollution Control  
Permit-to-Install and Operate  
for  
Harsco Minerals - Warren, OH**

Facility ID:	0278080692
Permit Number:	P0118996
Permit Type:	Renewal
Issued:	7/14/2015
Effective:	7/14/2015
Expiration:	11/14/2021





**Division of Air Pollution Control**  
**Permit-to-Install and Operate**  
for  
Harsco Minerals - Warren, OH

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**Final Permit-to-Install and Operate**  
Harsco Minerals - Warren, OH  
**Permit Number:** P0118996  
**Facility ID:** 0278080692  
**Effective Date:** 7/14/2015

## Authorization

Facility ID: 0278080692  
Application Number(s): A0053162  
Permit Number: P0118996  
Permit Description: PTIO renewal for a mineral processing plant.  
Permit Type: Renewal  
Permit Fee: \$0.00  
Issue Date: 7/14/2015  
Effective Date: 7/14/2015  
Expiration Date: 11/14/2021  
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Harsco Minerals - Warren, OH  
101 TIDEWATER RD NE  
Warren, OH 44483

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

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

Ohio EPA DAPC, Northeast District Office  
2110 East Aurora Road  
Twinsburg, OH 44087  
(330)963-1200

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s)) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

  
Craig W. Butler  
Director



## Authorization (continued)

Permit Number: P0118996  
Permit Description: PTIO renewal for a mineral processing plant.

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

<b>Emissions Unit ID:</b>	<b>F001</b>
Company Equipment ID:	New/Old Line Baggers
Superseded Permit Number:	02-6472
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F003</b>
Company Equipment ID:	Main Plant blending
Superseded Permit Number:	02-6472
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F004</b>
Company Equipment ID:	Main Plant Storage Silos
Superseded Permit Number:	02-6472
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F005</b>
Company Equipment ID:	Dump Station
Superseded Permit Number:	02-6472
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F006</b>
Company Equipment ID:	Batch Briquetting
Superseded Permit Number:	02-6792
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F008</b>
Company Equipment ID:	Roadways and Parking Lot
Superseded Permit Number:	P0086304
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F009</b>
Company Equipment ID:	Storage Piles and Storage Building
Superseded Permit Number:	02-0988
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F010</b>
Company Equipment ID:	Jaw Crusher and Screener
Superseded Permit Number:	02-0988
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F011</b>
Company Equipment ID:	Auto Briquetting
Superseded Permit Number:	02-15789
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>F012</b>
Company Equipment ID:	Course Mixers and Conveyors
Superseded Permit Number:	02-15789
General Permit Category and Type:	Not Applicable



**Final Permit-to-Install and Operate**  
Harsco Minerals - Warren, OH  
**Permit Number:** P0118996  
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**Effective Date:** 7/14/2015

<b>Emissions Unit ID:</b>	<b>F013</b>
Company Equipment ID:	Rouge conveyor/truck loadout
Superseded Permit Number:	02-15789
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P002</b>
Company Equipment ID:	Slag Dryer
Superseded Permit Number:	02-0988
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P003</b>
Company Equipment ID:	Slag Screener and Conveyors
Superseded Permit Number:	P0108970
General Permit Category and Type:	Not Applicable



**Final Permit-to-Install and Operate**  
Harsco Minerals - Warren, OH  
**Permit Number:** P0118996  
**Facility ID:** 0278080692  
**Effective Date:** 7/14/2015

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

**1. What does this permit-to-install and operate ("PTIO") allow me to do?**

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

**2. Who is responsible for complying with this permit?**

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

**3. What records must I keep under this permit?**

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

**4. What are my permit fees and when do I pay them?**

There are two fees associated with permitted air contaminant sources in Ohio:

PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

**5. When does my PTIO expire, and when do I need to submit my renewal application?**

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is

very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

**6. What happens to this permit if my project is delayed or I do not install or modify my source?**

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

**7. What reports must I submit under this permit?**

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

**8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?**

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions of this permit will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

**9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?**

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.

**10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?**

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the [DO/LAA] in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

**11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?**

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

**12. What happens if one or more emissions units operated under this permit is/are shut down permanently?**

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emission unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

**13. Can I transfer this permit to a new owner or operator?**

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the

change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

**14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?**

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

**15. What happens if a portion of this permit is determined to be invalid?**

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.



**Final Permit-to-Install and Operate**  
Harsco Minerals - Warren, OH  
**Permit Number:** P0118996  
**Facility ID:** 0278080692  
**Effective Date:** 7/14/2015

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



**Final Permit-to-Install and Operate**

Harsco Minerals - Warren, OH

**Permit Number:** P0118996

**Facility ID:** 0278080692

**Effective Date:** 7/14/2015

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (1) None.
  - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - (1) None.



**Final Permit-to-Install and Operate**  
Harsco Minerals - Warren, OH  
**Permit Number:** P0118996  
**Facility ID:** 0278080692  
**Effective Date:** 7/14/2015

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



**1. F001, New/Old Line Baggers**

**Operations, Property and/or Equipment Description:**

Super-sacker - New Line Blender - Work Off Elevator - New Line Bagger - Old Line Blender - Old Line Bagger - Old Line 16 inch incline Screw - Old Line Transfer Screw - Old Line Silo Screw - Pneumatic recycler controlled by CE4 Baghouse

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	The baghouse serving this emissions unit shall achieve an outlet emission rate of not greater than 0.02 grain of particulate emissions (PE) per dry standard cubic foot of exhaust gases.  PE shall not exceed 0.5 lb/hr.  Visible PE from the exhaust stack serving this emissions unit shall not exceed 5% opacity as a 6-minute average.  See b)(2)a. and b)(2)b.
b.	OAC rule 3745-17-07(A) OAC rule 3745-17-07(B) OAC rule 3745-17-08(B)	The emissions limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

- (2) Additional Terms and Conditions
  - a. The emissions from this emissions unit shall be vented to a fabric filter baghouse at all times the emissions unit is in operation.
  - b. The collection efficiency of the baghouse system used to control particulate emissions shall be sufficient to minimize or eliminate visible emissions of fugitive dust at the point of capture.
- c) Operational Restrictions
  - (1) None.
- d) Monitoring and/or Recordkeeping Requirements
  - (1) The acceptable range for the pressure drop across the baghouse, that must be maintained in order to demonstrate compliance with the emission limitation in section b) of this permit, shall be the following:
    - a. CE4 Baghouse: 0.5 to 5.0 inches of water.
  - (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that

determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the pressure drop readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (3) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the location and color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emissions incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the

observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If no visible emissions are noted for each daily visible emission check during one month, then the frequency may become weekly. If visible emissions are noted during a weekly inspection, the permittee shall revert to daily visible emission checks until no visible emissions are documented for an entire month, at which time the permittee may again perform checks on a weekly basis.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA Northeast District Office by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following information in the annual PER that identify all deviations (excursions) of the control device operating parameter limitations that restrict the PE emissions and have been detected by the monitoring and record keeping requirements in this permit, as follows:
  - a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
  - b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;
  - c. the probable cause of each deviation (excursion); and
  - d. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no deviations (excursions) occurred.

- (4) The permittee shall identify the following information in the annual PER in accordance with the monitoring requirements for visible emissions in term number d)(3) above:
  - a. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit;

- b. all days during which any visible particulate emissions were observed from the stack serving this emission unit; and
- c. any corrective actions taken to minimize or eliminate the visible emissions.

The above information shall be provided as an attachment to the PER. If there are no day(s) and/or corrective action(s) to identify as required above, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no visible emissions were observed and no corrective actions were taken.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitations:

PE shall not exceed 0.02 gr/dscf and 0.5 lb/hr from the baghouse stack controlling this emissions unit.

Applicable Compliance Method:

Compliance shall be based on a one time calculation using emission factors from AP-42, Section 11.12.2-2 (6/2006) and Section 11.19.2-2 (8/2004) for mixing, loading and conveying (0.0048 lb/ton for super-sacker) and (1.1686 lbs/ton combined for all others) and the maximum process weight rate from the application (20 tons/hr for super-sacker) and (8 tons/hr for all others).

$$E = (20 \text{ tons/hr} \times 0.0048 \text{ lb/ton} + 8 \text{ tons/hr} \times 1.1686 \text{ lbs/ton}) (1 - (\text{capture efficiency} \times \text{control efficiency}))$$

where:

capture efficiency is estimated at 98%; and

control efficiency is estimated at 99%.

If required, compliance shall be demonstrated based upon an emission test performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

- b. Emission Limitation:

Visible PE from the exhaust stack serving this emissions unit shall not exceed 5% opacity as a 6-minute average.



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Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

- g) Miscellaneous Requirements
  - (1) None.



**2. F003, Main Plant blending**

**Operations, Property and/or Equipment Description:**

Silo T-1 Screw Conveyor - Silo T-2 Screw Conveyor - Silo T-3 Screw Conveyor - Silo T4/5 Screw Conveyor - Silo T-6 Screw Conveyor - Silo T-7 Screw Conveyor - #1 Hog Hopper & Vibratory Feeder - #2 Hog Hopper & Vibratory Feeder - #3 Hog Hopper & Vibratory Feeder- #1 Hog Elevator - #2 Hog Elevator - #3 Hog Elevator - Weigh Hopper #1 - Weigh Hopper #2 - Weigh Hopper #3 - #14 Belt - Main Discharge Screw - 18 Inch Overhead Screw controlled by CE1 Baghouse

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	The baghouse serving this emissions unit shall achieve an outlet emission rate of not greater than 0.01 grain of particulate emissions (PE) per dry standard cubic foot of exhaust gases.  PE shall not exceed 2.5 lbs/hr.  Visible PE from the exhaust stack serving this emissions unit shall not exceed 5% opacity as a 6-minute average.  See b)(2)a. and b)(2)b.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-17-07(A) OAC rule 3745-17-07(B) OAC rule 3745-17-08(B)	The emissions limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

- a. The emissions from this emissions unit shall be vented to a fabric filter baghouse at all times the emissions unit is in operation.
- b. The collection efficiency of the baghouse system used to control particulate emissions shall be sufficient to minimize or eliminate visible emissions of fugitive dust at the point of capture.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The acceptable range for the pressure drop across the baghouse, that must be maintained in order to demonstrate compliance with the emission limitation in section b) of this permit, shall be the following:
  - a. CE1 Baghouse: 0.5 to 5.0 inches of water.
- (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the pressure drop readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (3) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the location and color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emissions incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If no visible emissions are noted for each daily visible emission check during one month, then the frequency may become weekly. If visible emissions are noted during a weekly inspection, the permittee shall revert to daily visible emission checks until no visible emissions are documented for an entire month, at which time the permittee may again perform checks on a weekly basis.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA Northeast District Office by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following information in the annual PER that identify all deviations (excursions) of the control device operating parameter limitations that restrict the PE emissions and have been detected by the monitoring and record keeping requirements in this permit, as follows:
  - a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
  - b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;
  - c. the probable cause of each deviation (excursion); and
  - d. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no deviations (excursions) occurred.

- (4) The permittee shall identify the following information in the annual PER in accordance with the monitoring requirements for visible emissions in term number d)(3) above:
- a. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit;
  - b. all days during which any visible particulate emissions were observed from the stack serving this emission unit; and
  - c. any corrective actions taken to minimize or eliminate the visible emissions.

The above information shall be provided as an attachment to the PER. If there are no day(s) and/or corrective action(s) to identify as required above, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no visible emissions were observed and no corrective actions were taken.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitations:

PE shall not exceed 0.02 gr/dscf and 2.5 lb/hr from the baghouse stack controlling this emissions unit.

Applicable Compliance Method:

Compliance shall be based on a one time calculation using emission factors from AP-42, Section 11.12.2-2 (6/2006) for mixing and loading (1.788 lbs/ton combined) and the maximum process weight rate from the application (20 tons/hr).

$$E = 20 \text{ tons/hr} \times 1.788 \text{ lbs/ton} \times (1 - (\text{capture efficiency} \times \text{control efficiency}))$$

where:

capture efficiency is estimated at 98%; and

control efficiency is estimated at 99%.

If required, compliance shall be demonstrated based upon an emission test performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

b. Emission Limitation:

Visible PE from the exhaust stack serving this emissions unit shall not exceed 5% opacity as a 6-minute average.



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Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

- g) Miscellaneous Requirements
  - (1) None.

**3. F004, Main Plant Storage Silos**

**Operations, Property and/or Equipment Description:**

Silos T-1, T-2, T-3, T-4/5, T6 and T-7. Shaker type bin vents on silos

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	The bin vents serving this emissions unit shall achieve an outlet emission rate of not greater than 0.01 grain of particulate emissions (PE) per dry standard cubic foot of exhaust gases.  There shall be no visible fugitive PE or visible PE from the stacks serving this emissions unit.  See b)(2)a.
b.	OAC rule 3745-17-07(A) OAC rule 3745-17-07(B) OAC rule 3745-17-08(B)	The emissions limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

- a. The emissions from this emissions unit shall be vented to the bin vents at all times the emissions unit is in operation.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the location and color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emissions incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If no visible emissions are noted for each daily visible emission check during one month, then the frequency may become weekly. If visible emissions are noted during a weekly inspection, the permittee shall revert to daily visible emission checks until no visible emissions are documented for an entire month, at which time the permittee may again perform checks on a weekly basis.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.

- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA Northeast District Office by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following information in the annual PER in accordance with the monitoring requirements for visible emissions in term number d)(1) above:
  - a. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit;
  - b. all days during which any visible particulate emissions were observed from the stack serving this emission unit; and
  - c. any corrective actions taken to minimize or eliminate the visible emissions.

The above information shall be provided as an attachment to the PER. If there are no day(s) and/or corrective action(s) to identify as required above, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no visible emissions were observed and no corrective actions were taken.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitations:

PE shall not exceed 0.01 gr/dscf from the bin vent stacks controlling this emissions unit.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon an emission test performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.
  - b. Emission Limitation:

No visible fugitive PE or visible PE from the exhaust stacks serving this emissions unit.

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.



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- g) Miscellaneous Requirements
  - (1) None.

**4. F005, Dump Station**

**Operations, Property and/or Equipment Description:**

Feed Hopper - #1 Conveyor - #2 Conveyor - Rotary Head (feeds silos S-1, 2, 4, 5 & 6) controlled by CE5 Baghouse

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Visible PE from the exhaust stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average.  See b)(2)a. and b)(2)b.
b.	OAC rule 3745-17-07(B)	Visible fugitive PE from this emissions unit shall not exceed 20% opacity as a 3-minute average.
c.	OAC rule 3745-17-07(A) OAC rule 3745-17-08(B)	The emissions limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

a. The emissions from this emissions unit shall be vented to a fabric filter baghouse at all times the emissions unit is in operation.

- b. The dumping area shall be enclosed to the maximum extent possible in order to contain fugitive particulate emissions.
- c) Operational Restrictions
  - (1) The maximum annual operating hours for this emissions unit shall not exceed 4000, based upon a rolling, 12-month summation of the operating hours.
- d) Monitoring and/or Recordkeeping Requirements
  - (1) The acceptable range for the pressure drop across the baghouse, that must be maintained in order to demonstrate compliance with the emission limitation in section b) of this permit, shall be the following:
    - a. CE5 Baghouse: 0.5 to 5.0 inches of water.
  - (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;

- i. the total period of time (in minutes) during which there was a deviation;
- j. the pressure drop readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (3) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the location and color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emissions incident; and
  - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If no visible emissions are noted for each daily visible emission check during one month, then the frequency may become weekly. If visible emissions are noted during a weekly

inspection, the permittee shall revert to daily visible emission checks until no visible emissions are documented for an entire month, at which time the permittee may again perform checks on a weekly basis.

- (4) The permittee shall keep monthly records of:
  - a. the operating hours for each day; and
  - b. the rolling, 12-month summation of the operating hours.
- e) Reporting Requirements
  - (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
  - (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA Northeast District Office by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
  - (3) The permittee shall identify the following information in the annual PER that identify all deviations (excursions) of the control device operating parameter limitations that restrict the PE emissions and have been detected by the monitoring and record keeping requirements in this permit, as follows:
    - a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
    - b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;
    - c. the probable cause of each deviation (excursion); and
    - d. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no deviations (excursions) occurred.
  - (4) The permittee shall identify the following information in the annual PER in accordance with the monitoring requirements for visible emissions in term number d)(3) above:
    - a. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit;
    - b. all days during which any visible particulate emissions were observed from the stack serving this emission unit; and

- c. any corrective actions taken to minimize or eliminate the visible emissions.

The above information shall be provided as an attachment to the PER. If there are no day(s) and/or corrective action(s) to identify as required above, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no visible emissions were observed and no corrective actions were taken.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

Visible PE from the exhaust stack serving this emissions unit shall not exceed 10% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

b. Emission Limitation:

Visible fugitive PE from this emissions unit shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance with the visible emission limitation for the fugitive PE shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3) and (B)(3)(b) of OAC rule 3745-17-03.

g) Miscellaneous Requirements

- (1) None.

**5. F006, Batch Briquetting**

**Operations, Property and/or Equipment Description:**

Feed Hopper - Feed Conveyor - Press Feed Hopper - Briquette Press - Take Away Conveyor - Rotary Screener - Chain Conveyor - Discharge Conveyor - Fines Return Conveyor 1 - Fines Return Conveyor 2 - Pneumatic Fines Return controlled by CE6 Baghouse

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	The baghouse serving this emissions unit shall achieve an outlet emission rate of not greater than 0.02 grain of particulate emissions (PE) per dry standard cubic foot of exhaust gases.  PE shall not exceed 0.5 lb/hr.  Visible PE from the exhaust stack serving this emissions unit shall not exceed 5% opacity as a 6-minute average.  See b)(2)a. through b)(2)c.
b.	OAC rule 3745-17-07(A) OAC rule 3745-17-07(B) OAC rule 3745-17-08(B)	The emissions limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

- a. The emissions from this emissions unit shall be vented to a fabric filter baghouse at all times the emissions unit is in operation.
- b. Material transfer/conveying operations and the briquetter are to be sufficiently enclosed to minimize or eliminate visible emission of particulate matter.
- c. The collection efficiency of the baghouse system used to control particulate emissions shall be sufficient to minimize or eliminate visible emissions of fugitive dust at the point of capture.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

- (1) The acceptable range for the pressure drop across the baghouse, that must be maintained in order to demonstrate compliance with the emission limitation in section b) of this permit, shall be the following:
  - a. CE6 Baghouse: 4.0 to 8.0 inches of water.
- (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control

equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the pressure drop readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (3) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the location and color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emissions incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions

incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If no visible emissions are noted for each daily visible emission check during one month, then the frequency may become weekly. If visible emissions are noted during a weekly inspection, the permittee shall revert to daily visible emission checks until no visible emissions are documented for an entire month, at which time the permittee may again perform checks on a weekly basis.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA Northeast District Office by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following information in the annual PER that identify all deviations (excursions) of the control device operating parameter limitations that restrict the PE emissions and have been detected by the monitoring and record keeping requirements in this permit, as follows:
  - a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
  - b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;
  - c. the probable cause of each deviation (excursion); and
  - d. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no deviations (excursions) occurred.

- (4) The permittee shall identify the following information in the annual PER in accordance with the monitoring requirements for visible emissions in term number d)(3) above:

- a. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit;
- b. all days during which any visible particulate emissions were observed from the stack serving this emission unit; and
- c. any corrective actions taken to minimize or eliminate the visible emissions.

The above information shall be provided as an attachment to the PER. If there are no day(s) and/or corrective action(s) to identify as required above, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no visible emissions were observed and no corrective actions were taken.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitations:

PE shall not exceed 0.02 gr/dscf and 0.5 lb/hr from the baghouse stack controlling this emissions unit.

Applicable Compliance Method:

Compliance shall be based on one time calculations using emission factors from AP-42, Section 11.19.2-2 (8/2004) for screening and conveying (0.33 lb/ton combined) and the maximum process weight rate from the application (10 tons/hr).

$$E = 10 \text{ tons/hr} \times 0.33 \text{ lb/ton} \times (1 - (\text{capture efficiency} \times \text{control efficiency}))$$

where:

capture efficiency are estimated at 85%; and

control efficiency are estimated at 99%.

If required, compliance shall be demonstrated based upon an emission test performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

- b. Emission Limitation:

Visible PE from the exhaust stack serving this emissions unit shall not exceed 5% opacity as a 6-minute average.



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**Facility ID:** 0278080692  
**Effective Date:** 7/14/2015

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

- g) Miscellaneous Requirements
  - (1) None.

**6. F008, Roadways and Parking Lot**

**Operations, Property and/or Equipment Description:**

Plant roadways and parking areas

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
<b><i>Paved Roadways and Parking Areas</i></b>		
a.	OAC rule 3745-17-07(B)(4)	No visible particulate emissions (PE) except for 6 minutes during any 60-minute period.
b.	OAC rule 3745-17-08(B)	Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.  See b)(2)a. through b)(2)e.
<b><i>Unpaved Roadways and Parking Areas</i></b>		
c.	OAC rule 3745-17-07(B)(5)	No visible PE except for 13 minutes during any 60-minute period.
d.	OAC rule 3745-17-08(B)	Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust.  See b)(2)a. through b)(2)e.

(2) Additional Terms and Conditions

- a. The permittee shall employ best available control measures on all paved and unpaved roadways and parking areas for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's application, the permittee has committed to treat the paved roadways and parking areas by application of chemical stabilization/dust suppressants and/or watering at sufficient treatment frequencies to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- b. The needed frequencies of implementation of the control measures shall be determined by the permittee's inspections pursuant to the monitoring section of this permit. Implementation of the control measures shall not be necessary for paved and unpaved roadways and parking areas that are covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Implementation of any control measure may be suspended if unsafe or hazardous driving conditions would be created by its use.
- c. The permittee shall promptly remove, in such a manner as to minimize or prevent resuspension, earth and/or other material from paved streets onto which such material has been deposited by trucking or earth moving equipment or erosion by water or other means.
- d. 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.
- e. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-17-08.

c) Operational Restrictions

- (1) None.

d) Monitoring and/or Recordkeeping Requirements

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

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

- (2) The purpose of the inspections is to determine the need for implementing the above-mentioned control measures. The inspections shall be performed during representative, normal traffic conditions. No inspection shall be necessary for a roadway or parking area that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements. Any required inspection that is not performed due to any of the above-identified events shall be performed as soon as such event(s) has (have) ended, except if the next required inspection is within one week.
- (3) The permittee shall maintain records of the following information:
  - a. the date and reason any required inspection was not performed, including those inspections that were not performed due to snow and/or ice cover or precipitation;
  - b. the date of each inspection where it was determined by the permittee that it was necessary to implement the control measures;
  - c. the dates the control measures were implemented; and
  - d. on a calendar quarter basis, the total number of days the control measures were implemented and the total number of days where snow and/or ice cover or precipitation were sufficient to not require the control measures.

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

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA Northeast District Office by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:

No visible PE from paved roadways and parking areas except for a period of time not to exceed 6 minutes during any 60-minute observation period.



Applicable Compliance Method:

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

b. Emission Limitation:

No visible PE from unpaved roadways and parking areas except for a period of time not to exceed 13 minutes during any 60-minute observation period.

Applicable Compliance Method:

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

g) Miscellaneous Requirements

- (1) None.

**7. F009, Storage Piles and Storage Building**

**Operations, Property and/or Equipment Description:**

Raw material storage piles (LMF slag & Brick)

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Fugitive particulate emissions (PE) shall not exceed 1.34 tons/year.  no visible PE except for 1 minute during any 60-minute period.  best available control measures that are sufficient to minimize or eliminate visible PE of fugitive dust (see b)(2)a. through b)(2)f.).
b.	OAC rule 3745-17-07(B)	The emissions limitation specified by this rule is less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).
c.	OAC rule 3745-17-08(B)	See b)(2)a. through b)(2)f.

(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.
- b. 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.
- c. The above-mentioned control measure(s) shall be employed for each load-in and load-out operation of each storage pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Any required implementation of the control measure(s) shall continue during any such operation until further observation confirms that use of the measure(s) is unnecessary.
- d. The permittee shall employ best available control 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: (chemical stabilization, watering/sprinkling systems/hoses, covering the storage piles) to ensure compliance. Nothing in this paragraph shall prohibit the permittee from employing other control measures to ensure compliance.
- e. The above-mentioned control measure(s) shall be employed for wind erosion from each pile if the permittee determines, as a result of the inspection conducted pursuant to the monitoring section of this permit, that the control measure(s) are necessary to ensure compliance with the above-mentioned applicable requirements. Implementation of the control measure(s) shall not be necessary for a storage pile that is covered with snow and/or ice or if precipitation has occurred that is sufficient for that day to ensure compliance with the above-mentioned applicable requirements.
- f. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-31-05(A)(3).

c) Operational Restrictions

- (1) Slag processed in the equipment covered by this permit shall only be from electric furnaces. Prior to processing other types of material (including blast furnace slag), the permittee shall notify the Ohio EPA, Northeast District Office, Division of Air Pollution Control in writing. Processing of other materials may require the application of an Ohio

EPA permit to install and operate in accordance with the definition of "modification" in OAC rule 3745-31-01.

d) Monitoring and/or Recordkeeping Requirements

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

<u>storage pile identification</u>	<u>minimum load-in inspection frequency</u>
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all	daily
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- (2) Except as otherwise provided in this section, the permittee shall perform inspections of each load-out operation at each storage pile in accordance with the following frequencies:

<u>storage pile identification</u>	<u>minimum load-out inspection frequency</u>
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all	daily
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- (3) Except as otherwise provided in this section, the permittee shall perform inspections of the wind erosion from pile surfaces associated with each storage pile in accordance with the following frequencies:

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

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

- (6) The permittee 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).
- e. The information required in d)(6)d. shall be kept separately for (i) the load-in operations, (ii) the load-out operations, and (iii) the pile surfaces (wind erosion), and shall be updated on a calendar quarter basis within 30 days after the end of each calendar quarter.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA Northeast District Office by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitations:

Fugitive PE shall not exceed 1.34 tons/year.

Applicable Compliance Method:

Compliance with fugitive PE limitations shall be determined by using the emission factor equations in Sections 13.2.4 and 13.2.5, in Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume 1 (revised 11/2006), for load-in operations, load-out operations, and wind erosion. This emission limit was based on a maximum production of 30,000 tons of slag per year.

b. Emission Limitation:

There shall be no visible PE except for a period of time not to exceed 1 minute in any 60-minute observation period.



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**Permit Number:** P0118996  
**Facility ID:** 0278080692  
**Effective Date:** 7/14/2015

Applicable Compliance Method:

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

- g) Miscellaneous Requirements
  - (1) None.

**8. F010, Jaw Crusher and Screener**

**Operations, Property and/or Equipment Description:**

#1 Feed Hopper - #1 Feed Conveyor - Magnetic Conveyor - Grizzly Hopper & Feed Tray - Vibratory Screen Deck - Eagle Crusher (Jaw) - Takeaway Conveyor - Radial Stacker #1 - Feed Hopper (roll crusher) - Roll Crusher Feed Conveyor - Roll Crusher - Radial Stacker #2

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Particulate emissions (PE) shall not exceed 2.0 lb/hr and 8.8 tpy.  Visible fugitive PE from this emissions unit shall not exceed 5% opacity as a 6-minute average.  See b)(2)a.
b.	OAC rule 3745-17-07(B) OAC rule 3745-17-08(B)	The emissions limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

- a. The drop height of the stacker used in formation of the slag storage piles shall be kept at a minimum.

c) Operational Restrictions

- (1) Slag processed in the equipment covered by this permit shall only be from electric furnaces. Prior to processing other types of material (including blast furnace slag), the permittee shall notify the Ohio EPA, Northeast District Office, Division of Air Pollution Control in writing. Processing of other materials may require the application of an Ohio EPA permit to install and operate in accordance with the definition of "modification" in OAC rule 3745-31-01.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the location and color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emissions incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If no visible emissions are noted for each daily visible emission check during one month, then the frequency may become weekly. If visible emissions are noted during a weekly inspection, the permittee shall revert to daily visible emission checks until no visible emissions are documented for an entire month, at which time the permittee may again perform checks on a weekly basis.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA Northeast District Office by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following information in the annual PER in accordance with the monitoring requirements for visible emissions in term number d)(1) above:
  - a. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and
  - b. any corrective actions taken to minimize or eliminate the visible emissions.

The above information shall be provided as an attachment to the PER. If there are no day(s) and/or corrective action(s) to identify as required above, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no visible emissions were observed and no corrective actions were taken.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitations:

PE shall not exceed 2.0 lbs/hr.

Applicable Compliance Method:

Compliance shall be based on one time calculations using emission factors from AP-42, Section 11.19.2-2 (8/2004) and Section 11.12.2-2 (6/2006) for loading, conveying, screen and crushing (0.127 lb/ton combined) and the maximum process weight rate from the application (15 tons/hr).

$$E = 0.127 \text{ lb/ton} \times 15 \text{ tons/hr}$$

If required, compliance shall be demonstrated based upon an emission test performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.



b. Emission Limitation:

PE shall not exceed 8.8 tpy.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable PE limitation (2.0 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.

c. Emission Limitation:

Visible fugitive PE from this emissions unit shall not exceed 5% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance with the visible emission limitation for the fugitive PE shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3) and (B)(3)(b) of OAC rule 3745-17-03.

g) Miscellaneous Requirements

(1) None.

**9. F011, Auto Briquetting**

**Operations, Property and/or Equipment Description:**

Cam Belt - Fines Return - Press Feed Hopper - Briquette Press - Transfer Trough - Rotary Screener - Take Away Conveyor - Briquette Discharge Conveyor - Fines Return Elevator - Pneumatic Fines Return - Silo 1 - Silo 2 controlled by CE8 Baghouse

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) **Applicable Emissions Limitations and/or Control Requirements**

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	The baghouse serving this emissions unit shall achieve an outlet emission rate of not greater than 0.03 grain of particulate emissions (PE) per dry standard cubic foot of exhaust gases.  PE shall not exceed 1.92 lb/hr and 8.5 tpy.  See b)(2)a.
b.	OAC rule 3745-17-07(A)	Visible PE from the exhaust stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
c.	OAC rule 3745-17-07(B)	Visible fugitive PE from this emissions unit shall not exceed 20% opacity as a 3-minute average.



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

(2) Additional Terms and Conditions

a. The emissions from this emissions unit shall be vented to a fabric filter baghouse at all times the emissions unit is in operation.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The acceptable range for the pressure drop across the baghouse, that must be maintained in order to demonstrate compliance with the emission limitation in section b) of this permit, shall be the following:

a. CE8 Baghouse: 0.5 to 5.0 inches of water.

(2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the

permittedetermines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the pressure drop readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (3) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the location and color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emissions incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended.

The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If no visible emissions are noted for each daily visible emission check during one month, then the frequency may become weekly. If visible emissions are noted during a weekly inspection, the permittee shall revert to daily visible emission checks until no visible emissions are documented for an entire month, at which time the permittee may again perform checks on a weekly basis.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA Northeast District Office by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following information in the annual PER that identify all deviations (excursions) of the control device operating parameter limitations that restrict the PE emissions and have been detected by the monitoring and record keeping requirements in this permit, as follows:
  - a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
  - b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;
  - c. the probable cause of each deviation (excursion); and
  - d. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no deviations (excursions) occurred.

- (4) The permittee shall identify the following information in the annual PER in accordance with the monitoring requirements for visible emissions in term number d)(3) above:

- a. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and
- b. all days during which any visible particulate emissions were observed from the stack serving this emission unit; and
- c. any corrective actions taken to minimize or eliminate the visible emissions.

The above information shall be provided as an attachment to the PER. If there are no day(s) and/or corrective action(s) to identify as required above, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no visible emissions were observed and no corrective actions were taken.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitations:

PE shall not exceed 0.03 gr/dscf and 1.92 lbs/hr from the baghouse stack controlling this emissions unit.

Applicable Compliance Method:

Compliance shall be based on one time calculations using emission factors from AP-42, Section 11.19-2 (8/2004) for conveying and screening (0.375 lb/ton) and the maximum process weight rate from the application (10 tons/hr).

$$E = 10 \text{ tons/hr} \times 0.375 \text{ lb/ton} \times (1 - (\text{capture efficiency} \times \text{control efficiency}))$$

where:

capture efficiency is estimated at 85%; and

control efficiency is estimated at 99%.

If required, compliance shall be demonstrated based upon an emission test performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

- b. Emission Limitation:

PE shall not exceed 8.5 tpy.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable PE limitation (1.92 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.

c. Emission Limitation:

Visible PE from the exhaust stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

d. Emission Limitation:

Visible fugitive PE from this emissions unit shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance with the visible emission limitation for the fugitive PE shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3) and (B)(3)(b) of OAC rule 3745-17-03.

g) Miscellaneous Requirements

- (1) None.



**10. F012, Course Mixers and Conveyors**

**Operations, Property and/or Equipment Description:**

Feed Hopper CM #1 - Course Mixer #1 - Feed Hopper CM #2 - Course Mixer #2 - #1/#6 Feed Conveyor - #2 Feed Conveyor - #4 Feed Conveyor - #5 Feed Conveyor - Silo S-1 Vibratory Feeder - Silo S-6 Vibratory Feeder - Silo S-2 Vibratory Feeder - Silo S-4 Vibratory Feeder - Silo S-5 Vibratory Feeder controlled by CE9 and CE10 Bagothouses

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	The baghouse serving this emissions unit shall achieve an outlet emission rate of not greater than 0.03 grain of particulate emissions (PE) per dry standard cubic foot of exhaust gases.  PE shall not exceed 1.92 lb/hr and 8.5 tpy.  See b)(2)a.
b.	OAC rule 3745-17-07(A)	Visible PE from the exhaust stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-17-07(B)	Visible fugitive PE from this emissions unit shall not exceed 20% opacity as a 3-minute average.
d.	OAC rule 3745-17-08(B)	The emissions limitations specified by this rule is less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

a. The emissions from this emissions unit shall be vented to the fabric filter baghouses at all times the emissions unit is in operation.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The acceptable range for the pressure drop across the baghouses, that must be maintained in order to demonstrate compliance with the emission limitation in section b) of this permit, shall be the following:

- a. CE9 Baghouse: 0.5 to 8.0 inches of water.
- b. CE10 Baghouse: 0.5 to 5.0 inches of water.

(2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouses when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouses on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and

- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the pressure drop readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouses is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (3) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the location and color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emissions incident; and

- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If no visible emissions are noted for each daily visible emission check during one month, then the frequency may become weekly. If visible emissions are noted during a weekly inspection, the permittee shall revert to daily visible emission checks until no visible emissions are documented for an entire month, at which time the permittee may again perform checks on a weekly basis.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA Northeast District Office by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following information in the annual PER that identify all deviations (excursions) of the control device operating parameter limitations that restrict the PE emissions and have been detected by the monitoring and record keeping requirements in this permit, as follows:
  - a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouses was outside of the acceptable range;
  - b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouses;
  - c. the probable cause of each deviation (excursion); and
  - d. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no deviations (excursions) occurred.

- (4) The permittee shall identify the following information in the annual PER in accordance with the monitoring requirements for visible emissions in term number d)(3) above:
- a. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and
  - b. all days during which any visible particulate emissions were observed from the stack serving this emission unit; and
  - c. any corrective actions taken to minimize or eliminate the visible emissions.

The above information shall be provided as an attachment to the PER. If there are no day(s) and/or corrective action(s) to identify as required above, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no visible emissions were observed and no corrective actions were taken.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitations:

PE shall not exceed 0.03 gr/dscf and 1.92 lbs/hr from the baghouse stacks controlling this emissions unit.

Applicable Compliance Method:

Compliance shall be based on a one time calculation using emission factors from AP-42, Section 11.12.2-2 (6/2006) and Section 11.19.2-2 (8/2004) for mixing, loading and conveying (0.6224 lb/ton combined) and the maximum process weight rate from the application (10 tons/hr).

$$E = 10 \text{ tons/hr} \times 0.6224 \text{ lb/ton} \times (1 - (\text{capture efficiency} \times \text{control efficiency}))$$

where:

capture efficiency is estimated at 85%; and

control efficiency is estimated at 99%.

If required, compliance shall be demonstrated based upon an emission test performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

b. Emission Limitation:

PE shall not exceed 8.5 tpy.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable PE limitation (1.92 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.

c. Emission Limitation:

Visible PE from the exhaust stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

d. Emission Limitation:

Visible fugitive PE from this emissions unit shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance with the visible emission limitation for the fugitive PE shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3) and (B)(3)(b) of OAC rule 3745-17-03.

g) Miscellaneous Requirements

(1) None.

**11. F013, Rouge conveyor/truck loadout**

**Operations, Property and/or Equipment Description:**

Feed Hopper - Rouge Conveyor - Truck Loadout Spout controlled by CE7 Baghouse

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	The baghouse serving this emissions unit shall achieve an outlet emission rate of not greater than 0.03 grain of particulate emissions (PE) per dry standard cubic foot of exhaust gases.  PE shall not exceed 0.49 lb/hr and 2.1 tpy.  See b)(2)a. and b)(2)b.
b.	OAC rule 3745-17-07(A)	Visible PE from the exhaust stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.
c.	OAC rule 3745-17-07(B)	Visible fugitive PE from this emissions unit shall not exceed 20% opacity as a 3-minute average.



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

(2) Additional Terms and Conditions

a. The emissions from this emissions unit shall be vented to a fabric filter baghouse at all times the emissions unit is in operation.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The acceptable range for the pressure drop across the baghouse, that must be maintained in order to demonstrate compliance with the emission limitation in section b) of this permit, shall be the following:

a. CE7 Baghouse: 0.5 to 5.0 inches of water.

(2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the

permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the pressure drop readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (3) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack and of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the location and color of the emissions;
- b. whether the emissions are representative of normal operations;
- c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
- d. the total duration of any visible emissions incident; and
- e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended.

The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If no visible emissions are noted for each daily visible emission check during one month, then the frequency may become weekly. If visible emissions are noted during a weekly inspection, the permittee shall revert to daily visible emission checks until no visible emissions are documented for an entire month, at which time the permittee may again perform checks on a weekly basis.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA Northeast District Office by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following information in the annual PER that identify all deviations (excursions) of the control device operating parameter limitations that restrict the PE emissions and have been detected by the monitoring and record keeping requirements in this permit, as follows:
  - a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
  - b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;
  - c. the probable cause of each deviation (excursion); and
  - d. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no deviations (excursions) occurred.

- (4) The permittee shall identify the following information in the annual PER in accordance with the monitoring requirements for visible emissions in term number d)(3) above:

- a. all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit; and
- b. all days during which any visible particulate emissions were observed from the stack serving this emission unit; and
- c. any corrective actions taken to minimize or eliminate the visible emissions.

The above information shall be provided as an attachment to the PER. If there are no day(s) and/or corrective action(s) to identify as required above, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no visible emissions were observed and no corrective actions were taken.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitations:

PE shall not exceed 0.03 gr/dscf and 0.49 lb/hr from the baghouse stack controlling this emissions unit.

Applicable Compliance Method:

Compliance shall be based on a one time calculation using emission factors from AP-42, Section 11.12.2-2 (6/2006) and Section 11.19.2-2 (8/2004) for mixing, loading and conveying (0.5798 lb/ton combined) and the maximum process weight rate from the application (20 tons/hr).

$$E = 20 \text{ tons/hr} \times 0.5798 \text{ lb/ton} \times (1 - (\text{capture efficiency} \times \text{control efficiency}))$$

where:

capture efficiency is estimated at 98%; and

control efficiency is estimated at 99%.

If required, compliance shall be demonstrated based upon an emission test performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

- b. Emission Limitation:

PE shall not exceed 2.1 tpy.



Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable PE limitation (0.49 lb/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.

c. Emission Limitation:

Visible PE from the exhaust stack serving this emissions unit shall not exceed 20% opacity as a 6-minute average, except as provided by the rule.

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

d. Emission Limitation:

Visible fugitive PE from this emissions unit shall not exceed 20% opacity as a 3-minute average.

Applicable Compliance Method:

If required, compliance with the visible emission limitation for the fugitive PE shall be determined in accordance with Test Method 9 as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 1996, and the modifications listed in paragraphs (B)(3) and (B)(3)(b) of OAC rule 3745-17-03.

g) Miscellaneous Requirements

- (1) None.



**12. P002, Slag Dryer**

**Operations, Property and/or Equipment Description:**

Feed Hopper - # 2 Feed Conveyor - Slinger Conveyor - Slag Dryer controlled by CE2 Baghouse

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	<p>The baghouse serving this emissions unit shall achieve an outlet emission rate of not greater than 0.022 grain of particulate emissions (PE) per dry standard cubic foot of exhaust gases.            PE shall not exceed 0.94 lb/hr and 4.1 tpy.</p> <p>Nitrogen oxides (NOx) emissions shall not exceed 0.14 lb/mmBtu heat input, 1.12 lbs/hr and 4.9 tpy.            Sulfur dioxide (SO2) emissions shall not exceed 0.2 lb/mmBtu heat input, 1.6 lbs/hr and 7.0 tpy.</p> <p>Visible PE from the exhaust stack serving this emissions unit shall not exceed 5% opacity as a 6-minute average.            See b)(2)a.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-17-07(A) OAC rule 3745-17-11(B)	The emissions limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

a. The emissions from this emissions unit shall be vented to a fabric filter baghouse at all times the emissions unit is in operation.

c) Operational Restrictions

(1) Slag processed in the equipment covered by this permit shall only be from electric furnaces. Prior to processing other types of material (including blast furnace slag), the permittee shall notify the Ohio EPA, Northeast District Office, Division of Air Pollution Control in writing. Processing of other materials may require the application of an Ohio EPA permit to install and operate in accordance with the definition of "modification" in OAC rule 3745-31-01.

d) Monitoring and/or Recordkeeping Requirements

(1) The acceptable range for the pressure drop across the baghouse, that must be maintained in order to demonstrate compliance with the emission limitation in section b) of this permit, shall be the following:

a. CE2 Baghouse: 0.5 to 5.0 inches of water.

(2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and

- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the pressure drop readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (3) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. the location and color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emissions incident; and
  - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If no visible emissions are noted for each daily visible emission check during one month, then the frequency may become weekly. If visible emissions are noted during a weekly inspection, the permittee shall revert to daily visible emission checks until no visible emissions are documented for an entire month, at which time the permittee may again perform checks on a weekly basis.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA Northeast District Office by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following information in the annual PER that identify all deviations (excursions) of the control device operating parameter limitations that restrict the PE emissions and have been detected by the monitoring and record keeping requirements in this permit, as follows:
  - a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
  - b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;
  - c. the probable cause of each deviation (excursion); and
  - d. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no deviations (excursions) occurred.

- (4) The permittee shall identify the following information in the annual PER in accordance with the monitoring requirements for visible emissions in term number d)(3) above:
- a. all days during which any visible particulate emissions were observed from the stack serving this emission unit; and
  - b. any corrective actions taken to minimize or eliminate the visible emissions.

The above information shall be provided as an attachment to the PER. If there are no day(s) and/or corrective action(s) to identify as required above, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no visible emissions were observed and no corrective actions were taken.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitations:

PE shall not exceed 0.022 gr/dscf and 0.94 lb/hr from the baghouse stack controlling this emissions unit.

Applicable Compliance Method:

Compliance shall be based on a one time calculation using emission factors from AP-42, Section 11.19.2-2 (8/2004) for conveying and a stack test performed on January 16, 1998 (0.637 lb/ton combined) and the maximum process weight rate from the application (20 tons/hr).

$$E = 20 \text{ tons/hr} \times 0.637 \text{ lb/ton} \times (1 - (\text{capture efficiency} \times \text{control efficiency}))$$

where:

capture efficiency is estimated at 98%; and

control efficiency is estimated at 99%.

If required, compliance shall be demonstrated based upon an emission test performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

b. Emission Limitation:

PE shall not exceed 4.1 tpy.

Applicable Compliance Method:

Compliance shall be determined by multiplying the particulate matter emissions factor of 0.0187 lb/ton of slag dried (from the stack test performed on January 16, 1998) by the amount of slag dried each year (tons) and then dividing by 2000 lbs/ton.

c. Emission Limitation:

NOx emissions shall not exceed 0.14 lb/mmBtu heat input and 1.12 lbs/hr.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon an emission test performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 7 or 7E.

d. Emission Limitation:

NOx emissions shall not exceed 4.9 tons/year

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable NOx emission limitation (0.14 lb/mmBtu) by the maximum heat input rating (8.0 mmBtu/hr) and 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.

e. Emission Limitation:

SO2 emissions shall not exceed 0.2 lb/mmBtu heat input and 1.6 lbs/hr.

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon an emission test performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 6.

f. Emission Limitation:

SO2 emissions shall not exceed 7.0 tons/year

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable SO2 emission limitation (0.2 lb/mmBtu) by the maximum heat input rating (8.0 mmBtu/hr) and 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.

g. Emission Limitation:

Visible PE from the exhaust stack serving this emissions unit shall not exceed 5% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

g) Miscellaneous Requirements

- (1) None.



**13. P003, Slag Screener and Conveyors**

**Operations, Property and/or Equipment Description:**

#8A Hi Temp Belt - #8 Cam-belt - Derrick Screener - #3 Bunker Conveyor - #6 Conveyor - #7 Conveyor - Bucket Elevator 1 - Bucket Elevator 2 - Auto Weigh Conveyor T-9 - Auto Weigh Conveyor T-10 - Auto Weigh Conveyor T-11 - Auto Weigh Conveyor T-12 - #13 Reversing Conveyor - #14 Conveyor - Silo T-12 Screw - Inside Fines Screw - Outside Fines Screw - Pneumatic Fines Return controlled by CE3 Baghouse

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	<p>The baghouse serving this emissions unit shall achieve an outlet emission rate of not greater than 0.02 grain of particulate emissions (PE) per dry standard cubic foot of exhaust gases.</p> <p>PE shall not exceed 0.86 lb/hr and 3.80 tpy.</p> <p>Visible emissions from the baghouse stack shall not exceed 5% opacity, as a 6-minute average.</p> <p>See b)(2)a. through b)(2)c.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-17-07(A) OAC rule 3745-17-11(B)	The emissions limitations specified by these rules are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3).

(2) Additional Terms and Conditions

- a. The emissions from this emissions unit shall be vented to a fabric filter baghouse at all times the emissions unit is in operation.
- b. The collection efficiency of the air pollution capture hoods on emissions unit P003 shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at all points of capture. This shall include: two decker screener, all belt conveyor transfer points, bucket elevator transfer points, storage silos, and weigh bins. The permittee shall maintain all hoods and enclosures in good operating condition. No visible emissions shall be allowed from the gasketed enclosure panels for the weigh-belt conveyor transfer points for silos T-9 through T-12 and drum connection at the end of the reversing conveyer number 13. Additional capture hooding or enclosures shall be installed if required by Ohio EPA.
- c. The air pollution control system shall be operated with sufficient volumetric flow rate to minimize or eliminate visible particulate emissions at the point(s) of capture to the extent possible with good engineering design.

c) Operational Restrictions

- (1) Slag processed in the equipment covered by this permit shall only be from electric furnaces. Prior to processing other types of material (including blast furnace slag), the permittee shall notify the Ohio EPA, Northeast District Office, Division of Air Pollution Control in writing. Processing of other materials may require the application of an Ohio EPA permit to install and operate in accordance with the definition of "modification" in OAC rule 3745-31-01.

d) Monitoring and/or Recordkeeping Requirements

- (1) The acceptable range for the pressure drop across the baghouse, that must be maintained in order to demonstrate compliance with the emission limitation in section b) of this permit, shall be the following:
  - a. CE3 Baghouse: 0.5 to 5.0 inches of water.
- (2) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit is in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with

the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the pressure drop readings immediately after the corrective action was implemented; and
- k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the Ohio EPA Northeast District Office. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit. In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (3) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the location and color of the emissions;
  - b. whether the emissions are representative of normal operations;
  - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
  - d. the total duration of any visible emissions incident; and
  - e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

If no visible emissions are noted for each daily visible emission check during one month, then the frequency may become weekly. If visible emissions are noted during a weekly inspection, the permittee shall revert to daily visible emission checks until no visible emissions are documented for an entire month, at which time the permittee may again perform checks on a weekly basis.

e) Reporting Requirements

- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
- (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA Northeast District Office by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.
- (3) The permittee shall identify the following information in the annual PER that identify all deviations (excursions) of the control device operating parameter limitations that restrict the PE emissions and have been detected by the monitoring and record keeping requirements in this permit, as follows:

- a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
- b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the baghouse;
- c. the probable cause of each deviation (excursion); and
- d. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no deviations (excursions) occurred.

- (4) The permittee shall identify the following information in the annual PER in accordance with the monitoring requirements for visible emissions in term number d)(3) above:
  - a. all days during which any visible particulate emissions were observed from the stack serving this emission unit; and
  - b. any corrective actions taken to minimize or eliminate the visible emissions.

The above information shall be provided as an attachment to the PER. If there are no day(s) and/or corrective action(s) to identify as required above, the permittee shall indicate within the "Additional Information and Corrections" section of the PER that no visible emissions were observed and no corrective actions were taken.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitations:

PE shall not exceed 0.02 gr/dscf and 0.86 lb/hr from the baghouse stack controlling this emissions unit.

Applicable Compliance Method:

Compliance shall be based on a one time calculation using emission factors from AP-42, Section 11.19.2-2 (8/2004) for conveying and screening (0.351 lb/ton combined) and the maximum process weight rate from the application (20 tons/hr).

$$E = 20 \text{ tons/hr} \times 0.351 \text{ lb/ton} \times (1 - (\text{capture efficiency} \times \text{control efficiency}))$$

where:



capture efficiency is estimated at 98%; and

control efficiency is estimated at 99%.

If required, compliance shall be demonstrated based upon an emission test performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Methods 1 through 5.

b. Emission Limitation:

PE shall not exceed 3.8 tpy.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable PE limitation (0.86 lb/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.

c. Emission Limitation:

Visible PE from the exhaust stack serving this emissions unit shall not exceed 5% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined by visible emission evaluations performed in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9.

g) Miscellaneous Requirements

- (1) None.