

Facility ID: 0278060678 Issuance type: Final State Permit To Operate

This version of facility specific terms and conditions was converted from a database format to an HTML file during an upgrade of the Ohio EPA, Division of Air Pollution Control's permitting software. Every attempt has been made to convert the terms and conditions to look and substantively conform to the permit issued or being drafted in STARS. However, the format of the terms may vary slightly from the original. In addition, although it is not expected, there is a slight possibility that a term and condition may have been inadvertently "left out" of this reproduction during the conversion process. Therefore, if this version is to be used as a starting point in drafting a new version of a permit, it is imperative that the entire set of terms and conditions be reviewed to ensure they substantively mimic the issued permit. The official version of any permit issued final by Ohio EPA is kept in the Agency's Legal section. The Legal section may be contacted at (614) 644-3037.

In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part II" and before "A. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

\*\*\*THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION\*\*\*

Facility ID: 0278060678 Emissions Unit ID: P003 Issuance type: Final State Permit To Operate

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**Part II - Special Terms and Conditions**

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.

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P003 - Slag Dryer Rotary Dryer (replacement) with wet scrubber	OAC rule 3745-31-05(A)(3) (PTI 02-19631)	Particulate emissions (PE) shall not exceed 0.025 grain per dry standard cubic foot of exhaust gases, 4.3 pounds per hour and 18.8 tons per year.  Nitrogen oxides (NOx) emissions shall not exceed 1.15 pounds per hour and 5.0 tons per year.  Carbon monoxide (CO) emissions shall not exceed 0.97 pound per hour and 4.3 tons per year.
	OAC rule 3745-17-07(A)(1)	Volatile organic compounds (VOC) emissions shall not exceed 0.06 pound per hour and 0.3 ton per year.
	OAC rule 3745-17-11(A)	Visible particulate emissions from the exhaust stack serving this emissions unit shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.  The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	40 CFR Part 60, Subpart UUU	The emission limitation required by this applicable rule is equivalent to the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).  See sections C.1, C.2, D.1, D.2 and E.2 below.

2. **Additional Terms and Conditions**
  - (a) None

**B. Operational Restrictions**

1. The pressure drop across the scrubber shall be maintained within 90 percent of the average value recorded during the most recent performance test that demonstrated compliance with the PE standard specified above.
2. The scrubber liquid flow rate shall be maintained within 20 percent of the average value recorded during the most recent performance test that demonstrated compliance with the PE standard specified above.

**C. Monitoring and/or Record Keeping Requirements**

1. The permittee shall install, calibrate, maintain and properly operate monitoring devices that continuously measure and record the scrubber liquid flow rate and pressure drop across the scrubber while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manual(s). The pressure drop device must be certified by the manufacturer to be accurate within five percent of water column gauge pressure at the level of operation. The liquid flow rate monitoring device must be certified by the manufacturer to be accurate within five percent of design scrubbing liquid flow rate.
2. The permittee shall determine and record once each day, from the monitoring devices, an arithmetic average over

a 2-hour period of both the change in pressure of the gas stream across the scrubber and the flow rate of the scrubbing liquid.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify each day during which the pressure drop determined in section C.2 is less than 90 percent of the average value recorded during the most recent performance test that demonstrated compliance with the PE standard specified above.
2. The permittee shall submit deviation (excursion) reports that identify each daily scrubber liquid flow rate recorded in section C.2 that is less than 80 percent or greater than 120 percent of the average value recorded during the most recent performance test that demonstrated compliance with the PE standard specified above.

**E. Testing Requirements**

1. Compliance with the emission limitations in section A.1 of these terms and conditions shall be determined in accordance with the following methods:  
Emission Limitation:

NOx emissions shall not exceed 1.15 pounds per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion and the maximum rating of the burner.

$$E(\text{NOx}) = 12 \text{ mmBtu/hr} \times \text{scf}/1040 \text{ Btu} \times 100 \text{ lbs NOx}/10 \text{ E6 scf (AP-42 emission factor)} = 1.15 \text{ lbs/hr}$$

If required, the permittee shall demonstrate compliance with the hourly NOx emission limitation by means of physical testing of the effluent from this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 7 or 7E.

Emission Limitation:

NOx emissions shall not exceed 5.0 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable NOx emission limitation (1.15 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.

Emission Limitation:

CO emissions shall not exceed 0.97 pound per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation may be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion and the maximum rating of the burner.

$$E(\text{CO}) = 12 \text{ mmBtu/hr} \times \text{scf}/1040 \text{ Btu} \times 84 \text{ lb CO}/10 \text{ E6 scf (AP-42 emission factor)} = 0.97 \text{ lb/hr}$$

Emission Limitation:

CO emissions shall not exceed 4.3 tons per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable CO emission limitation (0.97 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.

Emission Limitation:

VOC emissions shall not exceed 0.06 pound per hour.

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated based on a one time calculation by using emission factors from AP-42, Section 1.4, Table 1.4-1 (1998) for Natural Gas Combustion and the maximum rating of the burner.

$$E(\text{VOC}) = 12 \text{ mmBtu/hr} \times \text{scf}/1040 \text{ Btu} \times 5.5 \text{ lb VOC}/10 \text{ E6 scf (AP-42 emission factor)} = 0.06 \text{ lb/hr}$$

Emission Limitation:

VOC emissions shall not exceed 0.3 ton per year.

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable VOC emission limitation (0.06 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.

Emission Limitation:

PE shall not exceed 0.025 grain per dry standard cubic foot of exhaust gases and 4.3 pounds per hour.

**Applicable Compliance Method:**

Compliance with the short-term PE limitations shall be demonstrated based upon an emission test performed in accordance with the methods and procedures specified in section E.2 and the procedures specified in OAC rule 3745-17-03(B)(10).

**Emission Limitation:**

PE shall not exceed 18.8 tons per year.

**Applicable Compliance Method:**

To determine the maximum annual emission rate for particulate emissions, the following equation shall be used:

$$E(PE) = ER \times 8760 \text{ hrs/yr} / 2000 \text{ lbs/ton}$$

where:

E(PE) is the maximum annual emission rate of particulate emissions; and

ER is the hourly mass emission rate for particulate emissions as determined in section E.2.

**Emission Limitation:**

Visible particulate emissions 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:**

Compliance with the visible emission limitation for the particulate emissions 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.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
  - a. The emission testing shall be conducted approximately 2.5 years after permit issuance and within 6 months prior to permit expiration.
  - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for particulate emissions.
  - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for particulate emissions, Methods 1 through 5 of 40 CFR Part 60, Appendix A. Sampling time and volume of each test shall be as specified in 40 CFR Part 60.736(b)(1).
  - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.
  - e. During the initial performance test, the permittee shall use the monitoring devices of section C.1 above to determine the average change in pressure of the gas stream across the scrubber and the average flow rate of the scrubber liquid during each of the particulate matter runs. The arithmetic averages of the three runs shall be used as baseline average values for the purpose of sections D.1 and D.2 above. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

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

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

**F. Miscellaneous Requirements**

1. None