

Facility ID: 0250000005 Issuance type: Title V Final Permit

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 III" and before "I. 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: 0250000005 Issuance type: Title V Final Permit

Part II - Specific Facility Terms and Conditions

a State and Federally Enforceable Section

1. None

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

Facility ID: 0250000005 Issuance type: Title V Final Permit

b State Only Enforceable Section

1. The following insignificant emissions units are located at this facility:

- Z001 - Dryer #1, dried brick
- Z002 - Dryer #2, dried brick
- Z003 - Dryer #3, dried brick
- Z004 - Wet Mixing
- Z005 - Material storage piles
- Z006 - Roadways and parking areas

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within a Permit to Install for the emissions unit.

- [Go to Part III for Emissions Unit F001](#)
- [Go to Part III for Emissions Unit F002](#)
- [Go to Part III for Emissions Unit P004](#)
- [Go to Part III for Emissions Unit P005](#)
- [Go to Part III for Emissions Unit P007](#)

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

Facility ID: 0250000005 Issuance type: Title V Final Permit

Part III - Terms and Conditions for Emissions Units

[Go to the top of this document](#)

Facility ID: 0250000005 Emissions Unit ID: F001 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

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

1. None.

I. 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>
Jaw Crusher	OAC rule 3745-17-07(B) OAC rule 3745-17-08(B) OAC rule 3745-31-05 PTI No. 02-9733	See A.I.2.a. See A.I.2.b. See A.I.2.c.

2. Additional Terms and Conditions

- a. In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
- b. In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08 (B) shall not apply to this emissions unit.
- c. Particulate emissions shall not exceed 6.0 pounds per hour.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

II. Operational Restrictions

1. The permittee shall operate a water spray system to control particulate emissions whenever this emissions unit is in operation.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each day for this emissions unit:
 - a. the amount of material processed, and
 - b. the periods of time when the water spray system was not in service when the emissions unit was in operation.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

IV. Reporting Requirements

1. The permittee shall notify the Director (the appropriate District Office or local air agency) in writing of any daily record showing that the water spray system was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Director (the appropriate District Office or local air agency) within 30 days after the event occurs.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

V. **Testing Requirements**

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

Emission Limitation:

Particulate emissions shall not exceed 6.0 pounds per hour.

Applicable Compliance Method:

Compliance shall be based on a calculation using the emission factor from AP-42, Section 18.19.2, Table 18.19.2-1, September 1988.

$E(\text{particulate emissions}) = 0.28 \text{ lb PE/ton crushed (emission factor)} \times 5 \text{ tons brick crushed /hour (maximum equipment capacity)}$.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

VI. **Miscellaneous Requirements**

1. None

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

Facility ID: 025000005 Issuance type: Title V Final Permit

[Go to the top of this document](#)

Facility ID: 025000005 Emissions Unit ID: F001 Issuance type: Title V Final Permit

B. State Enforceable Section

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

1. None.

I. **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>
---	--------------------------------------	--

2. **Additional Terms and Conditions**

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

II. **Operational Restrictions**

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

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

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

IV. **Reporting Requirements**

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

V. **Testing Requirements**

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

VI. **Miscellaneous Requirements**

- 1. None

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

Facility ID: 025000005 Issuance type: Title V Final Permit

Part III - Terms and Conditions for Emissions Units

[Go to the top of this document](#)

Facility ID: 025000005 Emissions Unit ID: F002 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

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

- 1. None.

I. **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>
Crushing, grinding and screening operations	OAC rule 3745-17-07(B)	See A.I.2.a.
	OAC rule 3745-17-08(B)	See A.I.2.b.

2. **Additional Terms and Conditions**

- a. In accordance with paragraph (B)(11)(e) of OAC rule 3745-17-07, the requirements of OAC rule 3745-17-07(B) shall not apply to this emissions unit.
- b. In accordance with paragraph (A)(1) of OAC rule 3745-17-08, the requirements of OAC rule 3745-17-08 (B) shall not apply to this emissions unit.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

II. **Operational Restrictions**

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

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

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

IV. **Reporting Requirements**

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

V. **Testing Requirements**

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

VI. **Miscellaneous Requirements**

1. None

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

Facility ID: 0250000005 Issuance type: Title V Final Permit

[Go to the top of this document](#)

Facility ID: 0250000005 Emissions Unit ID: F002 Issuance type: Title V Final Permit

B. State Enforceable Section

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

1. None.

I. **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>
2. Additional Terms and Conditions			
1.	None		

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

II. **Operational Restrictions**

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

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

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

IV. **Reporting Requirements**

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

V. **Testing Requirements**

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

VI. **Miscellaneous Requirements**

1. None

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

Facility ID: 0250000005 Issuance type: Title V Final Permit

Part III - Terms and Conditions for Emissions Units

[Go to the top of this document](#)

Facility ID: 025000005 Emissions Unit ID: P004 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

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

1. None.

I. 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>
Tunnel Kiln #1 Swindell - Dressler tunnel kiln fired by natural gas	OAC rule 3745-17-07(A)	See A.I.2.a.
	40 CFR 52.1881(b)(22)(vi)	See A.I.2.b.
	OAC rule 3745-17-11	See A.I.2.c.
	OAC rule 3745-18-56(B)	See A.I.2.d.

2. Additional Terms and Conditions

- a. Visible particulate emissions shall not exceed twenty percent opacity as a six-minute average, except as provided by the rule.
- b. Sulfur dioxide emissions from the kiln shall not exceed 20 pounds per ton of actual process weight input .
- c. Particulate emissions from this emissions unit shall be less than 10 lbs/hr*.

*The uncontrolled mass rate of particulate emissions (PE) from this emissions unit is less than 10 pounds/hour (the permittee has demonstrated this based on stack testing). Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, based on Table I of OAC rule 3745-17-11, the allowable PE limitation is greater than 10 lbs PE/hr. However, to ensure that Figure II will not be applicable, the permittee has agreed to accept the PE limitation stated above (less than 10 lbs/hr).
- d. Sulfur dioxide emissions shall not exceed 12 pounds of sulfur dioxide per ton of product from the kiln.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

II. Operational Restrictions

1. The sulfur content of the raw materials used in this emissions unit shall not exceed 0.4% sulfur, by weight, as a monthly composited average.
2. The permittee shall burn only natural gas in this emissions unit.
3. The maximum hourly production rate for this emissions unit shall not exceed 9.9 tons per hour of finished brick.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

III. Monitoring and/or Record Keeping Requirements

1. Each calendar month, the permittee shall collect at least one representative grab sample of dried clay brick material and then combine the grab samples into one composite sample for the calendar quarter. The permittee shall perform the material sampling and analyze each composite sample for sulfur content (weight percent). Each calendar quarter, the permittee also shall collect monthly samples of finished product made from clay, combine the grab samples into one composite sample for the calendar quarter, and analyze each composite sample for sulfur content (weight percent). The analysis shall be done using a method similar to ASTM D 5016, "Sulfur in ash from coal and coke using infrared analysis". The furnace used shall be of the resistance type LECO Model SC32 or SC444, with an analysis temperature at least 2100 degrees F. Alternative, but equivalent methods may be used upon written approval by the Ohio EPA Northeast District Office .

2. Each calendar month, the permittee shall collect at least one representative grab sample of dried shale brick material and then combine the grab samples into one composite sample for the calendar year. The permittee shall perform the material sampling and analyze each composite sample for sulfur content (weight percent). Each calendar quarter, the permittee also shall collect monthly samples of finished product made from shale, combine the grab samples into one composite sample for the calendar year, and analyze each composite sample for sulfur content (weight percent). The analysis shall be done using a method similiar to ASTM D 5016, "Sulfur in ash from coal and coke using infrared analysis." The furnace used shall be of the resistance type LECO Model SC32 or SC444, with an analysis temperature at least 2100 degrees F. Alternative, but equivalent methods may be used upon written approval by the Ohio EPA Northeast District Office .
3. For each shipment of clay or shale received for processing in this emissions unit, the permittee shall maintain records of total quantity of material received.
4. The permittee shall calculate and record the quarterly and annual average sulfur content (% sulfur) of the clay and shale, respectively, processed in this emissions unit, as well as the quarterly sulfur contents (% sulfur) of the finished product made from clay and the finished product made from shale.
5. Each month, the permittee shall calculate and record the average sulfur dioxide emission rate for clay and shale, based on the most recent sulfur analyses of the raw materials and finished products, in pounds of sulfur dioxide per ton of raw material and per ton of product. This shall be determined by using the following equations:

$$\text{pounds of SO}_2/\text{ton of raw material} = (\text{sulfur content [weight \%}/100\%]) \times (2 \text{ pounds SO}_2/\text{ pound sulfur}) / (2000)$$

$$\text{pounds of SO}_2/\text{ton of product} = \text{pounds of SO}_2/\text{ton of raw material} / (1 - \text{moisture content of raw material})$$
 where;

$$\text{sulfur content} = C(\text{dry}) - C(\text{fired})$$

$$C(\text{dry}) = \text{sulfur content in the dry brick or dry raw material sample(kiln input).}$$

$$C(\text{fired}) = \text{sulfur content in the fired brick sample (kiln output).}$$
6. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
7. The permittee shall maintain monthly records of the weight of the finished brick produced in this emissions unit.
8. The permittee shall maintain daily records of the weight of the raw material entering this emissions unit.
9. The permittee shall maintain monthly records of the hours of operation of this emissions unit.
10. The permittee shall determine the average hourly production rate for this emissions unit. This shall be calculated by dividing (7) by (9) for each month.
11. The permittee shall maintain daily records of the moisture content of the raw materials.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the sulfur dioxide emission limitation of 20.0 pounds of sulfur dioxide per ton of raw material, based upon the record keeping in section A.III.
3. The permittee shall submit deviation (excursion) reports that identify all exceedances of the sulfur dioxide emissions limitation of 12.0 pounds of sulfur dioxide per ton of product, based upon the record keeping in section A.III.
4. The permittee shall submit deviation (excursion) reports that identify all exceedances of the hourly production rate limitation, based upon the record keeping in section A.III.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

V. Testing Requirements

1. Emission Limitation

20% opacity as a six-minute average, except as provided by rule

Applicable Compliance Method
OAC rule 3745-17-03(B)(1), if requested.
2. The following test method(s) shall be employed to demonstrate compliance with the allowable emission rate (s): for particulates, Method 5 of 40 CFR Part 60, Appendix A . Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
3. The following test method(s) shall be employed to demonstrate compliance with the allowable emission rate (s): for SO₂, Method 6E of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may

be used with prior approval from the Ohio EPA.

4. 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 to demonstrate compliance with the allowable particulate and sulfur dioxide emission rates.
 - b. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal.
 - c. 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.
 - d. The sulfur content (% by weight) of the raw material(s) used during the compliance test shall be determined.
5. 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 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.
6. Compliance with sulfur dioxide limit shall be based on the monitoring and record keeping of Section A.III. and the testing of Section A.V.4.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

VI. **Miscellaneous Requirements**

1. None

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

Facility ID: 0250000005 Issuance type: Title V Final Permit

[Go to the top of this document](#)

Facility ID: 0250000005 Emissions Unit ID: P004 Issuance type: Title V Final Permit

B. State Enforceable Section

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

1. None.

I. **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>
---	--------------------------------------	--

2. **Additional Terms and Conditions**

1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

II. Operational Restrictions

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

III. Monitoring and/or Record Keeping Requirements

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

IV. Reporting Requirements

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

V. Testing Requirements

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

VI. Miscellaneous Requirements

- 1. None

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

Facility ID: 025000005 Issuance type: Title V Final Permit

Part III - Terms and Conditions for Emissions Units

[Go to the top of this document](#)

Facility ID: 025000005 Emissions Unit ID: P005 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

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

- 1. None.

I. 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>
Tunnel Kiln #2 Swindell - Dressler tunnel kiln fired by natural gas	OAC rule 3745-17-07(A)	See A.I.2.a.
	40 CFR 52.1881(b)(22)(vi)	See A.I.2.b.
	OAC rule 3745-17-11	See A.I.2.c.
	OAC rule 3745-18-56(B)	See A.I.2.d.

2. Additional Terms and Conditions

- a. Visible particulate emissions shall not exceed twenty percent opacity as a six-minute average, except as provided by the rule.
- b. Sulfur dioxide emissions from the kiln shall not exceed 20 pounds per ton of actual process weight input .
- c. Particulate emissions from this emissions unit shall be less than 10 lbs/hr*.

*The uncontrolled mass rate of particulate emissions (PE) from this emissions unit is less than 10 pounds/hour (the permittee has demonstrated this based on stack testing). Therefore, pursuant to OAC rule 3745-17-11(A)(2)(a)(ii), Figure II of OAC rule 3745-17-11 does not apply. In addition, based on Table I of OAC rule 3745-17-11, the allowable PE limitation is greater than 10 lbs PE/hr. However, to ensure that Figure II will not be applicable, the permittee has agreed to accept the PE limitation stated above (less than 10 lbs/hr).

d. Sulfur dioxide emissions shall not exceed 12 pounds of sulfur dioxide per ton of product from the kiln.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

II. Operational Restrictions

1. The sulfur content of the raw materials used in this emissions unit shall not exceed 0.4% sulfur, by weight, as a monthly composited average.
2. The permittee shall burn only natural gas in this emissions unit.
3. The maximum hourly production rate for this emissions unit shall not exceed 9.9 tons per hour of finished brick.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

III. Monitoring and/or Record Keeping Requirements

1. Each calendar month, the permittee shall collect at least one representative grab sample of dried clay brick material and then combine the grab samples into one composite sample for the calendar quarter. The permittee shall perform the material sampling and analyze each composite sample for sulfur content (weight percent). Each calendar quarter, the permittee also shall collect monthly samples of finished product made from clay, combine the grab samples into one composite sample for the calendar quarter, and analyze each composite sample for sulfur content (weight percent). The analysis shall be done using a method similar to ASTM D 5016, "Sulfur in ash from coal and coke using infrared analysis." The furnace used shall be of the resistance type LECO Model SC32 or SC444, with an analysis temperature at least 2100 degrees F. Alternative, but equivalent methods may be used upon written approval by the Ohio EPA Northeast District Office .
2. Each calendar month, the permittee shall collect at least one representative grab sample of dried shale brick material and then combine the grab samples into one composite sample for the calendar year. The permittee shall perform the material sampling and analyze each composite sample for sulfur content (weight percent). Each calendar quarter, the permittee also shall collect monthly samples of finished product made from shale, combine the grab samples into one composite sample for the calendar year, and analyze each composite sample for sulfur content (weight percent). The analysis shall be done using a method similar to ASTM D 5016, "Sulfur in ash from coal and coke using infrared analysis." The furnace used shall be of the resistance type LECO Model SC32 or SC444, with an analysis temperature at least 2100 degrees F. Alternative, but equivalent methods may be used upon written approval by the Ohio EPA Northeast District Office .
3. For each shipment of clay or shale received for processing in this emissions unit, the permittee shall maintain records of total quantity of material received.
4. The permittee shall calculate and record the quarterly and annual average sulfur content (% sulfur) of the clay and shale, respectively, processed in this emissions unit, as well as the quarterly sulfur contents (% sulfur) of the finished product made from clay and the finished product made from shale.
5. Each month, the permittee shall calculate and record the average sulfur dioxide emission rate for clay and shale, based on the most recent sulfur analyses of the raw materials and finished products, in pounds of sulfur dioxide per ton of raw material and per ton of product. This shall be determined by using the following equations:

$$\text{pounds of SO}_2/\text{ton of raw material} = (\text{sulfur content} [\text{weight } \%/100\%]) \times (2 \text{ pounds SO}_2/\text{ pound sulfur}) / (2000)$$

$$\text{pounds of SO}_2/\text{ton of product} = \text{pounds of SO}_2/\text{ton of raw material} / (1 - \text{moisture content of raw material})$$

where;

$$\text{sulfur content} = C(\text{dry}) - C(\text{fired})$$

C(dry) = sulfur content in the dry brick or dry raw material sample(kiln input).

C(fired) = sulfur content in the fired brick sample (kiln output).

6. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
7. The permittee shall maintain monthly records of the weight of the finished brick produced in this emissions unit.
8. The permittee shall maintain daily records of the weight of the raw material entering this emissions unit.
9. The permittee shall maintain monthly records of the hours of operation of this emissions unit.
10. The permittee shall determine the average hourly production rate for this emissions unit. This shall be calculated by dividing (7) by (9) for each month.

11. The permittee shall maintain daily records of the moisture content of the raw materials.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
2. The permittee shall submit deviation (excursion) reports that identify all exceedances of the sulfur dioxide emission limitation of 20.0 pounds of sulfur dioxide per ton of raw material, based upon the record keeping in section A.III.
3. The permittee shall submit deviation (excursion) reports that identify all exceedances of the sulfur dioxide emissions limitation of 12.0 pounds of sulfur dioxide per ton of product, based upon the record keeping in section A.III.
4. The permittee shall submit deviation (excursion) reports that identify all exceedances of the hourly production rate limitation, based upon the record keeping in section A.III.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

V. Testing Requirements

1. Emission Limitation
20% opacity as a six-minute average, except as provided by rule

Applicable Compliance Method
OAC rule 3745-17-03(B)(1), if requested.
2. The following test method(s) shall be employed to demonstrate compliance with the allowable emission rate (s): for particulates, Method 5 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
3. The following test method(s) shall be employed to demonstrate compliance with the allowable emission rate (s): for SO₂, Method 6E of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
4. 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 to demonstrate compliance with the allowable particulate and sulfur dioxide emission rates.
 - b. The emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal.
 - c. 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.
 - d. The sulfur content (% by weight) of the raw material(s) used during the compliance test shall be determined.
5. 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 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.
6. Compliance with sulfur dioxide limit shall be based on the monitoring and record keeping of Section A.III. and the testing of Section A.V.4.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

VI. Miscellaneous Requirements

- 1. None

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

Facility ID: 025000005 Issuance type: Title V Final Permit

[Go to the top of this document](#)

Facility ID: 025000005 Emissions Unit ID: P005 Issuance type: Title V Final Permit

B. State Enforceable Section

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

- 1. None.

I. 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>
---	--------------------------------------	--

2. Additional Terms and Conditions

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

II. Operational Restrictions

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

III. Monitoring and/or Record Keeping Requirements

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

IV. Reporting Requirements

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

V. Testing Requirements

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

VI. Miscellaneous Requirements

- 1. None

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

Facility ID: 025000005 Issuance type: Title V Final Permit

Part III - Terms and Conditions for Emissions Units

[Go to the top of this document](#)

Facility ID: 025000005 Emissions Unit ID: P007 Issuance type: Title V Final Permit

A. State and Federally Enforceable Section

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

1. None.

I. 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>
Mechanical brick tumbler	OAC rule 3745-17-07(A)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05.
	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05.
	OAC rule 3745-31-05 PTI No. 02-12495	See A.I.2.a and b.

2. Additional Terms and Conditions

- a. Particulate emissions (PE) from the fabric filter baghouse exhaust shall not exceed 0.03 grain per dry standard cubic foot (gr/dscf) of exhaust gases, 0.47 pound per hour and 2.06 tons per year.
- b. Visible particulate emissions shall not exceed five percent opacity, as a six-minute average.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

II. Operational Restrictions

1. The pressure drop across the baghouse shall be maintained within the range of 2 to 6 inches of water while the emissions unit is in operation.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall properly operate and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on a daily basis.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

IV. Reporting Requirements

1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

V. Testing Requirements

1. Emission Limitation
PE: 2.06 tons/yr

Applicable Compliance Method
This limit is based on the allowable hourly emission limit (0.47 lb/hr) multiplied by the maximum possible operating hours (8760 hr/yr), and divided by 2000 (lbs/ton). Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.
2. Emission Limitation
5% opacity, as a six-minute average

Applicable Compliance Method
If required by the Ohio EPA, compliance with the allowable visible emissions limitations of this permit shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures in OAC rule 3745-17-03(B)(1).

- 3. Emission Limitation
0.03 gr/dscf and 0.47 per hour particulate emissions

Applicable Compliance Method

If required by the Ohio EPA, compliance with these PE limits shall be demonstrated in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures in OAC rule 3745-17-03(B)(10).

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

VI. **Miscellaneous Requirements**

- 1. None

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

Facility ID: 0250000005 Issuance type: Title V Final Permit

[Go to the top of this document](#)

Facility ID: 0250000005 Emissions Unit ID: P007 Issuance type: Title V Final Permit

B. State Enforceable Section

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

- 1. None.

I. **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>
---	--------------------------------------	--

2. **Additional Terms and Conditions**

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

II. **Operational Restrictions**

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

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

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

IV. **Reporting Requirements**

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

V. **Testing Requirements**

- 1. None

[Go to the top of this document](#)

[Go to the top of Part III for this Emissions Unit](#)

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

VI. **Miscellaneous Requirements**

1. None