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Facility Name: **The Belden Brick Company**

Application Number: **06-5543**

Date: **March 29, 1999**

GENERAL PERMIT CONDITIONS

TERMINATION OF PERMIT TO INSTALL

Substantial construction for installation must take place within 18 months of the effective date of this permit. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

NOTICE OF INSPECTION

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above-named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, or to examine records or reports pertaining to the construction, modification or installation of the source(s) of environmental pollutants identified within this permit.

CONSTRUCTION OF NEW SOURCES

The proposed source(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

If the construction of the proposed source(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of Ohio Administrative Code (OAC) Rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the

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plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet applicable standards.

PERMIT TO INSTALL FEE

In accordance with Ohio Revised Code 3745.11, the specified Permit to Install fee must be remitted within 30 days of the effective date of this permit to install.

PUBLIC DISCLOSURE

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC Rule 3745-49-03.

APPLICABILITY

This Permit to Install is applicable only to the contaminant sources identified. Separate application must be made to the Director for the installation or modification of any other contaminant sources.

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BEST AVAILABLE TECHNOLOGY

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

PERMIT TO OPERATE APPLICATION

A Permit to Operate application must be submitted to the appropriate field office for each air contaminant source in this Permit to Install. In accordance with OAC Rule 3745-35-02, the application shall be filed no later than thirty days after commencement of operation.

SOURCE OPERATION AFTER COMPLETION OF CONSTRUCTION

This facility is permitted to operate each source described by this permit to install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws and regulations.

Facility Name: **The Belden Brick Company**Application Number: **06-5543**Date: **March 29, 1999**AIR EMISSION SUMMARY

The air contaminant emissions units listed below comprise the Permit to Install for **Belden Brick Company** located in **Tuscarawas** County. The emissions units listed below shall not exceed the emission limits/control requirements contained in the table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.

<u>Ohio EPA Source Number</u>	<u>Source Identification Description</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
P201	Gas-fired tunnel kiln	Dry sorbent injection unit followed by a fabric filter and compliance with the terms and conditions of the permit; compliance with the OEPA Air Toxics Policy.	3745-31-05	Emissions of particulate matter shall not exceed 1.9 pounds per hour nor 8.2 tons per year. Emissions of sulfur dioxide shall not exceed 20.2 pounds per hour nor 65.8 tons per rolling 12-month period. Emissions of nitrogen oxides shall not exceed 3.6 pounds per hour nor 15.9 tons per year. Emissions of carbon monoxide shall not exceed 28.7 pounds per hour nor 96.2 tons per rolling 12-month period. Emissions of hydrogen fluoride shall not exceed 1.4 pounds per hour

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
P201 cont'd				nor 6.2 tons per year. Emissions of hydrogen chloride shall not exceed 0.9 pounds per hour nor 4.0 tons per year.
			3745-17-11	The requirements of this rule are less stringent than those defined above as BAT.
			3745-17-07	Visible emissions shall not exceed 20% opacity except as provided by rule.
F225	Factory	Use of fabric filter and compliance with the terms and conditions of the permit.	3745-31-05	Emissions of particulate matter shall not exceed 0.3 pounds per hour nor 1.3 tons per year There shall be no visible emissions from this emissions unit. See Additions Special Term and Condition C, below.

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
F225 cont'd			3745-17-07 3745-17-11	The emission limits in these rules are less stringent than the above.
F251	Two truck raw material dump stations	Visible emissions from this emissions unit shall not exceed 20% opacity.	3745-31-05 3745-17-07 3745-17-11	Emissions of particulate matter shall not exceed 0.1 ton per year Visible emissions from this emissions unit shall not exceed 20% opacity. The emission limits in this rules are less stringent than the above.
F252	One clay and one shale crusher, vented to the baghouse	Use of a fabric filter and compliance with the terms and conditions of the permit.	3745-31-05	Emissions units F252 through F257 are controlled by a single fabric filter. The particulate matter emissions limits apply to the fabric filter outlet. The visible emissions limit applies to the fabric filter outlet. Opacity of uncaptured fugitive

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
F252 cont'd				emissions shall not exceed 7%. Emissions of particulate matter shall not exceed 0.3 pounds per hour nor 1.3 tons per year There shall be no visible emissions from this stack. See Additional Special Term and Condition H, below.
			40 CFR 60 Subpart 000 3745-17-07 3745-17-11	The emission limits in these rules are less stringent than the above.
F253	All material handling operations, vented to the baghouse	Use of a fabric filter and compliance with the terms and conditions of the permit.	3745-31-05	Emissions units F252 through F257 are controlled by a single fabric filter. The particulate matter emissions limits apply to the fabric filter outlet. The visible emissions limit applies to the fabric filter outlet. Opacity

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
F253 cont'd				<p>of uncaptured fugitive emissions shall not exceed 7%.</p> <p>Emissions of particulate matter shall not exceed 0.3 pounds per hour nor 1.3 tons per year</p> <p>There shall be no visible emissions from this stack.</p> <p>See Additional Special Term and Condition H, below.</p>
			<p>40 CFR 60 Subpart 000 3745-17-07 3745-17-11</p>	<p>The emissions limits in these rules are less stringent than the above.</p>
F254	Eight crushed material storage bins, vented to the baghouse	Use of a fabric filter and compliance with the terms and conditions of the permit.	3745-31-05	<p>Emissions units F252 through F257 are controlled by a single fabric filter. The particulate matter emissions limits apply to the fabric filter outlet. The visible emissions limit applies to the</p>

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F254 cont'd				<p>fabric filter outlet. Opacity of uncaptured fugitive emissions shall not exceed 7%.</p> <p>Emission of particulate matter shall not exceed 0.3 pounds per hour nor 1.3 tons per year</p> <p>There shall be no visible emissions from this stack.</p> <p>See Additional Special Terms and Condition H, below.</p>
			<p>40 CFR 60 Subpart 000 3745-17-07 3745-17-11</p>	<p>The emission limits in these rules are less stringent than the above.</p>
F255	One clay and one shale grinder, vented to the baghouse	Use of a fabric filter and compliance with the terms and conditions of the permit.	3745-31-05	Emissions units F252 through F257 are controlled by a single fabric filter. The particulate matter emissions limits apply to the fabric filter outlet.

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F255 cont'd				<p>The visible emissions limit applies to the fabric filter outlet. Opacity of uncaptured fugitive emissions shall not exceed 7%.</p> <p>Emissions of particulate matter shall not exceed 0.3 pounds per hour nor 1.3 tons per year.</p> <p>There shall be no visible emissions from this stack.</p> <p>See Additional Special Term and Condition H, below.</p>
			<p>40 CFR 60 Subpart 000 3745-17-07 3745-17-11</p>	<p>The emissions limits in these rules are less stringent than the above.</p>
F256	<p>Four screening operations, vented to the baghouse</p>	<p>Use of a fabric filter and compliance with the terms and conditions of the permit.</p>	3745-31-05	<p>Emissions units F252 through F257 are controlled by a single fabric filter. The particulate matter emissions limits apply to</p>

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
F256 cont'd				<p>the fabric filter outlet. The visible emissions limit applies to the fabric filter outlet. Opacity of uncaptured fugitive emissions shall not exceed 7%.</p> <p>Emissions of particulate matter shall not exceed 0.3 pounds per hour nor 1.3 tons per year</p> <p>There shall be no visible emissions from this stack.</p> <p>See Additional Special Terms and Condition H, below.</p>
			40 CFR 60 Subpart 000 3745-17-07 3745-17-11	The emissions limits in these rules are less stringent than the above.
F257	Twelve ground storage bins, vented to the baghouse	Use of a fabric filter and compliance with the terms and conditions of the permit.	3745-31-05	Emissions units F252 through F257 are controlled by a single fabric filter. The particulate

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
F257 cont'd				<p>matter emissions limits apply to the fabric filter outlet. The visible emissions limit applies to the fabric filter outlet. Opacity of uncaptured fugitive emissions shall not exceed 7%.</p> <p>Emissions of particulate matter shall not exceed 0.3 pounds per hour nor 1.3 tons per year</p> <p>There shall be no visible emissions from this stack.</p> <p>See Additional Special Term and Condition H, below.</p>
			40 CFR 60 Subpart 000 3745-17-07 3745-17-11	The emissions limits in these rules are less stringent than the above.
F258	Eight additive feeding operations, controlled by	Use of a total enclosure and compliance with the terms and conditions of	3745-31-05	Emissions unit F258 is controlled by a total enclosure.

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<u>Ohio EPA Source Number</u>	<u>Source Identification Number</u>	<u>BAT Determination</u>	<u>Applicable Federal & OAC Rules</u>	<u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u>
F258 Cont'd	a total enclosure	the permit.		Visible emissions of fugitive dust shall not exceed 20% opacity as a three-minute average. See Additional Special Term and Condition H, below.
			3745-17-07 3745-17-11	The emissions limits in these rules are less stringent than the above.
P261	Drying tunnel	Use of waste heat from kiln, the use of natural gas to provide supplemental heat, and compliance with the terms and conditions of the permit.	3745-31-05	1.9 ton VOC per year

SUMMARY

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons/Year</u>
PM	17.4
SO ₂	65.8
NO _x	15.9
CO	96.2
HF	6.2
HCl	4.0
VOC	1.9

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NSPS REQUIREMENTS

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

<u>Source Number</u>	<u>Source Description</u>	<u>NSPS Regulation (Subpart)</u>
F252	One clay and one shale crusher	000
F253	All material handling operations	000
F254	Eight crushed material storage bins	000
F255	One clay and one shale grinder	000
F256	Four screening operations	000
F257	Twelve ground material storage bins	000

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

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

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

Reports are to be sent to:

Ohio Environmental Protection Agency
 DAPC - Permit Management Unit
 P.O. Box 163669
 Columbus, OH 43216-3669

and **Ohio EPA, Southeast District Office**
2195 Front Street
Logan, Ohio 432138

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REPORTING REQUIREMENTS

Unless otherwise specified, reports required by the Permit to Install need only be submitted to **Ohio EPA, Southeast District Office, 2195 Front Street, Logan, Ohio 432138.**

WASTE DISPOSAL

The owner/operator shall comply with any applicable state and federal requirements governing the storage, treatment, transport and disposal of any waste material generated by the operation of the sources.

MAINTENANCE OF EQUIPMENT

This source and its associated air pollution control system(s) shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers in order to minimize air contaminant emissions.

MALFUNCTION/ABATEMENT

In accordance with OAC RULE 3745-15-06, any malfunction of the source(s) or associated air pollution control system(s) shall be reported immediately to the **Ohio EPA, Southeast District Office, 2195 Front Street, Logan, Ohio 432138.**

Except as provided by OAC Rule 3745-15-06(A)(3), scheduled maintenance of air pollution control equipment that requires the shutdown or bypassing of air pollution control system(s) must be accompanied by the shutdown of the associated air pollution sources.

AIR POLLUTION NUISANCES PROHIBITED

The air contaminant source(s) identified in this permit may not cause a public nuisance in violation of OAC Rule 3745-15-07.

CONSTRUCTION COMPLIANCE CERTIFICATION

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be

provided to Ohio EPA upon completion of construction but prior to startup of the source.

ADDITIONAL SPECIAL TERMS AND CONDITIONS

A. NETTING CALCULATIONS

- The Belden Brick Company operates a brick making facility in Sugarcreek, Ohio consisting of several adjacent brick plants. Belden shall install control equipment on the three tunnel kilns at Plant 6 in order to reduce existing source emissions and net out of PSD review. Belden shall install a continuous emissions monitoring system on the existing Plant 6. This system shall be functionally equivalent to the system described in this permit for Plant 2. Adequate records shall be kept by the Plant 6 CEMS to document the compliance status of Plant 2 with applicable PSD significance levels. The Belden Brick Company shall not violate those significance levels. The table below summarizes the average netted emission rates, in tons per year, for Plant 6 over the last two years (1997 and 1998), assuming the control equipment achieves a reduction of 90% for SO₂, HF, and HCl and 95% for PM. Once the control equipment is installed and operational on Plant 6, the emissions from Plant 6 shall be limited to 0.8 ton PM/year, 36.6 tons SO₂/year, 33.9 tons NO_x/year, 95.4 tons CO per year, 1.4 tons VOC per year, 1.3 tons Hf per year, and 0.1 ton HCL per year.

POLLUTANT	PLANT 2 EMISSIONS	PLANT 6 AVG. EMISSIONS (UNCONTROLLED)	PLANT 6 AVG. EMISSIONS REDUCTION	NET INCREASE
Particulate Matter	17.4	16.4	15.6	1.8
Sulfur Dioxide	65.8	357.6	321.8	- 256.0
Nitrogen Oxides	15.9	33.9	0	15.9
Carbon Monoxide	96.2	95.4	0	96.2
VOC	1.9	1.4	0	1.9
Hydrogen Fluoride	6.2	13.3	12.0	- 5.8
Hydrogen Chloride	4.0	0.8	0.7	3.3

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B. AIR TOXIC POLICY CLARIFYING LANGUAGE

1. This permit allows the use of materials specified by the permittee in the permit to install application for this emissions unit. To fulfill the best available technology requirements of (OAC) rule 3745-31-05 and to ensure compliance with OAC rule 3745-15-07 (Air Pollution Nuisances Prohibited), the emission limitation(s) specified in this permit was (were) established using the Ohio EPA's "Air Toxic Policy" and is (are) based on both the materials used and the design parameters of the emissions unit's exhaust system, as specified in the application. The Ohio EPA's "Air Toxic Policy" was applied for each pollutant using the SCREEN 3.0 model and comparing the predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for each pollutant:

Pollutant: hydrogen fluoride

TLV (ug/m3): 2600

Maximum Hourly Emission Rate (lbs/hr): 1.41

Predicted 1-Hour Maximum Ground-Level

Concentration (ug/m3): 20.89

MAGLC (ug/m3): 61.90

OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by the OAC rule 3745-31-01. The permittee is hereby advised that the following changes to the process may be determined to be a "modification":

- a. changes in the composition of the materials used, or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value specified in the above table;

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- b. changes to the emissions unit or its exhaust parameters (e.g., increased emission rate [not including an increase in an "allowable" emission limitation specified in the terms and conditions of this permit], reduced exhaust gas flow rate, and decreased stack height);
- c. changes in the composition of the materials used, or use of new materials, that would result in the emission of an air contaminant not previously permitted; and,
- d. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant that has a listed TLV.

The Ohio EPA will not consider any of the above-mentioned as a "modification" requiring a permit to install, if the following conditions are met:

- a. the change is not otherwise considered a "modification" under OAC Chapter 3745-31;
- b. the permittee can continue to comply with the allowable emission limitations specified in its permit to install; and,
- c. prior to the change, the applicant conducts an evaluation pursuant to the Air Toxic Policy, determines that the changed emissions unit still satisfies the Air Toxic Policy, and the permittee maintains documentation that identifies the change and the results of the application of the Air Toxic Policy for the change.

For any change to the emissions unit or its method of operation that either would require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a final permit to install prior to the change.

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**C. FACTORY EMISSIONS MONITORING AND RECORDKEEPING REQUIREMENTS
(EMISSIONS UNIT F225)**

1. The permittee shall perform daily checks for any visible particulate emissions from the exhaust of the fabric filter control system. The presence or absence of any visible emissions from the exhaust of the fabric filter control system shall be noted in an operations log. If any visible emissions are observed, corrective actions shall be taken to eliminate the visible emissions and these actions shall also be noted in the operations log.

NOTE: Exhaust from this emissions unit is currently vented back into the building. This is the normal operating mode for this emissions unit.

D. TUNNEL KILN OPERATIONAL RESTRICTION (EMISSIONS UNIT P201)

1. Usage (firing) of fireclay shall not exceed 63,482 tons during any 12-month period. Raw material used in this emissions unit consists primarily of shale and fireclay. Testing of raw materials and stack emissions indicate that fireclay contributes much more than shale to the emissions of sulfur dioxide and carbon monoxide. In order to restrict annual emissions to levels at which no computer modeling is required by the PSD rules and/or the Ohio EPA air toxics policy, the permittee has requested that the usage (firing) of fireclay be restricted to 70% of the raw materials used. This limit was calculated from the annualized dry process weight rate as shown in the following equation: $(20705 \text{ \#/hr})(8760 \text{ hr/yr})(70\% \text{ clay})(0.0005 \text{ ton/\#}) = 63482 \text{ tons/yr}$. This requirement, which will limit the uncontrolled emission rate, combined with the control requirement will assure compliance with the annual emission limits.
2. To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, The Belden Brick Company shall not exceed the cumulative clay usage rate specified in the following table:

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Month(s)	Maximum Allowable Tons of Cumulative Clay Fired
1	6,300
1-2	12,600
1-3	18,900
1-4	25,200
1-5	31,500
1-6	37,800
1-7	44,100
1-8	50,400
1-9	53,900
1-10	57,400
1-11	60,900
1-12	63,482

3. After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual usage limitation shall be based upon a rolling, 12-month summation of the fireclay used (fired).

E. BAGHOUSE OPERATIONAL RESTRICTION (EMISSIONS UNITS P201 AND F225 (see C.1))

1. The pressure drop across the baghouse shall be maintained within the range established during the initial stack test of P201 while the emissions unit is in operation. This pressure drop range may be modified as a result of stack testing required by this permit.

F. RECORDKEEPING REQUIREMENTS ASSOCIATED WITH THE AIR TOXIC POLICY REQUIREMENTS

1. The permittee shall collect and record the following information for each change where the air toxic modeling was required pursuant to the Air Toxic Policy:
 - a. background data that describes the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.); and,

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- b. a copy of the resulting computer model runs that show the results of the application of the Air Toxic Policy for the change.

**G. RAW MATERIALS MONITORING AND RECORDKEEPING REQUIREMENTS
(EMISSIONS UNIT P201)**

1. The permittee shall maintain monthly records both of the raw material used (fired) and the total fireclay content, in tons, for all products fired in the tunnel kiln.

**H. GRINDING PLANT MONITORING AND RECORDKEEPING REQUIREMENTS
(EMISSIONS UNITS F251 - F258)**

1. The grinding plant consists of the following emissions units:
 - F251 - Two truck raw material dump stations;
 - F252 - One clay and one shale crusher, vented to the fabric filter;
 - F253 - All material handling operations, vented to the fabric filter;
 - F254 - Eight crushed material storage bins, vented to the fabric filter;
 - F255 - One clay and one shale grinder, vented to the fabric filter;
 - F256 - Four screening operations, vented to the fabric filter;
 - F257 - Twelve ground material storage bins, vented to the fabric filter;
 - F258 - Eight additive feeding operations.

The permittee shall perform daily checks for any visible particulate emissions from the exhaust of the fabric filter control system. The presence or absence of any visible emissions from the exhaust of the fabric filter control system shall be noted in an operations log. If

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any visible emissions are observed, corrective actions shall be taken to eliminate the visible emissions and these actions shall also be noted in the operations log.

NOTE: Exhaust from this emissions unit is currently vented back into the building. This is the normal operating mode for this emissions unit.

I. SCRUBBER CERTIFICATION, MONITORING AND RECORDKEEPING REQUIREMENTS (EMISSIONS UNIT P201 and for Plant 6 Control System)

1. For sulfur dioxide, carbon monoxide, and flow:

Prior to the installation of the continuous SO₂, CO, and flow monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification Test 2, 4 or 4A, and 6, respectively for approval by the Ohio EPA, Central Office. The SO₂, CO, and flow monitoring system must be installed prior to start up.

Within 60 days of installation of the CEMS, the permittee shall conduct certification tests of the continuous SO₂, CO, and flow monitoring system pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification Test 2, 4 or 4A, and 6, respectively. Personnel from the Ohio EPA, Southeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to Ohio EPA, Southeast District Office within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, Southeast District Office and the Ohio EPA, Central Office.

Certification of the continuous SO₂, CO, and flow monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all

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requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification Test 2, 4 or 4A, and 6, respectively.

The permittee shall operate and maintain equipment to continuously monitor and record SO₂, CO, and flow from this emissions unit in units of the applicable standard(s). Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The permittee shall maintain records of all data obtained by the continuous SO₂, CO, and flow monitoring system including, but not limited to, pressure, temperature, ACFM, and real time data gathered from the differential optical absorption spectroscopy system for SO₂ and CO emissions in units of the applicable standard (pounds per hour), results of daily calibration checks, and magnitude of any calibration adjustments.

Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of SO₂ and CO values in excess of the applicable limit(s) specified in the air summary of this permit.

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting any continuous SO₂, CO, and flow monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The

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total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by February 1, May 1, August 1, and November 1 of each year and shall address the data obtained during the previous calendar quarter.

Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the Ohio EPA, Southeast District Office within 30 days following the end of each calendar quarter in a manner prescribed by the Director.

Within 180 days of the installation of the CEMS, the permittee shall develop a written quality assurance/quality control plan for the continuous SO₂, CO, and flow monitoring system designed to ensure continuous valid and representative readings of SO₂, CO, and flow. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous SO₂, CO, and flow monitoring system must be kept on site and available for inspection during regular office hours.

2. For hydrogen fluoride and hydrogen chloride:

The hydrogen fluoride and hydrogen chloride monitoring system must be installed prior to start up.

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Within 60 days of installation of the CEMS, the permittee shall conduct a performance specification test of such equipment pursuant to ORC section 3704.03(I). The CEMS for hydrogen fluoride and hydrogen chloride must be capable of passing a relative accuracy test using 40 CFR Part 60, Appendix A, Reference Method 13 for hydrogen fluoride and Reference Method 26A for hydrogen chloride. The permittee must conduct nine(9) runs of at least twenty-one (21) minutes in duration. The results between the CEMS and each above listed Reference Methods must be within 20 percent (+/-). These tests must be performed within sixty (60) days of startup. Personnel from the Ohio EPA, Southeast District Office shall be permitted to examine equipment and witness the certification tests, and two copies of the test results shall be submitted to the Ohio EPA, Southeast District Office within 30 days after the test is completed. Certification of the continuous hydrogen fluoride and hydrogen chloride monitoring system shall be granted upon determination by the Ohio EPA Central Office that the system meets all requirements of ORC section 3704.03(I). In accordance with OAC rule 3745-15-04, the permittee shall submit the test results for approval of the Ohio EPA within 30 days of conducting the test.

The permittee shall operate and maintain existing equipment to continuously monitor and record hydrogen fluoride and hydrogen chloride from this emissions unit in units of the applicable standard. The permittee shall maintain records of all data obtained by the hydrogen fluoride and hydrogen chloride monitoring system including, but not limited to, pressure, temperature and real time data gathered from the differential optical absorption spectroscopy system for hydrogen fluoride and hydrogen chloride emissions in units of the applicable standard (pounds per hour), results of daily calibration checks, and magnitude of any calibration adjustments.

Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting all instances of hydrogen fluoride and hydrogen chloride values in excess of the limitations specified in the terms and conditions

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of this permit, detailing the date, commencement and completion times, duration, magnitude, reason (if known) and corrective actions taken (if any) of all values above the applicable emission limitations.

The permittee shall submit reports within thirty (30) days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting any continuous hydrogen fluoride and hydrogen chloride monitoring system downtime while the emissions unit was on-line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of source and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly report. If there are no excess emissions during the calendar quarter, then the permittee shall submit a statement to that effect along with the emissions unit and monitor operating times. These quarterly excess emission reports shall be submitted by February 1, May 1, August 1, and November 1 of each year and shall address the data obtained during previous calendar quarter.

Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the Ohio EPA, Southeast District Office within thirty (30) days following the end of each calendar quarter in a manner prescribed by the Director.

Within one hundred eighty (180) days of installation of the CEMS, the permittee shall develop a written quality assurance/quality control plan for the CEMS designed to ensure continuous valid and representative readings of hydrogen fluoride and hydrogen chloride. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. A logbook dedicated to the monitoring system must be kept on site and available for inspection during regular office hours.

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Each continuous monitoring system consists of all the equipment used to acquire data and includes any sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

The data obtained from the certified CEMS shall be used to determine compliance with the applicable emission limitation.

If at any time it is determined that the continuous monitor cannot adequately document the compliance status of the tunnel kiln, the permittee shall immediately begin complying with the requirements of Additional Term and Condition X and this requirement and the associated requirements pertaining to the continuous monitor shall no longer be applicable.

J. BAGHOUSE PRESSURE DROP MONITORING AND RECORDKEEPING REQUIREMENT (EMISSIONS UNITS P201 AND F225 (see C.1))

1. The permittee shall properly install, 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 continuous basis.

K. MONITORING AND RECORDS RETENTION

1. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings, if a strip-chart recorder is employed for continuous monitoring instrumentation, and copies of all reports required by the permit. Such records may be maintained in computerized form.

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L. RAW MATERIALS REPORTING REQUIREMENTS (EMISSIONS UNIT P201)

1. The permittee shall submit deviation (excursion) reports that identify all months during which the usage of fireclay was above the maximum specified level during any cumulative monthly period for the first year or any subsequent 12-month period.

M. FACTORY AND GRINDING PLANT REPORTING REQUIREMENTS (EMISSIONS UNITS F225 AND F252 - F257)

1. The permittee shall submit deviation (excursion) reports that identify all days during which visible particulate emissions are observed from the exhaust of the fabric filter control system.

The reports shall be submitted on:

- a. January 31 of each year and shall cover the period from July 1 until December 31; and,
- b. July 31 of each year and shall cover the period from January 1 until June 30.

If no visible particulate emissions are observed from the exhaust of the fabric filter control system during a given period, the permittee shall submit a report which states that no visible particulate emissions were observed from the exhaust of the fabric filter control system during that period. (These reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

N. BAGHOUSE PRESSURE DROP REPORTING REQUIREMENT (EMISSIONS UNITS P201 AND F225 (see C.1))

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.

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O. REPORTING REQUIREMENTS

1. The permittee shall submit required reports in the following manner:
 - a. reports of any required monitoring and/or recordkeeping information shall be submitted to the Ohio EPA, Southeast District Office; and,
 - b. except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA, Southeast District Office. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

P. EMISSION TESTING REQUIREMENTS (EMISSIONS UNITS P201, F252 - F257 and Plant 6 Control Equipment)

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. the emission testing of P201 shall be conducted within 60 days of beginning to produce salable product or 6 months of startup, whichever is earlier. The emissions testing of Plant 6 control equipment shall be conducted within 6 months of normal operation of that control equipment;

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- b. the emission testing of P201 shall be conducted to demonstrate compliance with the particulate matter, sulfur dioxide, nitrogen oxides, carbon monoxide, hydrogen fluoride, and hydrogen chloride emissions limits;
 - c. the emission testing of F252 - F257 shall be conducted in accordance with 40 CFR 60.672;
 - d. the test methods employed to demonstrate compliance with the allowable mass emission rates shall be among those listed in 40 CFR Part 60, Appendix A for each tested pollutant. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA; and,
 - e. the tests shall be conducted while the emissions unit is operating at or near its maximum capacity and using worst case raw materials, unless otherwise specified or approved by the Ohio EPA, Southeast District Office. If the emissions unit is not able to be tested at or near its maximum capacity within the first six months of operation, this testing will need to be repeated within 60 days after attaining that production schedule.
2. 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, Southeast 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, Southeast District Office's refusal to accept the results of the emission test(s).
3. Personnel from the Ohio EPA, Southeast 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

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unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

4. 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, Southeast 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, Southeast District Office.

Q. COMPLIANCE DETERMINATION FOR VISIBLE EMISSIONS OF PARTICULATE EMISSIONS (EMISSIONS UNITS P201)

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

Applicable Compliance Method:

OAC rule 3745-17-03(B)(1)

R. COMPLIANCE DETERMINATION (EMISSIONS UNIT P201)

1. Sulfur dioxide emissions shall not exceed 20.2 pound per hour nor 65.8 tons per rolling 12-month period. Carbon monoxide emissions shall not exceed 28.7 pounds per hour nor 96.2 tons per rolling 12-month period. Hydrogen fluoride emissions shall not exceed 1.4 pound per hour nor 6.2 tons per year. Hydrogen chloride emissions shall not exceed 0.9 pound per hour nor 4.0 tons per year.

Applicable Compliance Method:

Compliance with the sulfur dioxide, carbon monoxide, hydrogen fluoride, and hydrogen chloride emission limitations shall be based upon the records and report data specified in Additional Terms and Conditions I.1 and I.2. Data from the Plant # 6 continuous emissions monitors shall be used, as necessary, to demonstrate that the PSD significance levels have not been exceeded. If required, the permittee shall demonstrate compliance with the allowable mass emission rate for sulfur dioxide,

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carbon monoxide, hydrogen fluoride, and hydrogen chloride in accordance with the methods and procedures specified in 40 CFR Part 60 Appendix A.

2. Particulate matter emissions shall not exceed 1.9 pound per hour nor 8.2 tons per year. Nitrogen oxides emissions shall not exceed 3.6 pound per hour nor 15.9 tons per year.

Applicable Compliance Method:

Compliance with the hourly particulate matter and nitrogen oxides emissions limitations shall be based on the initial stack test. Annual limitations were calculated by multiplying the hourly limitations by 8760 hours per year.

S. COMPLIANCE DETERMINATION (EMISSIONS UNIT F225)

1. Particulate emissions shall not exceed 0.3 pound per hour nor 1.3 tons per year.

Applicable Compliance Method:

Compliance with the particulate matter emission limit of 0.3 pound per hour shall be determined based on emission testing conducted in accordance with OAC rule 3745-17-03. Emission testing is not specifically required to demonstrate compliance with this emission limit, but, if appropriate, may be requested pursuant to OAC rule 3745-15-04(A). The ton per year emission limitation was derived by multiplying by 8760 hours per year and dividing by 2,000 pounds per tons.

T. COMPLIANCE DETERMINATION FOR EMISSIONS UNITS P251 and F252 - F257

1. Visible emissions from P251 shall not exceed 20% opacity.

Applicable Compliance Method:

OAC rule 3745-17-03(B)(1)

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2. Emissions of PM from P251 shall not exceed 0.1 ton per year.

Applicable Compliance Method:

Compliance has been determined by multiplying the emission factor from AP-42, Fifth Edition, Table 11.19.2-2 for truck unloading of fragmented stone by the annual throughput of raw materials, as follows:
(1.6×10^{-6} pound PM per ton unloaded)(108,000 tons unloaded per year)(0.0005 ton/pound) = 0.000086 TPY

3. Opacity of uncaptured fugitive emissions from F252 - F257 shall not exceed 7%.

Applicable Compliance Method:

40 CFR Part 60, Appendix A, Method 9.

U. COMPLIANCE DETERMINATION FOR EMISSIONS UNIT P261

1. Organic compound emissions shall not exceed 1.9 tons per year.

Applicable Compliance Method

The ton per year emission limitation was derived by multiplying the maximum hourly dryer capacity of 14.79 tons/hr by the appropriate emission factor of 0.03 # VOC/ton product (AP-42, Fifth Edition, Supplement C, Table 11.3-5) by 8760 hours per year and dividing by 2,000 pounds per tons.

V. INITIAL NOTIFICATION REPORTING REQUIREMENT FOR MACT STANDARD

1. Within 120 days after promulgation of the 40 CFR 63 Subpart for clay products manufacturing, the permittee shall submit an Initial Notification Report which certifies whether or not the permittee is subject to the promulgated standard. If the permittee is subject to the final standard, the following information shall also be included in the Initial Notification Report:

- a. the name and mailing address of the permittee;

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- b. the physical location of the source if it is different from the mailing address;
- c. identification of the relevant MACT standard and the permittee's compliance date;
- d. a brief description of the nature, design, size, and method of operation of the source, including the operating design capacity and an identification of each emission point of each hazardous air pollutant; and,
- e. a statement of whether or not the permittee is a major source or an area source according to the promulgated MACT.

W. COMPLIANCE DEMONSTRATION REPORTING REQUIREMENT FOR MACT STANDARD

- 1. Within 60 days following completion of the required compliance demonstration activity specified in the 40 CFR 63 Subpart for clay products manufacturing, the permittee shall submit a notification of compliance status that contains the following information:
 - a. the methods used to determine compliance;
 - b. the results of any performance tests, opacity or visible emission observations, continuous monitoring systems (CMS) performance evaluations, and/or other monitoring procedures or methods that were conducted;
 - c. the methods that will be used for determining continuous compliance, including a description of monitoring and reporting requirements and test methods;
 - d. the type and quantity of hazardous air pollutants emitted by the source, reported in units and averaging times in accordance with the test methods specified in the 40 CFR 63 Subpart for clay products manufacturing;

- e. an analysis demonstrating whether the affected source is a major source or an area source;
- f. a description of the air pollution control equipment or method for each emission point, including each control device or method for each hazardous air pollutant and the control efficiency (percent) for each control device or method; and,
- g. a statement of whether or not the permittee has complied with the requirements of the 40 CFR 63 Subpart for clay products manufacturing.

X. ALTERNATIVE CONDITION TO REPLACE CONTINUOUS MONITORING

- 1. If, after 6 months have elapsed since the beginning of production of salable product, it is determined that the continuous monitor cannot adequately document the compliance status of the tunnel kiln, the permittee shall immediately begin complying with the following requirements and the requirements pertaining to the continuous monitor shall no longer be applicable. If sufficient cause is shown that the monitor has a reasonable expectation of adequately documenting the compliance status of the tunnel kiln, a 6-month extension may be granted.
 - a. SCRUBBER OPERATIONAL RESTRICTION
 - i. At all times while the emissions unit is in operation, the usage rate of all three sorbents shall each be continuously maintained at a value of not less than 95% of the rate used during the latest stack test which was performed while the emissions unit was being operated at worst case conditions.
 - b. SCRUBBER MONITORING AND RECORDKEEPING REQUIREMENTS
 - i. The permittee shall properly install, operate and maintain equipment to monitor and record the sorbent usage rates while the emissions unit is in operation. The monitoring devices and recorder(s) shall be installed, calibrated, operated and

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maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

ii. The permittee shall collect and record the following information:

aa. the usage rate of each sorbent, on an hourly basis; and,

bb. a log or record of operating time for the control device, monitoring equipment, and the associated emissions unit.

c. SCRUBBER REPORTING REQUIREMENTS

i. The permittee shall submit deviation (excursion) reports that identify all periods of time during which a sorbent usage rate was not maintained at or above the required levels.