



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

TO: Interested Parties / Applicant
DATE: September 11, 2006
RE: General Shale Brick, Inc. / 109-22854-00002
FROM: Nisha Sizemore
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER.dot 03/23/06



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

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Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204-2251
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Mr. Mark Stacy
General Shale Brick, Inc.
Old State Road Hwy 67 West
 Mooresville, IN 46158

September 11, 2006

Re: **109-22854-00002**
Significant Source Modification to:
Part 70 Operating Permit No.: **T 109-16617-00002**

Dear Mr. Stacy:

General Shale Brick, Inc., previously known as General Shale Products, LLC - Plants 20 and 32, was issued Part 70 Operating Permit **T 109-16617-00002** on June 12, 2006, for a stationary brick and structural clay manufacturing source located at Highway 67 South and CR 1000 North, Mooresville, Indiana. An application to modify the source was received on March 23, 2006. Pursuant to 326 IAC 2-7-10.5 the following emission units are approved for construction at the source, subject to Condition 7 of the General Construction Conditions:

- (a) One (1) brick manufacturing line, identified as New Plant, consisting of the following:
 - (1) One (1) brick making room and sand system (mill room), identified as EU-NPMR, equipped with a baghouse, identified as CD-MRBH and exhausting to Stack MRBH, capacity: 72.5 tons of clay and shale per hour.
 - (2) One (1) coal/natural gas fired brick kiln, identified as EU-NPK, equipped with a dry lime injection baghouse, identified as DIFF-03, and exhausting to Stack DIFF-03, capacity: 20.55 tons of bricks and 25.0 million British thermal units per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is a new affected source, using an emissions control system to comply with the rule.
 - (3) One (1) natural gas/propane brick dryer, identified as EU-NPBD1, exhausting to Stack NPBD1, capacity: 20.55 tons of bricks and 13.29 million British thermal units per hour.
- (b) The following insignificant activities:
 - One (1) kiln car vacuum cleaning system.
 - Fugitive conveying.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.
7. The construction of these facilities shall not commence until the Permittee demonstrates compliance with the limitations in Condition D.2.1(e) of SPM 109-22865-00002 using the testing required by Condition D.2.5(c) of SPM 109-22865-00002.

This significant source modification authorizes construction of the new emission units. Operating conditions shall be incorporated into the Part 70 Operating Permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12. Operation is not approved until the significant permit modification has been issued.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter contact CarrieAnn Paukowits, c/o OAQ, 100 North Senate Avenue, Indianapolis, Indiana 46204-2251, at 631-691-3395, ext. 18 or in Indiana at 1-800-451-6027 (ext 631-691-3395).

Sincerely,

Original Signed By:
Nisha Sizemore, Chief
Permits Branch
Office of Air Quality

CAP/MES

Attachments

cc: File - Morgan County
Morgan County Health Department
Air Compliance Section Inspector - Jim Thorpe
Compliance Branch
Administrative and Development Section
Technical Support and Modeling - Michele Boner
Warren Paschal, General Shale Brick, Inc.
M. Dale Overcash, Trinity Consultants



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**PART 70 SIGNIFICANT SOURCE MODIFICATION
OFFICE OF AIR QUALITY**

**General Shale Brick, Inc.
Highway 67 South and CR 1000 North
 Mooresville, Indiana 46158**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. **This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions.**

Operation Permit No.: T 109-16617-00002	
Issued by: Original Signed by Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: June 12, 2006 Expiration Date: June 12, 2011
First Significant Source Modification No.: 109-22854-00002	Conditions Affected: A.1, A.2, A.3, B.11, D.1.1, D.2.1, D.2.3, D.2.4, D.2.5, D.2.7 added, D.2.8 (previously D.2.7), D.2.9 added, D.2.10 added, D.2.11 added, D.2.12 (previously D.2.8), D.2.13 (previously D.2.9), D.2.10 - D.2.13 removed, Sections D.3, D.4 and E.1 added, Emergency Occurrence Report revised and one report form added
Issued by: Original Signed By: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: September 11, 2006 Expiration Date: June 12, 2011

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary brick and structural clay manufacturing source.

Responsible Official:	Manager of Environmental Compliance
Source Address:	Highway 67 South and CR 1000 North, Mooresville, Indiana 46158
Mailing Address:	P.O. Box 156, Mooresville, Indiana 46158
General Source Phone Number:	(317) 831-3317
SIC Code:	3251
County Location:	Morgan
Source Location Status:	Nonattainment for ozone under 8-hour standard and PM _{2.5} Attainment for all other criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules and Emission Offset; Major Source, Section 112 of the Clean Air Act

A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

This brick and structural clay products manufacturing company consists of three (3) plants:

- (a) Plant No. 20 is located at Highway 67 South and CR 1000 N, Mooresville, Indiana;
- (b) Plant No. 32 is located at Highway 67 South and CR 1000 N, Mooresville, Indiana; and
- (c) The New Plant is located at Highway 67 South and CR 1000 N, Mooresville, Indiana.

Since the three (3) plants are located on contiguous or adjacent properties, belong to the same industrial grouping, and under common control of the same entity, they will be considered one (1) source.

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) clay/shale processing operation, identified as EU-001, consisting of grinding and screening operations, installed in 1970 with one (1) grinder replaced in 1999, equipped with a baghouse for particulate control, installed in 1993, exhausting to Stack 001, capacity: 100 tons of clay/shale per hour.
- (b) Two (2) brick manufacturing lines, identified as EU-002, consisting of the following:
 - (1) One (1) brick manufacturing line, identified as Line 1, installed in 1970, modified in 1979, located at Plant No. 20, consisting of the following:
 - (A) One (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 1 Kiln and one (1) coal and natural gas-fired kiln, identified as Line 1 Kiln, equipped with a dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01, exhausting to Stack DIFF-01, rated at 25 million British thermal units per hour, capacity: 14.8 tons of bricks per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is an existing affected source using an emissions control system to comply with the rule.
 - (B) One (1) mill room, identified as EU-P20-MR, equipped with a baghouse, identified as CD-P20-MR, capacity: 65 tons per hour.
 - (2) One (1) brick manufacturing line, identified as Line 2, installed in 1987, located at Plant No. 32, consisting of the following:

- (A) One (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 2 Kiln, and one (1) coal and natural gas-fired kiln, identified as Line 2 Kiln, equipped with a dry lime injection baghouse, identified as DIFF-02, exhausting to Stack DIFF-02, rated at 25 million British thermal units per hour, capacity: 13.7 tons of bricks per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is an existing affected source using an emissions control system to comply with the rule.
- (B) One (1) mill room, identified as EU-P32-MR, equipped with a baghouse, identified as CD-P32-MR, capacity: 70 tons per hour.
- (c) One (1) brick manufacturing line, identified as New Plant, consisting of the following:
 - (1) One (1) brick making room and sand system (mill room), identified as EU-NPMR, equipped with a baghouse, identified as CD-MRBH and exhausting to Stack MRBH, capacity: 72.5 tons of clay and shale per hour.
 - (2) One (1) coal/natural gas fired brick kiln, identified as EU-NPK, equipped with a dry lime injection baghouse, identified as DIFF-03, and exhausting to Stack DIFF-03, capacity: 20.55 tons of bricks and 25.0 million British thermal units per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is a new affected source, using an emissions control system to comply with the rule.
 - (3) One (1) natural gas/propane brick dryer, identified as EU-NPBD1, exhausting to Stack NPBD1, capacity: 20.55 tons of bricks and 13.29 million British thermal units per hour.
- (d) Waste brick crushing operations, identified as EU-BC, including conveying, crushing and screening, using wet suppression, capacity: 150 tons of bricks per hour.

B.11 Emergency Provisions [326 IAC 2-7-16]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
 - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or

Telephone Number: 317-233-0178 (ask for Compliance Section)
Facsimile Number: 317-233-6865

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(9) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] Clay/Shale Processing

- (a) One (1) clay/shale processing operation, identified as EU-001, consisting of grinding and screening operations, installed in 1970 with one (1) grinder replaced in 1999, equipped with a baghouse for particulate control, installed in 1993, exhausting to Stack 001, capacity: 100 tons of clay/shale per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

D.1.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from clay and shale processing (screening and grinding) operation shall not exceed 51.3 pounds per hour when operating at a process weight rate of 100 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] Brick Manufacturing Lines

- (b) Two (2) brick manufacturing lines, identified as EU-002, consisting of the following:
- (1) One (1) brick manufacturing line, identified as Line 1, installed in 1970, modified in 1979, located at Plant No. 20, consisting of the following:
- (A) One (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 1 Kiln, and one (1) coal and natural gas-fired kiln, identified as Line 1 Kiln, equipped with a dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01, exhausting to Stack DIFF-01, rated at 25 million British thermal units per hour, capacity: 14.8 tons of bricks per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is an existing affected source using an emissions control system to comply with the rule.
 - (B) One (1) mill room, identified as EU-P20-MR, equipped with a baghouse, identified as CD-P20-MR, capacity: 65 tons per hour.
- (2) One (1) brick manufacturing line, identified as Line 2, installed in 1987, located at Plant No. 32, equipped with consisting of the following:
- (A) One (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 2 Kiln, and one (1) coal and natural gas-fired kiln, identified as Line 2 Kiln, equipped with a dry lime injection baghouse, identified as DIFF-02, exhausting to Stack DIFF-02, rated at 25 million British thermal units per hour, capacity: 13.7 tons of bricks per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is an existing affected source using an emissions control system to comply with the rule.
 - (B) One (1) mill room, identified as EU-P32-MR, equipped with a baghouse, identified as CD-P32-MR, capacity: 70 tons per hour.

(The information describing the process contained in this facility description box is descriptive information and

does not constitute enforceable conditions.)

D.2.1 PSD, Emission Offset and Nonattainment NSR Minor Limits [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-1.1-5]

- (a) The production of bricks at the Line 1 tunnel kiln shall not exceed 129,648 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The production of bricks at the Line 2 tunnel kiln shall not exceed 120,012 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (c) The production of bricks at the two (2) kilns, Line 1 Kiln and Line 2 Kiln, shall not exceed 243,456 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month.
- (d) Prior to operation of the baghouses on Line 1 Kiln and Line 2 Kiln, the SO₂ emissions from each of the kilns shall not exceed 3.77 pounds of SO₂ per ton of bricks. This will continue to limit the potential to emit SO₂ from each kiln to less than two hundred and fifty (250) tons per year.
- (e) After the baghouses commence operation, the potential to emit PM, PM₁₀, SO₂ and NO_x shall be limited as follows:

Facility	NO _x Limit	PM Limit	PM ₁₀ Limit	SO ₂ Limit
	lbs/ton bricks	lbs/ton bricks	lbs/ton bricks	lbs/ton bricks
Line 1 Kiln	0.813	0.336	0.336	1.68
Line 2 Kiln	0.813	0.336	0.336	2.32
Line 1 mill room (EU-P20-MR)	N/A	0.0063	0.0036	N/A
Line 2 mill room (EU-P32-MR)	N/A	0.0063	0.0036	N/A

Compliance with these limitations limits the potential to emit PM and PM₁₀ to less than one hundred (100) tons per year, the potential to emit SO₂ to less than two hundred and fifty (250) tons per year and the potential to emit NO_x to less than one hundred (100) tons per year from the source existing prior to the addition of the New Plant. Therefore, the source prior to the addition of the New Plant is a minor source pursuant to 326 IAC 2-1.1-5, Nonattainment NSR, 326 IAC 2-2, PSD, and 326 IAC 2-3, Emission Offset, and these limits render the requirements of 326 IAC 2-2 and 326 IAC 2-3 not applicable.

D.2.3 Particulate [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the Line 1 Kiln shall not exceed 24.9 pounds per hour when operating at a process weight rate of 14.8 tons per hour.

This pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the Line 2 Kiln shall not exceed 23.7 pounds per hour when operating at a process weight rate of 13.7 tons per hour.

This pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (c) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the one (1) mill room (EU-P20-MR) shall not exceed 47.1 pounds per hour when operating at a process weight rate of 65 tons per hour.

The pound per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (d) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the one (1) mill room (EU-P32-MR) shall not exceed 47.8 pounds per hour when operating at a process weight rate of 70 tons per hour.

The pound per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and all control devices.

D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

- (a) Within 180 days after the issuance of this Part 70 permit renewal, 109-16617-00002, in order to demonstrate compliance with Condition D.2.1(d), the Permittee shall perform SO₂ testing for the Line 1 Kiln and Line 2 Kiln stacks utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. After the baghouses on the kilns commence operation, this testing shall be superseded by the testing required in Condition D.2.5(c).
- (b) Within 180 days after issuance of this Part 70 permit renewal, 109-16617-00002, in order to demonstrate compliance with Condition D.2.3, the Permittee shall perform PM testing for the Line 1 Kiln and Line 2 Kiln stacks utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

- (c) Prior to commencing construction of the New Plant described in Section D.3, but no later than 180 days after the baghouses on the kilns commence operation, in order to demonstrate compliance with Condition D.2.1(e), the Permittee shall perform PM, PM₁₀, SO₂ and NO_x testing for the Line 1 Kiln/Dryer stack and the Line 2 Kiln/Dryer stack (DIFF-01 and DIFF-02). PM₁₀ includes filterable and condensable PM₁₀. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

D.2.7 Particulate and SO₂ Control [326 IAC 2-7-6(6)]

- (a) In order to comply with Condition D.2.1(e), the dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01, for particulate and SO₂ control shall be in operation and control emissions from the Line 1 Kiln at all times that the Line 1 Kiln is in operation.
- (b) In order to comply with Condition D.2.1(e), the dry lime injection baghouse, identified as DIFF-02, for particulate and SO₂ control shall be in operation and control emissions from the Line 2 Kiln at all times that the Line 2 Kiln is in operation.
- (c) In order to comply with Condition D.2.1(e), the baghouse, identified as CD-P20-MR, for particulate control shall be in operation and control emissions from the Line 1 mill room, identified as EU-P20-MR, at all times that the Line 1 mill room is in operation.
- (d) In order to comply with Condition D.2.1(e), the baghouse, identified as CD-P32-MR, for particulate control shall be in operation and control emissions from the Line 2 mill room identified as EU-P32-MR, at all times that the Line 2 mill room is in operation.
- (e) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.2.8 Visible Emissions Notations

- (a) Visible emission notations of the Line 1 Kiln and Line 2 Kiln stack exhausts (DIFF-01 and DIFF-02) and the mill room baghouses (CD-P20-MR and CD-P32-MR) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.2.9 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) The Permittee shall record the pressure drop across the baghouses (CD-P20-MR and CD-P32-MR) used in conjunction with the mill rooms (EU-P20-MR and EU-P32-MR) at least once per day when the mill rooms are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.
- (b) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.2.10 Broken or Failed Bag Detection

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

D.2.11 Compliance Assurance SO₂ Monitoring [40 CFR 64]

Pursuant to 40 CFR 64, Compliance Assurance Monitoring, the Permittee shall perform the following monitoring, which is based on the compliance monitoring requirements in NESHAP Subpart JJJJ:

- (a) The Permittee shall continuously monitor the dry lime feed rate at the one (1) dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01, and the one (1) dry lime injection baghouse, identified as DIFF-02.
- (b) The Permittee shall inspect the dry lime feed system and feeder setting on the one (1) dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01, and the one (1) dry lime injection baghouse, identified as DIFF-02, once per shift.
- (c) If the lime feeder setting drops below the level established during the latest performance test, the switches monitoring the interlock system on the limestone delivery systems, including the lime screw conveyor and holding bin, are not functioning properly, or the Permittee discovers cracks, holes or abnormal/excessive wear on the indicators for the screw conveyor and holding bin, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances.

D.2.12 Record Keeping Requirements

- (a) To document compliance with Condition D.2.1 the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the brick production limit as well as the SO₂ emission limits established in Condition D.2.1.
 - (1) The total number of bricks produced at each kiln each month;
 - (2) Calendar dates covered in the compliance determination period;
 - (3) Sulfur content, heat content, and ash content of the coal; and
 - (4) Sulfur dioxide emission rates.
- (b) To document compliance with Condition D.2.8, the Permittee shall maintain records of visible emission notations of the Line 1 Kiln and Line 2 Kiln stack exhausts (DIFF-01 and DIFF-02) once per day while combusting coal.
- (c) To document compliance with Condition D.2.9, the Permittee shall maintain records once per day of the pressure drop across the baghouses (CD-P20-MR and CD-P32-MR) used in conjunction with the mill rooms (EU-P20-MR and EU-P32-MR) during normal operation when venting to the atmosphere.
- (d) To document compliance with Condition D.2.11, the Permittee shall maintain records of the feeder setting once per shift and continuous records of the dry lime feed rate.
- (e) To document compliance with Condition D.2.1(d) and (e), the Permittee shall maintain a record of the date the one (1) dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01, and the one (1) dry lime injection baghouse, identified as DIFF-02, commence operation.
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.13 Reporting Requirements

- (a) A quarterly summary of the information to document compliance with Condition D.2.1(a) through (c) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) Reports indicating the date the one (1) dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01, and the one (1) dry lime injection baghouse, identified as DIFF-02, commence operation shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, within thirty (30) days of commencing operation of each baghouse. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] Brick Manufacturing Line (New Plant)

- (c) One (1) brick manufacturing line, identified as New Plant, consisting of the following:
 - (1) One (1) brick making room and sand system (mill room), identified as EU-NPMR, equipped with a baghouse, identified as CD-MRBH and exhausting to Stack MRBH, capacity: 72.5 tons of clay and shale per hour.
 - (2) One (1) coal/natural gas fired brick kiln, identified as EU-NPK, equipped with a dry lime injection baghouse, identified as DIFF-03, and exhausting to Stack DIFF-03, capacity: 20.55 tons of bricks and 25.0 million British thermal units per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is a new affected source, using an emissions control system to comply with the rule.
 - (3) One (1) natural gas/propane brick dryer, identified as EU-NPBD1, exhausting to Stack NPBD1, capacity: 20.55 tons of bricks and 13.29 million British thermal units per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 PSD and Nonattainment NSR Minor Modification Limits [326 IAC 2-2] [326 IAC 2-1.1-5]

- (a) The construction of these facilities shall not commence until the Permittee demonstrates compliance with the pound per ton emission limitations in Condition D.2.1(e) using the testing required by Condition D.2.5(c).
- (b) The potential to emit PM, PM₁₀, and SO₂ shall be limited as follows:

Facility	PM Limit	PM ₁₀ Limit	SO ₂ Limit
	lbs/ton bricks	lbs/ton bricks	lbs/ton bricks
New Plant Kiln	0.336	0.336	2.60
New Plant Mill Room	0.0063	0.0036	N/A
Total			

Compliance with these limitations limits the potential to emit PM and PM₁₀ to less than one hundred (100) tons per year and the potential to emit SO₂ to less than two hundred and fifty (250) tons per year from the addition of the New Plant. Therefore, this modification is a minor modification pursuant to 326 IAC 2-1.1-5, Nonattainment NSR, 326 IAC 2-2, PSD, and the requirements of 326 IAC 2-2 and 326 IAC 2-3 are not applicable.

D.3.2 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-1]

Pursuant to 326 IAC 7-1.1 (SO₂ Emissions Limitations), the SO₂ emissions from the kiln, identified as EU-NPK, shall not exceed six (6.0) pounds per million British thermal units heat input while combusting coal.

D.3.3 Particulate [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the one (1) proposed brick making room and sand system (EU-NPMR) shall not exceed 48.1 pounds per hour when operating at a process weight rate of 72.5 tons per hour.

The pound per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from one (1) proposed coal/natural gas fired brick kiln (EU-NPK) shall not exceed 31.1 pounds per hour when operating at a process weight rate of 20.55 tons per hour.

This pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (c) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the one (1) proposed natural gas/propane brick dryer (EU-NPBD1) shall not exceed 31.1 pounds per hour when operating at a process weight rate of 20.55 tons per hour.

This pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.3.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and all control devices.

Compliance Determination Requirements

D.3.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within 180 days of startup, in order to demonstrate compliance with Conditions D.3.1(b) and D.3.3(b), the Permittee shall perform PM, PM₁₀ and SO₂ testing for the one (1) coal/natural gas fired brick kiln stack (DIFF-03). PM₁₀ includes filterable and condensable PM₁₀. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

D.3.6 Particulate and SO₂ Control [326 IAC 2-7-6(6)]

- (a) In order to comply with Conditions D.3.1(b) and D.3.3(b), the dry lime injection baghouse, identified as DIFF-03, for particulate and SO₂ control shall be in operation and control emissions from the one (1) coal/natural gas fired brick kiln (EU-NPK) at all times that the kiln is in operation.
- (b) In order to comply with Condition D.3.1(b), the baghouse, identified as CD-MRBH, for particulate control shall be in operation and control emissions from the one (1) brick making room and sand system, identified as EU-NPMR, at all times that the one (1) brick making room and sand system, identified as EU-NPMR, is in operation.

- (c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.3.7 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 2-7-5(3)(A)] [326 IAC 2-7-6]

Pursuant to 326 IAC 7-2, the Permittee shall demonstrate that the sulfur dioxide emissions from the kiln (EU-NPK) do not exceed six (6.0) pounds per million British thermal units. Compliance shall be determined utilizing one of the following options:

- (a) Providing vendor analysis of coal delivered, if accompanied by a certification from the fuel supplier, as described under 40 CFR 60.48c(f)(3). The certification shall include:
 - (1) The name of the coal supplier; and
 - (2) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the coal was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected); and
 - (3) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and
 - (4) The methods used to determine the properties of the coal; or
- (b) Sampling and analyzing the coal by using one of the following procedures:
 - (1) Minimum Coal Sampling Requirements and Analysis Methods:
 - (A) The coal sample acquisition point shall be at a location where representative samples of the total coal flow to be combusted by the facility or facilities may be obtained. A single as-bunkered or as-burned sampling station may be used to represent the coal to be combusted by multiple facilities using the same stockpile feed system;
 - (B) Coal shall be sampled at least one (1) time per day;
 - (C) Minimum sample size shall be five hundred (500) grams;
 - (D) Samples shall be composited and analyzed at the end of each calendar quarter;
 - (E) Preparation of the coal sample, heat content analysis, and sulfur content analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), (e); or
 - (2) Sample and analyze the coal pursuant to 326 IAC 3-7-3; or
- (c) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the tunnel kilns, using 40 CFR 60, Appendix A, Method 6 in accordance with the

procedures in 326 IAC 3-6, which is conducted with such frequency as to generate the amount of information required by (a) or (b) above. [326 IAC 7-2-1(b)]

A determination of noncompliance pursuant to any of the methods specified in (a), (b), or (c) above shall not be refuted by evidence of compliance pursuant to the other method.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.8 Visible Emissions Notations

- (a) Visible emission notations of the one (1) coal/natural gas fired brick kiln (EU-NPK) stack exhaust (DIFF-03) and the one (1) brick making room and sand system (EU-NPMR) baghouse stack exhaust (MRBH) shall be performed once per day during normal daylight operations.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.3.9 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) The Permittee shall record the pressure drop across the baghouse (CD-MRBH) used in conjunction with the one (1) brick making room and sand system (EU-NPMR) at least once per day when the brick making room and sand system is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.
- (b) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.3.10 Broken or Failed Bag Detection

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as

an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

D.3.11 Compliance Assurance SO₂ Monitoring [40 CFR 64]

- (a) The Permittee shall continuously monitor the dry lime feed rate at the one (1) dry lime injection baghouse, identified as DIFF-03.
- (b) The Permittee shall inspect the dry lime feed system and feeder setting on the one (1) dry lime injection baghouse, identified as DIFF-03, once per shift.
- (c) If the lime feeder setting drops below the level established during the latest performance test, the switches monitoring the interlock system on the limestone delivery systems, including the lime screw conveyor and holding bin, are not functioning properly, or the Permittee discovers cracks, holes or abnormal/excessive wear on the indicators for the screw conveyor and holding bin, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.12 Record Keeping Requirements

- (a) To document compliance with Condition D.3.1 the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the brick production limit as well as the SO₂ emission limits established in Condition D.2.1.
 - (1) The total number of bricks produced at each kiln each month;
 - (2) Calendar dates covered in the compliance determination period;
 - (3) Sulfur content, heat content, and ash content of the coal; and
 - (4) Sulfur dioxide emission rates;
- (b) To document compliance with Condition D.3.8, the Permittee shall maintain records of visible emission notations of the one (1) coal/natural gas fired brick kiln (EU-NPK) stack exhaust (DIFF-03) once per day while combusting coal.
- (c) To document compliance with Condition D.3.9, the Permittee shall maintain records once per day of the pressure drop across the baghouse (CD-MRBH) used in conjunction with the one (1) brick making room and sand system (EU-NPMR) during normal operation when venting to the atmosphere.
- (d) To document compliance with Condition D.3.11, the Permittee shall maintain records of the feeder setting once per shift.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] Waste Brick Crushing

- (d) Waste brick crushing operations, identified as EU-BC, including conveying, crushing and screening, using wet suppression, capacity: 150 tons of bricks per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the waste brick crushing operations (EU-BC) shall not exceed 55.4 pounds per hour when operating at a process weight rate of 150 tons per hour.

The pound per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

SECTION E.1 FACILITY OPERATION CONDITIONS

NESHAP Subpart JJJJJ

- (a) One (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 1 Kiln and one (1) coal and natural gas-fired kiln, identified as Line 1 Kiln, equipped with a dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01, exhausting to Stack DIFF-01, rated at 25 million British thermal units per hour, capacity: 14.8 tons of bricks per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is an existing affected source using an emissions control system to comply with the rule.
- (b) One (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 2 Kiln, and one (1) coal and natural gas-fired kiln, identified as Line 2 Kiln, equipped with a dry lime injection baghouse, identified as DIFF-02, exhausting to Stack DIFF-02, rated at 25 million British thermal units per hour, capacity: 13.7 tons of bricks per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is an existing affected source using an emissions control system to comply with the rule.
- (c) One (1) coal/natural gas fired brick kiln, identified as EU-NPK, equipped with a dry lime injection baghouse, identified as DIFF-03, and exhausting to Stack DIFF-03, capacity: 20.55 tons of bricks and 25.0 million British thermal units per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is a new affected source, using an emissions control system to comply with the rule.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

- E.1.1 General Provisions Relating to NESHAP Subpart JJJJJ [326 IAC 20-1] [40 CFR Part 63, Subpart A] Pursuant to 40 CFR 63.8505, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, as specified

in Table 7 of 40 CFR Part 63, Subpart JJJJJ and in accordance with the schedule in 40 CFR 63 Subpart JJJJJ.

E.1.2 NESHAP Subpart JJJJJ Requirements [40 CFR Part 63, Subpart JJJJJ]

Pursuant to 40 CFR Part 63, Subpart JJJJJ, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart JJJJJ, for the facilities listed in this section, with a compliance date of May 1, 2007 for the one (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 1 Kiln and one (1) coal and natural gas-fired kiln, identified as Line 1 Kiln, and the one (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 2 Kiln, and one (1) coal and natural gas-fired kiln, identified as Line 2 Kiln, and upon startup for the one (1) coal/natural gas fired brick kiln, identified as EU-NPK, as specified as follows:

What This Subpart Covers

§ 63.8380 What is the purpose of this subpart?

This subpart establishes national emission limitations for hazardous air pollutants (HAP) emitted from brick and structural clay products (BSCP) manufacturing facilities. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

§ 63.8385 Am I subject to this subpart?

You are subject to this subpart if you own or operate a BSCP manufacturing facility that is, is located at, or is part of, a major source of HAP emissions according to the criteria in paragraphs (a) and (b) of this section.

(a) A BSCP manufacturing facility is a plant site that manufactures brick (including, but not limited to, face brick, structural brick, and brick pavers); clay pipe; roof tile; extruded floor and wall tile; and/or other extruded, dimensional clay products. Brick and structural clay products manufacturing facilities typically process raw clay and shale, form the processed materials into bricks or shapes, and dry and fire the bricks or shapes.

(b) A major source of HAP emissions is any stationary source or group of stationary sources within a contiguous area under common control that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (10 tons) or more per year or any combination of HAP at a rate of 22.68 megagrams (25 tons) or more per year.

§ 63.8390 What parts of my plant does this subpart cover?

(a) This subpart applies to each existing, new, or reconstructed affected source at a BSCP manufacturing facility.

(b) The existing affected source is an existing tunnel kiln with a design capacity equal to or greater than 9.07 megagrams per hour (Mg/hr) (10 tons per hour (tph)) of fired product according to paragraphs (b)(1) through (3) of this section. For the remainder of this subpart, a tunnel kiln with a design capacity equal to or greater than 9.07 Mg/hr (10 tph) of fired product will be called a large tunnel kiln, and a tunnel kiln with a design capacity less than 9.07 Mg/hr (10 tph) of fired product will be called a small tunnel kiln.

(1) For existing tunnel kilns that do not have sawdust dryers, the kiln exhaust process stream (*i.e.*, the only process stream) is subject to the requirements of this subpart.

(e) Each new or reconstructed tunnel kiln is an affected source regardless of design capacity. All process streams from each new or reconstructed tunnel kiln are subject to the requirements of this subpart.

(h) A source is a new affected source if construction of the affected source began after July 22, 2002, and you met the applicability criteria at the time you began construction.

(j) An affected source is existing if it is not new or reconstructed.

§ 63.8395 When do I have to comply with this subpart?

(a) If you have a new or reconstructed affected source, you must comply with this subpart according to paragraphs (a)(1) and (2) of this section.

(2) If the initial startup of your affected source is after May 16, 2003, then you must comply with the applicable emission limitations in Tables 1 and 2 to this subpart upon initial startup of your affected source.

(b) If you have an existing affected source, you must comply with the applicable emission limitations in Tables 1 and 2 to this subpart no later than May 16, 2003. On February 2, 2006, IDEM, OAQ approved an extension of the final compliance date contained in 40 CFR Part 63, Subpart JJJJJ, for the two (2) existing tunnel kilns. The termination date of this extension is May 1, 2007, which is the final compliance date. The Permittee must comply with the terms of the extension as required by Condition C.10.

(e) You must meet the notification requirements in §63.8480 according to the schedule in §63.8480 and in 40 CFR part 63, subpart A. Some of the notifications must be submitted before you are required to comply with the emission limitations in this subpart.

Emission Limitations

§ 63.8405 What emission limitations must I meet?

- (a) You must meet each emission limit in Table 1 to this subpart that applies to you.
- (b) You must meet each operating limit in Table 2 to this subpart that applies to you.

§ 63.8410 What are my options for meeting the emission limitations?

To meet the emission limitations in Tables 1 and 2 to this subpart, you must use one or more of the options listed in paragraphs (a) and (b) of this section.

(a) *Emissions control system.* Use an emissions capture and collection system and an APCD and demonstrate that the resulting emissions or emissions reductions meet the emission limits in Table 1 to this subpart, and that the capture and collection system and APCD meet the applicable operating limits in Table 2 to this subpart.

General Compliance Requirements

§ 63.8420 What are my general requirements for complying with this subpart?

- (a) You must be in compliance with the emission limitations (including operating limits) in this subpart at all times, except during periods of startup, shutdown, and malfunction and during periods of routine control device maintenance as specified in paragraph (e) of this section.
- (b) Except as specified in paragraph (e) of this section, you must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in §63.6(e)(1)(i). During the period between the compliance date specified for your affected source in §63.8395 and the date upon which continuous monitoring systems (CMS) (e.g., continuous parameter monitoring systems) have been installed and verified and any applicable operating limits have been set, you must maintain a log detailing the operation and maintenance of the process and emissions control equipment.
- (c) You must develop a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in §63.6(e)(3).
- (d) You must prepare and implement a written operation, maintenance, and monitoring (OM&M) plan according to the requirements in §63.8425.
- (e) If you own or operate an affected kiln and must perform routine maintenance on the control device for that kiln, you may bypass the kiln control device and continue operating the kiln upon approval by the Administrator provided you satisfy the conditions listed in paragraphs (e)(1) through (5) of this section.
 - (1) You must request a routine control device maintenance exemption from the Administrator. Your request must justify the need for the routine maintenance on the control device and the time required to accomplish the maintenance activities, describe the maintenance activities and the frequency of the maintenance activities, explain why the maintenance cannot be accomplished during kiln shutdowns, describe how you plan to minimize emissions to the greatest extent possible during the maintenance, and provide any other documentation required by the Administrator.

- (2) The routine control device maintenance exemption must not exceed 4 percent of the annual operating uptime for each kiln.
- (3) The request for the routine control device maintenance exemption, if approved by the Administrator, must be incorporated by reference in and attached to the affected source's title V permit.
- (4) You must minimize HAP emissions during the period when the kiln is operating and the control device is offline.
- (5) You must minimize the time period during which the kiln is operating and the control device is offline.
- (f) You must be in compliance with the provisions of subpart A of this part, except as noted in Table 7 to this subpart.

§ 63.8425 What do I need to know about operation, maintenance, and monitoring plans?

- (a) You must prepare, implement, and revise as necessary an OM&M plan that includes the information in paragraph (b) of this section. Your OM&M plan must be available for inspection by the permitting authority upon request.
- (b) Your OM&M plan must include, as a minimum, the information in paragraphs (b)(1) through (13) of this section.
 - (1) Each process and APCD to be monitored, the type of monitoring device that will be used, and the operating parameters that will be monitored.
 - (2) A monitoring schedule that specifies the frequency that the parameter values will be determined and recorded.
 - (3) The limits for each parameter that represent continuous compliance with the emission limitations in §63.8405. The limits must be based on values of the monitored parameters recorded during performance tests.
 - (4) Procedures for the proper operation and routine and long-term maintenance of each APCD, including a maintenance and inspection schedule that is consistent with the manufacturer's recommendations.
 - (5) Procedures for installing the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last APCD).
 - (6) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction system.
 - (7) Continuous monitoring system performance evaluation procedures and acceptance criteria (e.g., calibrations).
 - (8) Procedures for the proper operation and maintenance of monitoring equipment consistent with the requirements in §§63.8450 and 63.8(c)(1), (3), (4)(ii), (7), and (8).
 - (9) Continuous monitoring system data quality assurance procedures consistent with the requirements in §63.8(d).
 - (10) Continuous monitoring system recordkeeping and reporting procedures consistent with the requirements in §63.10(c), (e)(1), and (e)(2)(i).
 - (11) Procedures for responding to operating parameter deviations, including the procedures in paragraphs (b)(11)(i) through (iii) of this section.
 - (i) Procedures for determining the cause of the operating parameter deviation.
 - (ii) Actions for correcting the deviation and returning the operating parameters to the allowable limits.
 - (iii) Procedures for recording the times that the deviation began and ended and corrective actions were initiated and completed.
 - (12) Procedures for keeping records to document compliance.
 - (13) If you operate an affected kiln and you plan to take the kiln control device out of service for routine maintenance, as specified in §63.8420(e), the procedures specified in paragraphs (b)(13)(i) and (ii) of this section.
 - (i) Procedures for minimizing HAP emissions from the kiln during periods of routine maintenance of the kiln control device when the kiln is operating and the control device is offline.
 - (ii) Procedures for minimizing the duration of any period of routine maintenance on the kiln control device when the kiln is operating and the control device is offline.

(c) Changes to the operating limits in your OM&M plan require a new performance test. If you are revising an operating limit parameter value, you must meet the requirements in paragraphs (c)(1) and (2) of this section.

(1) Submit a notification of performance test to the Administrator as specified in §63.7(b).

(2) After completing the performance tests to demonstrate that compliance with the emission limits can be achieved at the revised operating limit parameter value, you must submit the performance test results and the revised operating limits as part of the Notification of Compliance Status required under §63.9(h).

(d) If you are revising the inspection and maintenance procedures in your OM&M plan, you do not need to conduct a new performance test.

Testing and Initial Compliance Requirements

§ 63.8435 By what date must I conduct performance tests?

You must conduct performance tests within 180 calendar days after the compliance date that is specified for your source in §63.8395 and according to the provisions in §63.7(a)(2).

§ 63.8440 When must I conduct subsequent performance tests?

(a) You must conduct a performance test before renewing your 40 CFR part 70 operating permit or at least every 5 years following the initial performance test.

(b) You must conduct a performance test when you want to change the parameter value for any operating limit specified in your OM&M plan.

§ 63.8445 How do I conduct performance tests and establish operating limits?

(a) You must conduct each performance test in Table 3 to this subpart that applies to you.

(b) Before conducting the performance test, you must install and calibrate all monitoring equipment.

(c) Each performance test must be conducted according to the requirements in §63.7 and under the specific conditions in Table 3 to this subpart.

(d) You must test while operating at the maximum production level.

(e) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §63.7(e)(1).

(f) You must conduct at least three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour.

(g) You must use the data gathered during the performance test and the equations in paragraphs (g)(1) and (2) of this section to determine compliance with the emission limitations.

(1) To determine compliance with the production-based hydrogen fluoride (HF), hydrogen chloride (HCl), and particulate matter (PM) emission limits in Table 1 to this subpart, you must calculate your mass emissions per unit of production for each test run using Equation 1 of this section:

$$MP = \frac{ER}{P} \quad (\text{Eq. 1})$$

Where:

MP=mass per unit of production, kilograms (pounds) of pollutant per megagram (ton) of fired product
ER=mass emission rate of pollutant (HF, HCl, or PM) during each performance test run, kilograms (pounds) per hour

P=production rate during each performance test run, megagrams (tons) of fired product per hour.

(2) To determine compliance with the percent reduction HF and HCl emission limits in Table 1 to this subpart, you must calculate the percent reduction for each test run using Equation 2 of this section:

$$PR = \frac{ER_i - ER_o}{ER_i} (100) \quad (\text{Eq. 2})$$

Where:

PR=percent reduction, percent

ER_i=mass emission rate of specific HAP (HF or HCl) entering the APCD, kilograms (pounds) per hour

ER_o=mass emission rate of specific HAP (HF or HCl) exiting the APCD, kilograms (pounds) per hour.

(h) You must establish each site-specific operating limit in Table 2 to this subpart that applies to you as specified in Table 3 to this subpart.

§ 63.8450 What are my monitoring installation, operation, and maintenance requirements?

(a) You must install, operate, and maintain each CMS according to your OM&M plan and the requirements in paragraphs (a)(1) through (5) of this section.

(1) Conduct a performance evaluation of each CMS according to your OM&M plan.

(2) The CMS must complete a minimum of one cycle of operation for each successive 15-minute period. To have a valid hour of data, you must have at least three of four equally spaced data values (or at least 75 percent if you collect more than four data values per hour) for that hour (not including startup, shutdown, malfunction, out-of-control periods, or periods of routine control device maintenance covered by a routine control device maintenance exemption as specified in §63.8420(e)).

(3) Determine and record the 3-hour block averages of all recorded readings, calculated after every 3 hours of operation as the average of the previous 3 operating hours. To calculate the average for each 3-hour average period, you must have at least 75 percent of the recorded readings for that period (not including startup, shutdown, malfunction, out-of-control periods, or periods of routine control device maintenance covered by a routine control device maintenance exemption as specified in §63.8420(e)).

(4) Record the results of each inspection, calibration, and validation check.

(5) At all times, maintain the monitoring equipment including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(f) For each lime or chemical feed rate measurement device, you must meet the requirements in paragraphs (a)(1) through (5) and paragraphs (f)(1) and (2) of this section.

(1) Locate the measurement device in a position that provides a representative feed rate measurement.

(2) At least semiannually, conduct a calibration check.

(h) Requests for approval of alternate monitoring procedures must meet the requirements in §§63.8445(i) and 63.8(f).

§ 63.8455 How do I demonstrate initial compliance with the emission limitations?

(a) You must demonstrate initial compliance with each emission limitation that applies to you according to Table 4 to this subpart.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.8480(e).

Continuous Compliance Requirements

§ 63.8465 How do I monitor and collect data to demonstrate continuous compliance?

(a) You must monitor and collect data according to this section.

(b) Except for periods of monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must monitor continuously (or collect data at all required intervals) at all times that the affected source is operating. This includes periods of startup, shutdown, malfunction, and routine control device maintenance as specified in §63.8420(e) when the affected source is operating.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities for purposes of calculating data averages. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. You must use all the valid data collected during all other periods in assessing compliance. Any averaging period for which you do not have valid monitoring data and such data are required constitutes a deviation from the monitoring requirements.

§ 63.8470 How do I demonstrate continuous compliance with the emission limitations?

(a) You must demonstrate continuous compliance with each emission limit and operating limit in Tables 1 and 2 to this subpart that applies to you according to the methods specified in Table 5 to this subpart.

(c) You must report each instance in which you did not meet each emission limit and each operating limit in this subpart that applies to you. This includes periods of startup, shutdown, malfunction, and routine control device maintenance. These instances are deviations from the emission limitations in this subpart. These deviations must be reported according to the requirements in §63.8485.

(e) Consistent with §§63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with §63.6(e)(1) and your OM&M plan. The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in §63.6(e).

(f) Deviations that occur during periods of control device maintenance covered by an approved routine control device maintenance exemption according to §63.8420(e) are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with the approved routine control device maintenance exemption.

(g) You must demonstrate continuous compliance with the operating limits in Table 2 to this subpart for visible emissions (VE) from tunnel kilns equipped with DLA, DIFF, or DLS/FF by monitoring VE at each kiln stack according to the requirements in paragraphs (g)(1) through (3) of this section.

(1) Perform daily VE observations of each kiln stack according to the procedures of Method 22 of 40 CFR part 60, appendix A. You must conduct the Method 22 test while the affected source is operating under normal conditions. The duration of each Method 22 test must be at least 15 minutes.

(2) If VE are observed during any daily test conducted using Method 22 of 40 CFR part 60, appendix A, you must promptly initiate and complete corrective actions according to your OM&M plan. If no VE are observed in 30 consecutive daily Method 22 tests for any kiln stack, you may decrease the frequency of Method 22 testing from daily to weekly for that kiln stack. If VE are observed during any weekly test, you must promptly initiate and complete corrective actions according to your OM&M plan, resume Method 22 testing of that kiln stack on a daily basis, and maintain that schedule until no VE are observed in 30 consecutive daily tests, at which time you may again decrease the frequency of Method 22 testing to a weekly basis.

(3) If VE are observed during any test conducted using Method 22 of 40 CFR part 60, appendix A, you must report these deviations by following the requirements in §63.8485.

Notifications, Reports, and Records

§ 63.8480 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(f)(4), and 63.9 (b) through (e), (g)(1), and (h) that apply to you, by the dates specified.

(c) As specified in §63.9(b)(3), if you start up your new or reconstructed affected source on or after May 16, 2003, you must submit an Initial Notification not later than 120 calendar days after you become subject to this subpart.

(d) If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin, as required in §63.7(b)(1).

(e) If you are required to conduct a performance test as specified in Table 3 to this subpart, you must submit a Notification of Compliance Status as specified in §63.9(h) and paragraphs (e)(1) and (2) of this section.

(1) For each compliance demonstration that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test, according to §63.10(d)(2).

(2) In addition to the requirements in §63.9(h)(2)(i), you must include the information in paragraphs (e)(2)(i) and (ii) of this section in your Notification of Compliance Status.

- (i) The operating limit parameter values established for each affected source with supporting documentation and a description of the procedure used to establish the values.
- (f) If you request a routine control device maintenance exemption according to §63.8420(e), you must submit your request for the exemption no later than 30 days before the compliance date.

§ 63.8485 What reports must I submit and when?

- (a) You must submit each report in Table 6 to this subpart that applies to you.
- (b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 6 to this subpart and as specified in paragraphs (b)(1) through (5) of this section.
 - (1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.8395 and ending on June 30 or December 31, and lasting at least 6 months, but less than 12 months. For example, if your compliance date is March 1, then the first semiannual reporting period would begin on March 1 and end on December 31.
 - (2) The first compliance report must be postmarked or delivered no later than July 31 or January 31 for compliance periods ending on June 30 and December 31, respectively.
 - (3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.
 - (4) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31 for compliance periods ending on June 30 and December 31, respectively.
 - (5) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (4) of this section.
- (c) The compliance report must contain the information in paragraphs (c)(1) through (7) of this section.
 - (1) Company name and address.
 - (2) Statement by a responsible official with that official's name, title, and signature, certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
 - (3) Date of report and beginning and ending dates of the reporting period.
 - (4) If you had a startup, shutdown or malfunction during the reporting period and you took actions consistent with your SSMP and OM&M plan, the compliance report must include the information specified in §63.10(d)(5)(i).
 - (5) A description of control device maintenance performed while the control device was offline and the kiln controlled by the control device was operating, including the information specified in paragraphs (c)(5)(i) through (iii) of this section.
 - (i) The date and time when the control device was shutdown and restarted.
 - (ii) Identification of the kiln that was operating and the number of hours that the kiln operated while the control device was offline.
 - (iii) A statement of whether or not the control device maintenance was included in your approved routine control device maintenance exemption developed as specified in §63.8420(e). If the control device maintenance was included in your approved routine control device maintenance exemption, then you must report the information in paragraphs (c)(5)(iii)(A) through (C) of this section.
 - (A) The total amount of time that the kiln controlled by the control device operated during the current semiannual compliance period and during the previous semiannual compliance period.
 - (B) The amount of time that each kiln controlled by the control device operated while the control device was offline for maintenance covered under the routine control device maintenance exemption during the current semiannual compliance period and during the previous semiannual compliance period.
 - (C) Based on the information recorded under paragraphs (c)(5)(iii)(A) and (B) of this section, compute the annual percent of kiln operating uptime during which the control device was offline for routine maintenance using Equation 1 of this section.

Where:

RM=Annual percentage of kiln uptime during which control device was offline for routine control device maintenance

DT_p=Control device downtime claimed under the routine control device maintenance exemption for the previous semiannual compliance period

DT_c=Control device downtime claimed under the routine control device maintenance exemption for the current semiannual compliance period

KU_p=Kiln uptime for the previous semiannual compliance period

KU_c=Kiln uptime for the current semiannual compliance period

(6) If there are no deviations from any emission limitations (emission limits or operating limits) that apply to you, the compliance report must contain a statement that there were no deviations from the emission limitations during the reporting period.

(7) If there were no periods during which the CMS was out-of-control as specified in your OM&M plan, the compliance report must contain a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(e) For each deviation from an emission limitation (emission limit or operating limit) occurring at an affected source where you are using a CMS to comply with the emission limitations in this subpart, you must include the information in paragraphs (c)(1) through (5) and paragraphs (e)(1) through (13) of this section. This includes periods of startup, shutdown, malfunction, and routine control device maintenance.

(1) The total operating time of each affected source during the reporting period.

(2) The date and time that each malfunction started and stopped.

(3) The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.

(4) The date, time, and duration that each CMS was out-of-control, including the pertinent information in your OM&M plan.

(5) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction; during routine control device maintenance covered in your approved routine control device maintenance exemption; or during another period.

(6) A description of corrective action taken in response to a deviation.

(7) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(8) A breakdown of the total duration of the deviations during the reporting period into those that were due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(9) A summary of the total duration of CMS downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during that reporting period.

(10) A brief description of the process units.

(11) A brief description of the CMS.

(12) The date of the latest CMS certification or audit.

(13) A description of any changes in CMS, processes, or control equipment since the last reporting period.

(f) If you have obtained a title V operating permit according to 40 CFR part 70 or 40 CFR part 71, you must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If you submit a compliance report according to Table 6 to this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all required information concerning deviations from any emission limitation (including any operating limit), then submitting the compliance report will satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submitting a compliance report will not otherwise affect any obligation you may have to report deviations from permit requirements to the permitting authority.

§ 63.8490 What records must I keep?

(a) You must keep the records listed in paragraphs (a)(1) through (4) of this section.

- (1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirements in §63.10(b)(2)(xiv).
- (2) The records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.
- (3) Records of performance tests as required in §63.10(b)(2)(viii).
- (4) Records relating to control device maintenance and documentation of your approved routine control device maintenance exemption, if you request such an exemption under §63.8420(e).
- (b) You must keep the records required in Table 5 to this subpart to show continuous compliance with each emission limitation that applies to you.
- (c) You must also maintain the records listed in paragraphs (c)(1) through (6) of this section.
- (2) For each deviation of an operating limit parameter value, the date, time, and duration of the deviation, a brief explanation of the cause of the deviation and the corrective action taken, and whether the deviation occurred during a period of startup, shutdown, or malfunction.
- (3) For each affected source, records of production rates on a fired-product basis.
- (4) Records for any approved alternative monitoring or test procedures.
- (5) Records of maintenance and inspections performed on the APCD.
- (6) Current copies of your SSMP and OM&M plan, including any revisions, with records documenting conformance.

§ 63.8495 In what form and for how long must I keep my records?

- (a) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1).
- (b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
- (c) You must keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You may keep the records offsite for the remaining 3 years.

Other Requirements and Information

§ 63.8505 What parts of the General Provisions apply to me?

Table 7 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

§ 63.8510 Who implements and enforces this subpart?

- (a) This subpart can be implemented and enforced by us, the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to your State, local, or tribal agency.
- (b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under section 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.
- (c) The authorities that cannot be delegated to State, local, or tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.
- (1) Approval of alternatives to the applicability requirements in §§63.8385 and 63.8390, the compliance date requirements in §63.8395, and the non-opacity emission limitations in §63.8405.
- (2) Approval of major changes to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.
- (3) Approval of major changes to monitoring under §63.8(f) and as defined in §63.90.
- (4) Approval of major changes to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

§ 63.8515 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in §63.2, and in this section as follows:

Air pollution control device (APCD) means any equipment that reduces the quantity of a pollutant that is emitted to the air.

Bag leak detection system means an instrument that is capable of monitoring PM loadings in the exhaust of a fabric filter in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light-scattering, light-transmittance, or other effects to monitor relative PM loadings.

Brick and structural clay products (BSCP) manufacturing facility means a plant site that manufactures brick (including, but not limited to, face brick, structural brick, and brick pavers); clay pipe; roof tile; extruded floor and wall tile; and/or other extruded, dimensional clay products. Brick and structural clay products manufacturing facilities typically process raw clay and shale, form the processed materials into bricks or shapes, and dry and fire the bricks or shapes.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limitation (including any operating limit) or work practice standard;
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart for any affected source required to obtain such a permit; or
- (3) Fails to meet any emission limitation (including any operating limit) or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Dry lime injection fabric filter (DIFF) means an APCD that includes continuous injection of hydrated lime or other sorbent into a duct or reaction chamber followed by a fabric filter.

Dry lime scrubber/fabric filter (DLS/FF) means an APCD that includes continuous injection of humidified hydrated lime or other sorbent into a reaction chamber followed by a fabric filter. These systems typically include recirculation of some of the sorbent.

Dry limestone adsorber (DLA) means an APCD that includes a limestone storage bin, a reaction chamber that is essentially a packed tower filled with limestone, and may or may not include a peeling drum that mechanically scrapes reacted limestone to regenerate the stone for reuse.

Emission limitation means any emission limit or operating limit.

Fabric filter means an APCD used to capture PM by filtering a gas stream through filter media; also known as a baghouse.

Initial startup means:

- (1) For a new or reconstructed tunnel kiln controlled with a DLA, and for a tunnel kiln that would be considered reconstructed but for §63.8390(i)(1) or §63.8390(i)(2), the time at which the temperature in the kiln first reaches 260 °C (500 °F) and the kiln contains product; or
- (2) For a new or reconstructed tunnel kiln controlled with a DIFF, DLS/FF, or WS, the time at which the kiln first reaches a level of production that is equal to 75 percent of the kiln design capacity or 12 months after the affected source begins firing BSCP, whichever is earlier.

Kiln exhaust process stream means the portion of the exhaust from a tunnel kiln that exhausts directly to the atmosphere (or to an APCD), rather than to a sawdust dryer.

Large tunnel kiln means a tunnel kiln (existing, new, or reconstructed) with a design capacity equal to or greater than 9.07 Mg/hr (10 tph) of fired product.

Particulate matter (PM) means, for purposes of this subpart, emissions of PM that serve as a measure of total particulate emissions, as measured by Method 5 (40 CFR part 60, appendix A), and as a surrogate for metal HAP contained in the particulates including, but not limited to, antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium.

Plant site means all contiguous or adjoining property that is under common control, including properties that are separated only by a road or other public right-of-way. Common control includes properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, or any combination thereof.

Research and development kiln means any kiln whose purpose is to conduct research and development for new processes and products and is not engaged in the manufacture of products for commercial sale, except in a de minimis manner.

Responsible official means responsible official as defined in 40 CFR 70.2.

Small tunnel kiln means a tunnel kiln (existing, new, or reconstructed) with a design capacity less than 9.07 Mg/hr (10 tph) of fired product.

Startup means the setting in operation of an affected source and starting the production process.

Tunnel kiln means any continuous kiln that is used to fire BSCP. Some tunnel kilns have two process streams, including a process stream that exhausts directly to the atmosphere or to an APCD, and a process stream in which the kiln exhaust is ducted to a sawdust dryer where it is used to dry sawdust before being emitted to the atmosphere.

Tunnel kiln design capacity means the maximum amount of brick, in Mg (tons), that a kiln is designed to produce in one year divided by the number of hours in a year (8,760 hours). If a kiln is modified to increase the capacity, the design capacity is considered to be the capacity following modifications.

Wet scrubber (WS) means an APCD that uses water, which may include caustic additives or other chemicals, as the sorbent. Wet scrubbers may use any of various design mechanisms to increase the contact between exhaust gases and the sorbent.

Table 1 to Subpart JJJJJ of Part 63—Emission Limits

As stated in §63.8405, you must meet each emission limit in the following table that applies to you.

For each . . .	You must meet the following emission limits . . .	Or you must comply with the following . . .
1. Existing large tunnel kiln (design capacity >=10 tph of fired product), excluding any process stream that is ducted to a sawdust dryer prior to July 22, 2002;	a. HF emissions must not exceed 0.029 kilograms per megagram (kg/Mg) (0.057 pounds per ton (lb/ton)) of fired product. b. HCl emissions must not exceed 0.13 kg/Mg (0.26 lb/ton) of fired product. c. PM emissions must not exceed 0.21 kg/Mg (0.42 lb/ton) of fired product.	Reduce uncontrolled HF emissions by at least 90 percent. Reduce uncontrolled HCl emissions by at least 30 percent. Not applicable.
2. New or reconstructed large tunnel kiln, including all process streams.	a. HF emissions must not exceed 0.029 kg/Mg (0.057 lb/ton) of fired product. b. HCl emissions must not exceed 0.028 kg/Mg (0.056 lb/ton) of fired product. c. PM emissions must not exceed 0.060 kg/Mg (0.12 lb/ton) of fired product.	Reduce uncontrolled HF emissions by at least 90 percent. Reduce uncontrolled HCl emissions by at least 85 percent. Not applicable.

Table 2 to Subpart JJJJJ of Part 63—Operating Limits

As stated in §63.8405, you must meet each operating limit in the following table that applies to you.

For each . . .	You must . . .
2. Kiln equipped with a DIFF or DLS/FF.	a. or maintain no VE from the DIFF or DLS/FF stack; and b. Maintain free-flowing lime in the feed hopper or silo and to the APCD at all times for continuous injection systems; maintain the feeder setting at or above the level established during the performance test for continuous injection systems.

Table 3 to Subpart JJJJJ of Part 63—Requirements for Performance Tests

As stated in §63.8445, you must conduct each performance test in the following table that applies to you.

For each . . .	You must . . .	Using . . .	According to the following requirements . . .
1. Kiln.....	a. Select locations of sampling ports and the number of traverse points.	Method 1 or 1A of 40 CFR part 60, appendix A.	Sampling sites must be located at the outlet of the APCD and prior to any releases to the atmosphere for all affected sources. If you choose to meet the percent emission reduction requirements for HF or HCl, a sampling site must also be located at the APCD inlet.
	b. Determine velocities and volumetric flow	Method 2 of 40 CFR part 60, appendix A.	You may use Method 2A, 2C, 2D, 2F,

rate.

or 2G of 40
CFR part 60,
appendix A,
as
appropriate,
as an
alternative
to using
Method 2 of
40 CFR part
60, appendix
A.

c. Conduct gas
molecular weight
analysis.

Method 3 of 40 CFR
part 60, appendix
A.

You may use
Method 3A or
3B of 40 CFR
part 60,
appendix A,
as
appropriate,
as an
alternative
to using
Method 3 of
40 CFR part
60, appendix
A.

d. Measure
moisture content
of the stack gas.

Method 4 of 40 CFR
part 60, appendix
A.

.....

e. Measure HF and
HCl emissions.

Method 26A of 40
CFR part 60,
appendix A; or

Conduct the
test while
operating at
the maximum
production
level. You
may use
Method 26 of
40 CFR part
60, appendix
A, as an
alternative
to using
Method 26A
of 40 CFR
part 60,
appendix A,
when no acid
PM (e.g., HF
or HCl
dissolved in
water
droplets
emitted by
sources
controlled
by a WS) is
present.

Method 320 of 40
CFR part 63,

Conduct the
test while

	appendix A.	operating at the maximum production level. When using Method 320 of 40 CFR part 63, appendix A, you must follow the analyte spiking procedures of section 13 of Method 320 of 40 CFR part 63, appendix A, unless you can demonstrate that the complete spiking procedure has been conducted at a similar source.
f. Measure PM emissions.	Method 5 of 40 CFR part 60, appendix A.	Conduct the test while operating at the maximum production level.
4. Kiln equipped with a DIFF or DLS/FF.	Establish the operating limit for the lime feeder setting.	Data from the lime feeder during the performance test. For continuous lime injection systems, you must ensure that lime in the feed hopper or silo and to the APCD is free-flowing at all times during the performance test and record the feeder setting for the three test runs. If the feed rate setting varies

during the three test runs, determine and record the average feed rate from the three test runs.

Table 4 to Subpart JJJJ of Part 63—Initial Compliance with Emission Limitations

As stated in §63.8455, you must demonstrate initial compliance with each emission limitation that applies to you according to the following table:

For each . . .	For the following emission limitation . . .	You have demonstrated initial compliance if . . .
1. Existing large tunnel kiln (design capacity ≥ 10 tph of fired product), excluding any process stream that is ducted to a sawdust dryer prior to July 22, 2002; or including any process stream that exhausts directly to the atmosphere or to an APCD and any process stream that is first ducted to a sawdust dryer on or after July 22, 2002; each new or reconstructed small tunnel kiln (design capacity < 10 tph of fired product), including all process streams; each tunnel kiln that would be considered reconstructed but for § 63.8390(i)(1), including all process streams; and each large tunnel kiln previously equipped with a DLA that would be considered reconstructed but for § 63.8390(i)(2), including all process streams.	a. HF emissions must not exceed 0.029 kg/Mg (0.057 lb/ton) of fired product; or uncontrolled HF emissions must be reduced by at least 90 percent; and	i. The HF emissions measured using Method 26A of 40 CFR part 60, appendix A or Method 320 of 40 CFR part 63, appendix A over the period of the initial performance test, according to the calculations in § 63.8445(g)(1), do not exceed 0.029 kg/Mg (0.057 lb/ton); or uncontrolled HF emissions measured using Method 26A of 40 CFR part 60, appendix A or Method 320 of 40 CFR part 63, appendix A over the period of the initial performance test are reduced by at least 90 percent, according to the calculations in § 63.8445(g)(2); and

- ii. You establish and have a record of the operating limits listed in Table 2 to this subpart over the 3-hour performance test during which HF emissions did not exceed 0.029 kg/Mg (0.057 lb/ton) or uncontrolled HF emissions were reduced by at least 90 percent.
 - b. HCl emissions must not exceed 0.13 kg/Mg (0.26 lb/ton) of fired product; or uncontrolled HCl emissions must be reduced by at least 30 percent; and
 - i. The HCl emissions measured using Method 26A of 40 CFR part 60, appendix A or Method 320 of 40 CFR part 63, appendix A over the period of the initial performance test, according to the calculations in § 63.8445(g)(1), do not exceed 0.13 kg/Mg (0.26 lb/ton); or uncontrolled HCl emissions measured using Method 26A of 40 CFR part 60, appendix A or Method 320 of 40 CFR part 63, appendix A over the period of the initial performance test are reduced by at least 30 percent, according to the calculations in § 63.8445(g)(2); and
 - ii. You establish and have a record of the operating limits listed in Table 2 to this

- subpart over the 3-hour performance test during which HCl emissions did not exceed 0.13 kg/Mg (0.26 lb/ton) or uncontrolled HCl emissions were reduced by at least 30 percent.
2. New or reconstructed large tunnel kiln, including all process streams.
- c. PM emissions must not exceed 0.21 kg/Mg (0.42 lb/ton) of fired product.
 - i. The PM emissions measured using Method 5 of 40 CFR part 60, appendix A, over the period of the initial performance test, according to the calculations in § 63.8445(g)(1), do not exceed 0.21 kg/Mg (0.42 lb/ton); and
 - ii. You establish and have a record of the operating limits listed in Table 2 to this subpart over the 3-hour performance test during which PM emissions did not exceed 0.21 kg/Mg (0.42 lb/ton).
 - a. HF emissions must not exceed 0.029 kg/Mg (0.057 lb/ton) of fired product; or uncontrolled HF emissions must be reduced by at least 90 percent; and
 - i. The HF emissions measured using Method 26A of 40 CFR part 60, appendix A or Method 320 of 40 CFR part 63, appendix A over the period of the initial performance test, according to the calculations in § 63.8445(g)(1), do not exceed 0.029 kg/Mg (0.057 lb/ton); or uncontrolled HF

emissions
measured using
Method 26A of 40
CFR part 60,
appendix A or
Method 320 of 40
CFR part 63,
appendix A over
the period of the
initial
performance test
are reduced by at
least 90 percent,
according to the
calculations in
§
63.8445(g)(2);
and

ii. You establish
and have a record
of the operating
limits listed in
Table 2 to this
subpart over the
3-hour
performance test
during which HF
emissions did not
exceed 0.029 kg/
Mg (0.057 lb/ton)
or uncontrolled
HF emissions were
reduced by at
least 90 percent.

b. HCl emissions
must not exceed
0.028 kg/Mg
(0.056 lb/ton) of
fired product; or
uncontrolled HCl
emissions must be
reduced by at
least 85 percent;
and

i. The HCl
emissions
measured using
Method 26A of 40
CFR part 60,
appendix A or
Method 320 of 40
CFR part 63,
appendix A over
the period of the
initial
performance test,
according to the
calculations in
§
63.8445(g)(1), do
not exceed 0.028
kg/Mg (0.056 lb/
ton); or
uncontrolled HCl
emissions
measured using
Method 26A of 40
CFR part 60,
appendix A or

Method 320 of 40
CFR part 63,
appendix A over
the period of the
initial
performance test
are reduced by at
least 85 percent,
according to the
calculations in
§
63.8445(g)(2);
and

ii. You establish
and have a record
of the operating
limits listed in
Table 2 to this
subpart over the
3-hour
performance test
during which HCl
emissions did not
exceed 0.028 kg/
Mg (0.056 lb/ton)
or uncontrolled
HCl emissions
were reduced by
at least 85
percent.

c. PM emissions
must not exceed
0.060 kg/Mg (0.12
lb/ton) of fired
product.

i. The PM
emissions
measured using
Method 5 of 40
CFR part 60,
appendix A, over
the period of the
initial
performance test,
according to the
calculations in
§
63.8445(g)(1), do
not exceed 0.060
kg/Mg (0.12 lb/
ton); and

ii. You establish
and have a record
of the operating
limits listed in
Table 2 to this
subpart over the
3-hour
performance test
during which PM
emissions did not
exceed 0.060 kg/
Mg (0.12 lb/ton).

General Shale Brick, Inc.
Moosville, Indiana
Permit Reviewer: MSS/MES

First Significant Source Modification 109-22854-00002
Modified by: CAP/MES

Page 36 of 43
T 109-16617-00002

Table 5 to Subpart JJJJJ of Part 63—Continuous Compliance With Emission Limits and Operating Limits

As stated in §63.8470, you must demonstrate continuous compliance with each emission limit and operating limit that applies to you according to the following table:

For each . . .	For the following emission limits and operating limits . . .	You must demonstrate continuous compliance by . . .
2. Kiln equipped with a DIFF or DLS/FF.	Each emission limit in Table 1 to this subpart and each operating limit in Item 2 of Table 2 to this subpart for kilns equipped with DIFF or DLS/FF.	i. If you use a bag leak detection system, initiating corrective action within 1 hour of a bag leak detection system alarm and completing corrective actions in accordance with your OM&M plan; operating and maintaining the fabric filter such that the alarm is not engaged for more than 5 percent of the total operating time in a 6-month block reporting period; in calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted; if corrective action is required, each alarm is counted as a minimum of 1 hour; if you take longer than 1 hour to initiate corrective action, the alarm time is counted as the actual amount of time taken by you to initiate corrective action; or performing VE observations of the DIFF or DLS/FF stack at the frequency specified in § 63.8470(g) using

Method 22 of 40 CFR part 60, appendix A; maintaining no VE from the DIFF or DLS/FF stack; and

ii. Verifying that lime is free-flowing via a load cell, carrier gas/lime flow indicator, carrier gas pressure drop measurement system, or other system; recording all monitor or sensor output, and if lime is found not to be free flowing, promptly initiating and completing corrective actions in accordance with your OM&M plan; recording the feeder setting once during each shift of operation to verify that the feeder setting is being maintained at or above the level established during the performance test.

Table 6 to Subpart JJJJJ of Part 63—Requirements for Reports

As stated in §63.8485, you must submit each report that applies to you according to the following table:

You must submit . . .	The report must contain . . .	You must submit the report . . .
1. A compliance report.....	<p>a. If there are no deviations from any emission limitations (emission limits, operating limits) that apply to you, a statement that there were no deviations from the emission limitations during the reporting period. If there were no periods during which the CMS was out-of-control as specified in your OM&M plan, a statement that there were no periods during which the CMS was out-of-control during the reporting period.</p> <p>b. If you have a deviation from any emission limitation (emission limit, operating limit) during the reporting period, the report must contain the information in § 63.8485(d) or (e). If there were periods during which the CMS was out-of-control, as specified in your OM&M plan, the report must contain the information in § 63.8485(e).</p> <p>c. If you had a startup, shutdown or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information in § 63.10(d)(5)(i).</p>	<p>Semiannually according to the requirements in § 63.8485(b).</p> <p>Semiannually according to the requirements in § 63.8485(b).</p> <p>Semiannually according to the requirements in § 63.8485(b).</p>

- | | | |
|--|--|---|
| 2. An immediate startup, shutdown, and malfunction report if you took actions during a startup, shutdown, or malfunction during the reporting period that are not consistent with your SSMP. | a. Actions taken for the event according to the requirements in § 63.10(d)(5)(ii). | By fax or telephone within 2 working days after starting actions inconsistent with the plan. |
| | b. The information in § 63.10(d)(5)(ii). | By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority. |
-

E.1.3 State Only National Emission Standards for Hazardous Air Pollutants for Brick and Structural Clay Products Manufacturing Requirements [326 IAC 20-72]

Pursuant to 326 IAC 20-72, the Permittee shall comply with the May 3, 2003 version of 40 CFR Part 63, Subpart JJJJJ, which is incorporated by reference as 326 IAC 20-72, for the facilities listed in this section. The Permittee shall comply with the provisions of 40 CFR Part 63, Subpart JJJJJ, as listed in Condition E.1.2, except the Permittee shall also follow the requirements of the May 3, 2003 version, as incorporated into 326 IAC 20-72, as follows.

Sec. 63.8420 What are my general requirements for complying with this subpart?

* * * * *

(c) You must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in Sec. 63.6(e)(3).

* * * * *

Sec. 63.8470 How do I demonstrate continuous compliance with the emission limitations?

* * * * *

(d) During periods of startup, shutdown, and malfunction, you must operate according to your SSMP.
(e) Deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating according to an SSMP that satisfies the requirements of Sec. 63.6(e) and your OM&M plan. * * *

* * * * *

This condition refers to the version of 40 CFR 63.6(e) which is the same as the April 20, 2006 version, except for the following:

Sec. 63.6 Compliance with standards and maintenance requirements.

* * * * *

(e) * * *

(1) * * *

(ii) Malfunctions must be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan required in paragraph (e)(3) of this section. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, an owner or operator must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices. * * *

* * * * *

(3) * * *

(i) The owner or operator of an affected source must develop and implement a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction; a program of corrective action for malfunctioning process; and air pollution control and monitoring equipment used to comply with the relevant standard. This plan must be developed by the owner or operator by the source's compliance date for that relevant standard. The purpose of the startup, shutdown, and malfunction plan is to--* * *

* * * * *

(iii) When actions taken by the owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator must keep records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a "checklist," or other effective form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan for that event. In addition, the owner or operator must keep records of these events as specified in Sec. 63.10(b), including records of the occurrence and duration of each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control and monitoring equipment.

* * *

* * * * *

(ix) The title V permit for an affected source must require that the owner or operator adopt a startup, shutdown, and malfunction plan which conforms to the provisions of this part, and that the owner or operator operate and maintain the source in accordance with the procedures specified in the current startup, shutdown, and malfunction plan. However, any revisions made to the startup, shutdown, and malfunction plan in accordance with the procedures established by this part shall not be deemed to constitute permit revisions under part 70 or part 71 of this chapter. Moreover, none of the procedures specified by the startup, shutdown, and malfunction plan for an affected source shall be deemed to fall within the permit shield provision in section 504(f) of the Act.

* * *

* * * * *

E.1.4 One Time Deadlines Relating to NESHAP Subpart JJJJ

- (a) The Permittee must conduct performance tests for the one (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 1 Kiln and one (1) coal and natural gas-fired kiln, identified as Line 1 Kiln, and the one (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 2 Kiln, and one (1) coal and natural gas-fired kiln, identified as Line 2 Kiln, by October 28, 2007. A notification of intent to conduct a performance test at least sixty (60) calendar days before the performance test is scheduled to begin.
- (b) The Permittee must conduct performance tests for the one (1) coal/natural gas fired brick kiln, identified as EU-NPK, within 180 calendar days after startup. A notification of intent to conduct a performance test at least sixty (60) calendar days before the performance test is scheduled to begin.
- (c) An initial notification shall be submitted for the one (1) coal/natural gas fired brick kiln, identified as EU-NPK, within 120 days of startup.
- (d) The Permittee shall submit the Notification of Compliance Status, including the performance test results, before the close of business on the sixtieth (60th) calendar day following the completion of the performance test.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: General Shale Brick, Inc.
Source Address: Highway 67 South and CR 1000 North, Mooresville, Indiana 46158
Mailing Address: P.O. Box 156, Mooresville, Indiana 46518
Part 70 Permit No.: T 109-16617-00002
Facilities: Line 1 Kiln and Line 2 Kiln
Parameter: Brick Produced
Limit: Not to exceed 243,456 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month.

YEAR: _____

Month	Bricks Produced (tons)	Bricks Produced (tons)	Bricks Produced (tons)
	This Month	Previous 11 Months	12 Month Total

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
100 North Senate Avenue
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865**

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: General Shale Brick, Inc.
Source Address: Highway 67 South and CR 1000 North, Mooresville, Indiana 46158
Mailing Address: P.O. Box 156, Mooresville, Indiana 46518
Part 70 Permit No.: T 109-16617-00002

This form consists of 2 pages

Page 1 of 2

<input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none">C The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); andC The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.
--

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document for Significant Source and Permit Modifications to a Part 70 Operating Permit

Source Name:	General Shale Brick, Inc.
Source Location:	Highway 67 South and CR 1000 North, Mooresville, Indiana 46158
County:	Morgan
Operation Permit No.:	T 109-16617-00002
Significant Source Modification No.:	109-22854-00002
Significant Permit Modification No.:	109-22865-00002
SIC Code:	3251
Permit Reviewer:	CarrieAnn Paukowits

On July 15, 2006, the Office of Air Quality (OAQ) had a notice published in the Martinsville Daily Reporter, Martinsville, Indiana, stating that General Shale Brick, Inc. had applied for a Significant Source Modification and a Significant Permit Modification to a Part 70 Operating Permit to add control devices to the two (2) existing kilns, limit the potential to emit PM, PM₁₀, NO_x and SO₂ to less than major source levels at the existing plant, add a New Plant to the existing location, and add the requirements of 40 CFR 63, Subpart JJJJJ, to their permit. The notice also stated that OAQ proposed to issue a Significant Source Modification and a Significant Permit Modification and provided information on how the public could review the proposed Significant Source and Permit Modifications and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not these Significant Source and Permit Modifications to a Part 70 Operating Permit should be issued as proposed.

On August 14, 2006, Pamela Blakely of the US EPA, Region 5, submitted comments on the proposed Significant Source and Significant Permit Modifications to a Part 70 Operating Permit. The comments are as follows (the permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded**):

Comment 1:

We have reviewed the General Shale Brick, Inc. Significant Source/Permit Modification (Permit Nos. 109-22854-00002 and 109-22865-00002). This draft permit modification authorizes General Shale to expand their existing brick manufacturing plant in Mooresville, Indiana, a PM_{2.5} (particulate matter 2.5 micrometers in diameter or less) and 8-hour ozone non-attainment area. The proposed modification allows the facility to modify their current plant without undergoing preconstruction review under the New Source Review (NSR) or Prevention of Significant Deterioration (PSD) permitting. For the reasons discussed below, we believe that this would constitute a circumvention of PSD/NSR.

The proposed modification adds an additional brick manufacturing line next to the company's two existing lines; increasing maximum brick production from approximately 250,000 tons per year to over 423,000 tons. The modification also includes the installation of two dry lime injection baghouses on two 1970 kilns and incorporates an applicable NESHAP at 40 C.F.R. Part 63, Subpart JJJJJ. The facility is currently permitted as an existing major source for PM, PM₁₀, SO₂, CO, and NO_x. Indiana is proposing that the facility become a synthetic minor source through the incorporation of production limitations and installation of the baghouses. Through the same permitting action, Indiana is proposing that the company be allowed to make a permit modification up to the major source 100/250 tons per year (tpy) NSR threshold.

A source may take a restriction on its potential to emit in order to become a synthetic minor (e.g., ~250 tpy). A source cannot do so, however, if the purpose of this restriction is to avoid applicable preconstruction review requirements. See, e.g., Environmental Protection Agency (EPA1s) June 13, 1989

guidance on "Limiting Potential to Emit in New Source Permitting," where EPA affirms that permits with conditions that do not reflect a source's planned mode of operation are sham permits and are void *ab initio*. See also June 17, 1993 memorandum from John Rasnic to George T. Czerniak, "Applicability of New Source Review Circumvention Guidance to 3M - Maplewood, Minnesota." In its June 28, 1989 Federal Register notice on the definition of "federally enforceable," EPA noted that it was not possible to set forth, in detail, all the circumstances under which it would consider an owner or operator to have improperly circumvented PSD/NSR. It reiterated the importance of the new source statutory scheme established by Congress in Parts C and D of the Clean Air Act, and the need to "prevent owners or operators from turning the statutory scheme on its head by using federally enforceable minor source permits in a manner inconsistent with the statute and with EPA's intention." EPA further stated that it would look to "objective indicia" to identify circumvention situations. 54 Fed. Reg. 27274, 27281.

In this case, it seems abundantly clear that the sole purpose for General Shale seeking to convert from major to synthetic minor status is to shortly thereafter augment its emissions without triggering NSR/PSD. The intended conversion from synthetic minor to major source status would occur virtually simultaneously; the company will not even be able to show that its last 24 months of actual emissions have been less than the NSR/PSD major source threshold. See 40 C.F.R. 52.21 (b) (21).

Since this facility is an existing major source proposing a physical change that could result in a significant emissions increase, we believe that the change should be subject to NSR and PSD permitting requirements.

Response 1:

There is nothing in EPA guidance to date which precludes General Shale from obtaining a federally enforceable PSD minor permit with limitations enforceable as a practical matter concurrently with a minor new source review construction permit limiting at the major source NSR threshold.

While it is true that sham permits for the purpose of circumventing PSD are void *ab initio*, the EPA comment seems to blur the distinction between circumvention or "sham" permitting and permissible avoidance of PSD requirements. The June 13, 1989 guidance on "Limiting Potential to Emit in New Source Permitting" indicates that "[i]n such cases where EPA can demonstrate an intent to operate the source at major source levels, EPA considers the minor source construction permit void *ab initio* and will take appropriate steps to prevent the source from constructing or operating without a major source permit." [Emphasis added] The EPA uses the example of an existing major stationary source proposing to add an electrical steam generating unit and applying for a federally enforceable minor source permit restricting operation of the unit to 240 hours per year. Because the project is a baseload unit, the EPA does not believe that the source intends to operate the unit for only 240 hours a year. If further investigation uncovers documentation of this intent, the 1989 EPA guidance indicates that any resulting permit under the scenario would be considered a sham and, therefore, void.

The 1989 guidance at page 13 also states:

The definition of potential to emit enables sources to obtain federally enforceable permits with operational restrictions as a means of limiting emissions to minor source levels. However, implicit in the application of these limitations is the understanding that they comport with the true design and intended operation of the project.

The June 17, 1993 memorandum from John Rasnic to George Czerniak, "Applicability of New Source Review Circumvention Guidance to 3M-Maplewood, Minnesota" discussed the "sham" permitting portion of 1989 EPA guidance in the context of 40 CFR 52.21(r)(4) and stated:

Generally in “sham” permitting, a source attempts to expedite construction by securing minor source status through permits containing operational restrictions from which the source intends to free itself shortly after completion of construction and commencement of operation. Such attempts are treated as unlawful circumvention of the preconstruction review requirements. Similarly, attempts to expedite construction by securing several minor source permits and avoiding major modification requirements should be treated as circumvention.

General Shale has operated approximately 35 years under its present configuration. Although its actual emissions and potential emissions make it a major source for PSD, General Shale has a strong history of compliance. The existing source under its present configuration can limit its actual and potential emissions to below the major source threshold with federally enforceable production limits and the installation of baghouses that are necessary for General Shale to comply with the applicable NESHAP, 40 CFR Part 63, Subpart JJJJ. There is no reason for IDEM to believe that General Shale cannot or will not comply with the PSD minor limit for its two existing kilns and, in fact, must demonstrate that it can comply with the limit via stack testing prior to any construction of the proposed new facility.

Further, the fact that General Shale is seeking to convert from major to minor status at its existing kilns in order to avoid triggering PSD at its new facility is simply not relevant. The fact that additional emissions will ensue by virtue of its new facility has no relevance to whether the federally enforceable operational and production limits at its existing facility constitute “sham” limits. Finally, because General Shale’s existing kilns will be a minor source with federally enforceable limits on its potential emissions, 40 CFR 52.21(b)(21) does not apply; therefore, there is no requirement to show 24 months of actual emissions prior to preconstruction approval of its proposed new facility.

No change has been made as a result of this comment.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70
Significant Source and Permit Modifications

Source Description and Location

Source Name:	General Shale Brick, Inc.
Source Location:	Highway 67 South and CR 1000 North, Mooresville, Indiana 46158
County:	Morgan
SIC Code:	3251
Operation Permit No.:	T 109-16617-00002
Operation Permit Issuance Date:	June 12, 2006
Significant Source Modification No.:	109-22854-00002
Significant Permit Modification No.:	109-22865-00002
Permit Reviewer:	CarrieAnn Paukowits

Source Definition

This brick and structural clay products manufacturing company consists of three (3) plants:

- (a) Plant No. 20 is located at Highway 67 South and CR 1000 N, Mooresville, Indiana;
- (b) Plant No. 32 is located at Highway 67 South and CR 1000 N, Mooresville, Indiana; and
- (c) The New Plant is located at Highway 67 South and CR 1000 N, Mooresville, Indiana.

Since the three (3) plants are located on contiguous or adjacent properties, belong to the same industrial grouping, and under common control of the same entity, they will be considered one (1) source.

Existing Approvals

The source, previously known as General Shale Products, LLC - Plants 20 and 32, was issued a Part 70 Operating Permit Renewal T 109-16617-00002 on June 12, 2006. There have been no approvals issued to this source since the renewal was issued.

County Attainment Status

The source is located in Morgan County.

Pollutant	Status
PM ₁₀	Basic Nonattainment
PM _{2.5}	Attainment
SO ₂	Attainment
NO ₂	Attainment
1-hour Ozone	Attainment
8-hour Ozone	Basic Nonattainment
CO	Attainment
Lead	Attainment

General Shale Brick, Inc.
Moosville, Indiana
Permit Reviewer: CAP/MES

Page 2 of 68
Source Modification No.: 109-22854-00002
Permit Modification No.: 109-22865-00002

- (a) Volatile organic compounds (VOC) and nitrogen oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Morgan County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements of Emission Offset, 326 IAC 2-3.
- (b) U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Morgan County as nonattainment for PM_{2.5}. On March 7, 2005 the Indiana Attorney General's Office, on behalf of IDEM, filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's guidance to regulate PM₁₀ emissions as a surrogate for PM_{2.5} emissions pursuant to the requirements of Emission Offset, 326 IAC 2-3.
- (c) Morgan County has been classified as attainment or unclassifiable in Indiana for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (d) Fugitive Emissions
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-3, fugitive emissions are not counted toward the determination of PSD and Emission Offset applicability.

Source Status

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits (before the limitations on the potential to emit added in this modification):

Pollutant	Emissions (tons/year)
PM	654
PM ₁₀	481
SO ₂	723
VOC	3.00
CO	99.9
NO _x	158

- (a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of two hundred and fifty (250) tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (b) This existing source is a major stationary source, under Emission Offset (326 IAC 2-3), because a nonattainment regulated pollutant is emitted at a rate of one hundred (100) tons per year or more.
- (c) These emissions are based upon the potential to emit before controls, since no controls were required in the renewal, and before the separate NO_x limit added in this modification.

The table below summarizes the potential to emit HAPs for the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

HAPs	Potential To Emit (tons/year)
HF	58.7
HCl	26.2
All other HAPs	1.32
TOTAL	86.2

This existing source is a major source of HAPs, as defined in 40 CFR 63.41, because HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2002 OAQ emission data and the 2004 Toxic Release Inventory HAPs emission data.

Pollutant	Actual Emissions (tons/year)
PM	Not reported
PM ₁₀	76
SO ₂	367
VOC	2
CO	78
NO _x	50
HAP (Lead)	0.01
HAP (HF)	17.8

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by General Shale Brick on March 23, 2006, relating to a two (2) step modification as follows:

Step 1

Step 1 of this modification involves changes to the existing plant and the existing Part 70 Operating Permit Renewal.

- (a) As part of Step 1, the applicant is proposing to add a control device to each of the two (2) existing kilns. There are multiple intents for these controls. The first is to comply with the requirements of 40 CFR 63, Subpart JJJJJ, the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Brick and Structural Clay Products Manufacturing. On February 2, 2006, IDEM, OAQ approved an extension of the final compliance date contained in 40 CFR Part 63, Subpart JJJJJ, for the two (2) existing tunnel kilns. The termination date of this extension is May 1, 2007, which is the final compliance date.

A second intent is to limit the potential to emit PM, PM₁₀ and SO₂. In combination with the throughput limits already in the permit, the addition of the controls will limit the potential to emit PM and SO₂ to less than 250 tons per year from the existing source. This will make the existing source a minor source pursuant to 326 IAC 2-2, PSD. The controls will also limit the potential to emit PM₁₀ to less than 100 tons per year. Therefore, this existing source will be minor source pursuant to 326 IAC 2-1.1-5, Nonattainment New Source Review, and 326 IAC 2-3, Emission Offset, will not be applicable. The proposed limitations on the two (2) brick manufacturing lines, identified as EU-002, and the resulting existing source potential to emit are as follows:

Facility	Existing Throughput Limit (tons bricks/ 12-month period)	PM Limit		PM ₁₀ Limit		SO ₂ Limit	
		lbs/ton bricks	tons/12-month period	lbs/ton bricks	tons/12-month period	lbs/ton bricks	tons/12-month period
Line 1 Kiln	129,648	0.336	21.8	0.336	21.8	1.68	109
Line 2 Kiln	120,012	0.336	20.2	0.336	20.2	2.32	139
Line 1 mill room	No limit - 65 ton/hr potential	0.0063	1.79	0.0036	1.02	N/A	N/A
Line 2 mill room	No limit - 70 ton/hr potential	0.0063	1.93	0.0036	1.10	N/A	N/A
Unrestricted potential from EU-001			11.0		1.01		0.00
Unrestricted potential from Brick Crushing			4.44		2.22		0.00
Unrestricted potential from Insignificant Activities			31.2		31.2		0.000004
Total			92.4		78.6		248

The Line 1 and Line 2 mill rooms were not specifically listed in the Title V renewal. However, they are existing units which are considered part of the brick manufacturing lines. They are listed separately in this modification for clarity.

In addition, the applicant has indicated that the capacity of the one (1) clay/shale processing operation, identified as EU-001, is one hundred (100) tons per hour, rather than 72.5 tons per hour. The total capacity of the grinding room is still less than the capacity of the individual grinders. While the line capacity is one hundred (100) tons per year, the capacity of each individual grinder has not changed. Therefore, there is no change in the applicability of 40 CFR 60, Subpart OOO. The change in capacity equals an increase in the potential to emit PM and PM₁₀ of 3.00 tons per year and 0.280 tons per year, respectively. Since the increase is less than 5.00 tons per year of PM and PM₁₀, no prior approval is required for this change.

- (b) The applicant is also proposing a total throughput limit at the kilns which will limit the potential to emit NO_x to less than 100 tons per year. This will make the source a minor source pursuant to 326 IAC 2-3, Emission Offset.

Facility	Proposed Throughput Limit (tons bricks /12- month period)	NO _x Limit	
		lbs/ton bricks	tons/12- month period
Line 1 and 2 Kilns	243,456	0.813	99.0
Unrestricted potential from Insignificant Activities			0.001
Total			< 100

- (c) The applicant has also requested that the applicable requirements of 40 CFR 63, Subpart JJJJJ, be added to the permit.

Step 2

After the Permittee demonstrates compliance with the pound per ton emission limits making the existing source a minor source pursuant to 326 IAC 2-2, PSD, 326 IAC 2-3, Emission Offset, and 326 IAC 2-1.1-5, Nonattainment New Source Review, Step 2 of the modification may commence. Step 2 consists of the addition of a new plant at the existing source. The new plant will be located on contiguous or adjacent property with the existing plant, the new plant belongs to the same industrial grouping, and the new plant and existing plants will be under common control of the same entity. Therefore, the new plant and the two (2) existing plants will be considered one (1) source. The addition of the new plant will be a modification to an existing minor source pursuant to 326 IAC 2-2, PSD, 326 IAC 2-3, Emission Offset, and 326 IAC 2-1.1-5, Nonattainment New Source Review. The new plant will consist of the following:

- (a) One (1) brick manufacturing line, identified as New Plant, consisting of the following:
- (1) One (1) brick making room and sand system (mill room), identified as EU-NPMR, equipped with a baghouse, identified as CD-MRBH and exhausting to Stack MRBH, capacity: 72.5 tons of clay and shale per hour.
 - (2) One (1) coal/natural gas fired brick kiln, identified as EU-NPK, equipped with a dry lime injection baghouse, identified as DIFF-03, and exhausting to Stack DIFF-03, capacity: 20.55 tons of bricks and 25.0 million British thermal units per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is a new affected source, using an emissions control system to comply with the rule.
 - (3) One (1) natural gas/propane brick dryer, identified as EU-NPBD1, exhausting to Stack NPBD1, capacity: 20.55 tons of bricks and 13.29 million British thermal units per hour.
- (b) The following insignificant activities, which are not specifically regulated:
- One (1) kiln car vacuum cleaning system
 - Fugitive conveying

Enforcement Issues

There are no pending enforcement actions.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
DIFF-01	Line 1 Kiln Baghouse	10.5	1.5	5,000	72
DIFF-02	Line 2 Kiln Baghouse	60.0	4.0	40,425	210
DIFF-03	New Line Kiln (EU-NPK) Baghouse	60.0	3.5	32,539	209
MRBH	Brick Making Room and Sand System (EU-NPMR) Baghouse	60.0	4.0	41,842	331
NPBD1	Brick Dryer (EU-NPBD1)	35.0	5.0	29,823	100

Emission Calculations

See Appendix A of this document for detailed emission calculations.

Permit Level Determination – Part 70

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, IDEM, or the appropriate local air pollution control agency.®

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

The change in capacity at the one (1) clay/shale processing operation, identified as EU-001, equals an increase in the potential to emit PM and PM₁₀ of 3.00 tons per year and 0.280 tons per year, respectively. The potential to emit of all other processes at the existing source will not change. Therefore, the emissions in this table are the potential to emit of the new proposed brick manufacturing line (Step 2 of the modification) before controls and limitations and including fugitive emissions and the increase in the potential to emit of the one (1) existing clay/shale processing operation, identified as EU-001.

Pollutant	Potential To Emit (tons/year)
PM	390
PM ₁₀	300
SO ₂	521
VOC	4.86
CO	99.9
NO _x	82.0

HAPs	Potential To Emit (tons/year)
HF	42.3
HCl	18.9
Other HAPs	0.918
TOTAL	62.1

This source modification is subject to 326 IAC 2-7-10.5(f)(4) and (6), any modification with a potential to emit greater than or equal to twenty-five (25) tons per year of PM, PM₁₀, SO₂ and NO_x and any modification with a potential to emit greater than ten (10) tons per year of a single HAP or twenty-five (25) tons per year of total HAPs. Additionally, the modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d), because it requires a case-by-case determination of an emission limitation or other standard and, therefore, does not qualify as minor permit modification or administrative amendment.

Permit Level Determination – PSD or Emission Offset

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 source and permit modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

The first table is for Step 1 of the modification and contains the revised potential to emit of the existing emission units at this source. The limitations are detailed in the “Description of Proposed Modification” section of this document.

Process/Emission Unit	Potential to Emit (tons/year)						
	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	Other (Total HAPs)
EU-001	11.0	1.01	0.000	0.000	0.000	0.000	0.000
EU-002	45.8	44.1	248	3.00	99.9	99.0	11.1
Brick Crushing	4.44	2.22	0.000	0.000	0.000	0.000	0.000
Insignificant Activities (combustion, vacuum systems, welding, coal processing and sand storage silos)	31.2	31.2	0.000004	0.00003	0.001	0.001	0.045
Total for Existing Source	92.4	78.6	248	3.00	99.9	<100	11.1
Major Source Threshold	250	100	250	100	250	100	-

As a result of the permit modifications in Step 1, the existing source is a minor source pursuant to 326 IAC 2-2, PSD, 326 IAC 2-3, Emission Offset, and 326 IAC 2-1.1-5, Nonattainment New Source

Review. After demonstrating compliance with the limitations for the existing source, the Permittee would be permitted to commence Step 2 of the modification, construction of the new brick manufacturing line. This second table is for Step 2 of the modification and contains the potential to emit of the proposed new emission units.

Process/Emission Unit	Potential to Emit (tons/year)						
	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	Other (Total HAPs)
Kiln	30.3	30.3	235	2.16	72.0	73.2	7.98
Drying	16.8	16.8	0.000	2.70	27.9	8.82	0.000
Mill room	2.01	1.14	0.000	0.000	0.000	0.000	0.000
Insignificant Activity (vacuum system)	0.502	0.502	0.000	0.000	0.000	0.000	0.000
Total for Modification excluding fugitive emissions	49.6	48.8	235	4.86	99.9	82.0	7.98
Significant Level Threshold	250	100	250	100	250	100	-

- (a) This modification to an existing minor stationary source is not major because the emission increase is less than the PSD major source thresholds for PM, SO₂ and CO. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.
- (b) This modification to an existing minor stationary source is not major because the emission increase is less than the Emission Offset major source thresholds for NO_x and VOC. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.
- (c) Morgan County has been designated as nonattainment for PM_{2.5} in 70 FR 943 dated January 5, 2005. According to the April 5, 2005 EPA memo titled "Implementation of New Source Review Requirements in PM_{2.5} Nonattainment Areas" authored by Steve Page, Director of OAQPS, until EPA promulgates the PM_{2.5} major NSR regulations, states should assume that a major stationary source's PM₁₀ emissions represent PM_{2.5} emissions. IDEM will use the PM₁₀ nonattainment major NSR program as a surrogate to address the requirements of nonattainment major NSR for the PM_{2.5} NAAQS. A major source in a nonattainment area is a source that emits or has the potential to emit one hundred (100) tons per year of any regulated pollutant. General Shale Brick has a limited potential to emit of PM₁₀ below one hundred (100) tons per year. Therefore, assuming that PM₁₀ emissions represent PM_{2.5} emissions, 326 IAC 2-3 does not apply for PM_{2.5}.
- (d) The following limits make the modification minor pursuant to 326 IAC 2-2, 326 IAC 2-3 and 326 IAC 2-1.1-5, Nonattainment New Source Review.

Facility	Throughput Limit (tons bricks /12-month period)	PM Limit		PM ₁₀ Limit		SO ₂ Limit	
		lbs/ton bricks	tons/12-month period	lbs/ton bricks	tons/12-month period	lbs/ton bricks	tons/12-month period
New Plant Kiln	No limit - 180,018 potential	0.336	30.2	0.336	30.2	2.60	234
New Plant Mill Room	No limit - 72.5 ton/hr potential	0.0063	2.00	0.0036	1.14	N/A	N/A
Unrestricted potential from Drying			16.8		16.8		0.00
Unrestricted potential from Insignificant Activity (vacuum system)			0.502		0.502		0.000
Total			49.6		48.8		234

Federal Rule Applicability Determination
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The federal rule applicabilities for the existing source will not change as a result of this modification. However, the requirements of 40 CFR 63, Subpart JJJJJ, will be included in the permit for all of the processes at this source. The following federal rules are applicable to the modification:

- (a) Pursuant to 40 CFR 60.671, nonmetallic mineral processing plant means any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located, including lime plants, power plants, steel mills, asphalt concrete plants, Portland cement plants, or any other facility processing nonmetallic minerals except as provided in §60.670 (b) and (c). Pursuant to 40 CFR 60.670, the provisions of 40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants, are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. The proposed facilities include conveying of crushed nonmetallic minerals. However, the conveyors move the material after ground storage and are not part of a process including equipment to crush or grind the materials. Therefore, the proposed facilities do not include a nonmetallic mineral processing plant and the requirements of 40 CFR 60, Subpart OOO, are not included in the permit for the proposed modification. The change in capacity of the one (1) clay/shale processing operation, identified as EU-001, does not change the applicability of this subpart because the capacity of each grinder has not and will not increase.
- (b) Pursuant to 40 CFR 60.730, the requirements of Subpart UUU, Standards of Performance for Calciners and Dryers in Mineral Industries, are applicable to the calcining and drying of raw materials prior to firing of the brick. However, pursuant to 40 CFR 60.730(b), tunnel kilns and tunnel dryers used in any of the seventeen (17) mineral industries are not subject to this subpart. The proposed kiln is a tunnel kiln and the proposed dryer is a tunnel dryer. Therefore, the requirements of 40 CFR 60, Subpart UUU, are not included in the permit for this modification.
- (c) This source is subject to the National Emission Standards for Hazardous Air Pollutants for Brick and Structural Clay Products Manufacturing (40 CFR 63, Subpart JJJJJ), which is incorporated by reference as 326 IAC 20-72-1, because it operates brick manufacturing kilns at a major source of HAPs. The affected source includes the following:

- (1) One (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 1 Kiln and one (1) coal and natural gas-fired kiln, identified as Line 1 Kiln, equipped with a dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01, exhausting to Stack DIFF-01, rated at 25 million British thermal units per hour, capacity: 14.8 tons of bricks per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is an existing affected source using an emissions control system to comply with the rule.
- (2) One (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 2 Kiln, and one (1) coal and natural gas-fired kiln, identified as Line 2 Kiln, equipped with a dry lime injection baghouse, identified as DIFF-02, exhausting to Stack DIFF-02, rated at 25 million British thermal units per hour, capacity: 13.7 tons of bricks per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is an existing affected source using an emissions control system to comply with the rule.
- (3) One (1) coal/natural gas fired brick kiln, identified as EU-NPK, equipped with a dry lime injection baghouse, identified as DIFF-03, and exhausting to Stack DIFF-03, capacity: 20.55 tons of bricks and 25.0 million British thermal units per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is a new affected source, using an emissions control system to comply with the rule.

On February 2, 2006, IDEM, OAQ approved an extension of the final compliance date contained in 40 CFR Part 63, Subpart JJJJJ, for the two (2) existing tunnel kilns. The termination date of this extension is May 1, 2007, which is the final compliance date.

Pursuant to Condition C.10 of T 109-16617-00002, General Shale Brick, Inc. shall submit a status report within fifteen (15) days of completion of the following milestones indicating the actual dates of completion:

- (1) The date on-site construction for the installation of the emissions control equipment is initiated.
- (2) The date on-site construction for the installation of the emission control equipment is completed.
- (3) The date by which final compliance is achieved.

Pursuant to 40 CFR 63.8395(a)(2), for the new proposed kiln, the Permittee shall comply with the requirements of 40 CFR 63, Subpart JJJJJ, upon initial startup.

Nonapplicable portions of the NESHAP will not be included in the permit. The affected source is subject to the following portions of 40 CFR 63, Subpart JJJJJ:

- (1) 40 CFR 63.8380
- (2) 40 CFR 63.8385
- (3) 40 CFR 63.8390 (a), (b)(1) for the existing affected sources, (e) for the new affected source, (h) and (j)
- (4) 40 CFR 63.8395(a)(2) for the new affected source, (b) for the existing affected sources, and (e)
- (5) 40 CFR 63.8405

- (6) 40 CFR 63.8410(a)
- (7) 40 CFR 63.8420
- (8) 40 CFR 63.8425
- (9) 40 CFR 63.8435
- (10) 40 CFR 63.8440
- (11) 40 CFR 63.8445(a) through (h),
- (12) 40 CFR 63.8450 (a), (f) and (h)
- (13) 40 CFR 63.8455(a) and (c)
- (14) 40 CFR 63.8465
- (15) 40 CFR 63.8470 (a), (c), (e), (f), (g),
- (16) 40 CFR 63.8480 (a), (c), (d), (e)(1) and (2)(i), (f)
- (17) 40 CFR 63.8485(a), (b), (c), (e) and (f)
- (18) 40 CFR 63.8490 (a), (b) and (c)(2) through (6)
- (19) 40 CFR 63.8495
- (20) 40 CFR 63.8505
- (21) 40 CFR 63.8510
- (22) 40 CFR 63.8515

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63 Subpart JJJJJ.

- (d) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:
- (1) has a potential to emit before or after controls equal to or greater than the major source threshold for the pollutant involved;
 - (2) is subject to an emission limitation or standard for that pollutant; and
 - (3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following table is used to identify the applicability of each of the applicability criteria, under 40 CFR 64.1, to each new or modified emission unit involved (the existing units now exhausting to a control have been included in the analysis as well as the existing mill rooms which were not analyzed separately in the renewal):

Emission Unit	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Line 1 Kiln and Dryer							
Line 1 Kiln and Dryer (PM and PM ₁₀)	Dry lime/sodium bicarbonate injection baghouse (DIFF-01)	Y	121	21.8	100	Y	N
Line 1 Kiln and Dryer (SO ₂)	Dry lime/sodium bicarbonate injection baghouse (DIFF-01)	Y	375	109	100	Y	Y
Line 1 Kiln and Dryer (NO _x)	None	Y	52.7	52.7	100	N	N
Line 1 Kiln and Dryer (VOC)	None	N	1.56	1.56	100	N	N
Line 1 Kiln and Dryer (CO)	None	N	51.9	51.9	100	N	N
Line 1 Kiln and Dryer (HF)	Dry lime/sodium bicarbonate injection baghouse (DIFF-01)	Y	30.5	3.05	10	Y	N
Line 1 Kiln and Dryer (HCl)	Dry lime/sodium bicarbonate injection baghouse (DIFF-01)	Y	13.6	2.04	10	Y	N
Line 2 Kiln and Dryer							
Line 2 Kiln and Dryer (PM and PM ₁₀)	Dry lime injection baghouse (DIFF-02)	Y	112	20.2	100	Y	N
Line 2 Kiln and Dryer (SO ₂)	Dry lime injection baghouse (DIFF-02)	Y	347	139	100	Y	Y
Line 2 Kiln and Dryer (NO _x)	None	Y	48.8	48.4	100	N	N

Emission Unit	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Line 2 Kiln and Dryer (VOC)	None	N	1.44	1.44	100	N	N
Line 2 Kiln and Dryer (CO)	None	N	48.0	48.0	100	N	N
Line 1 Kiln and Dryer (HF)	Dry lime injection baghouse (DIFF-02)	Y	28.2	2.82	10	Y	N
Line 1 Kiln and Dryer (HCl)	Dry lime injection baghouse (DIFF-02)	Y	12.6	1.89	10	Y	N
New Plant Kiln (EU-NPK)							
New Plant Kiln (PM and PM ₁₀)	Dry lime injection baghouse (DIFF-03)	Y	168	30.3	100	Y	N
New Plant Kiln (SO ₂)	Dry lime injection baghouse (DIFF-03)	Y	521	235	100	Y	Y
New Plant Kiln (NO _x)	None	Y	73.2	73.2	100	N	N
New Plant Kiln (VOC)	None	N	2.16	2.16	100	N	N
New Plant Kiln (CO)	None	N	72.0	72.0	100	N	N
New Plant Kiln (HF)	Dry lime injection baghouse (DIFF-03)	Y	42.3	4.23	10	Y	N
New Plant Kiln (HCl)	Dry lime injection baghouse (DIFF-03)	Y	18.9	8.24	10	Y	N
New Plant Dryer (EU-NPBD1)							
New Plant Dryer (PM and PM ₁₀)	None	Y	16.8	16.8	100	N	N
New Plant Dryer (NO _x)	None	Y	8.82	8.82	100	N	N
New Plant Dryer (VOC)	None	Y	2.70	2.70	100	N	N

Emission Unit	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
New Plant Dryer (CO)	None	Y	27.9	27.9	100	N	N
Mill and Brick Making Rooms							
Line 1 Mill Room (EU-P20-MR) (PM and PM ₁₀)	Baghouse (CD-P20-MR)	Y	180 PM/102 PM ₁₀	1.80 PM/1.02 PM ₁₀	100	Y	N
Line 2 Mill Room (EU-P32-MR) (PM and PM ₁₀)	Baghouse (CD-P20-MR)	Y	194 PM/110 PM ₁₀	1.94 PM/1.10 PM ₁₀	100	Y	N
New Plant Brick Making Room and Sand System (EU-NPMR) (PM and PM ₁₀)	Baghouse (CD-MRBH)	Y	201 PM/114 PM ₁₀	2.01 PM/1.14 PM ₁₀	100	Y	N

Pursuant to 40 CFR 64.2(b)(1)(i), the kilns are exempt from the requirements of 40 CFR Part 64, Compliance Assurance Monitoring (CAM), for PM, PM₁₀, HCl and HF because emission limitations or standards in the NESHAP, 40 CFR 63, Subpart JJJJJ, to which the kilns are subject was proposed by the Administrator after November 15, 1990, under Section 112 of the Clean Air Act.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to the two (2) existing kilns upon start-up of the control devices and the one (1) new kiln upon start-up for SO₂. A CAM plan has been submitted and the Compliance Determination and Monitoring Requirements section includes a detailed description of the CAM requirements.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to the two (2) mill rooms (EU-P20-MR and EU-P32-MR) and one (1) brick making and sand system room (EU-NPMR) upon issuance of the next Title V Renewal. A CAM plan must be submitted as part of the Renewal application.

State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

326 IAC 2-1.1-5, 2-2 and 2-3 (Air quality requirements (Nonattainment NSR), PSD and Emission Offset)

Air quality requirements (nonattainment NSR) PSD and Emission Offset applicability is discussed under the Permit Level Determination - PSD and Emission Offset section.

326 IAC 1-5-2 (Emergency Reduction Plans)

The source has submitted an Emergency Reduction Plan (ERP) on February 25, 1999. The ERP has been verified to fulfill the requirements of 326 IAC 1-5-2 (Emergency Reduction Plans).

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of the kiln at the proposed brick manufacturing line (EU-NPK) will emit greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs, before control. However, pursuant to 326 IAC 2-4.1-1(b)(2), because this kiln is specifically regulated by NESHAP 40 CFR 63, Subpart JJJJJ, which was issued pursuant to Section 112(d) of the CAA, this source is exempt from the requirements of 326 IAC 2-4.1.

326 IAC 2-6 (Emission Reporting)

Since this source is required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, this source is subject to 326 IAC 2-6 (Emission Reporting). In accordance with the compliance schedule in 326 IAC 2-6-3, an emission statement must be submitted triennially. The first report is due no later than July 1, 2008, and subsequent reports are due every three (3) years thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

- (a) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the one (1) proposed brick making room and sand system (EU-NPMR) shall not exceed 48.1 pounds per hour when operating at a process weight rate of 72.5 tons per hour. The potential to emit PM before controls is 45.8 pounds per hour. Therefore, the one (1) proposed brick making room and sand system (EU-NPMR) will comply with this rule. Although the control device is not required for compliance with this rule, the control device will be required for the facility to comply with the limits that make the modification minor pursuant to 326 IAC 2-1.1-5, Nonattainment new source review, and 326 IAC 2-2, PSD. The pound per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (b) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the one (1) proposed coal/natural gas fired brick kiln (EU-NPK) shall not exceed 31.1 pounds per hour when operating at a process weight rate of 20.55 tons per hour. The potential to emit PM before controls is 37.0 pounds per hour and the potential to emit PM after controls is 6.66 pounds per hour. Therefore, the dry lime injection baghouse (DIFF-03) must be in operation at all times when the one (1) proposed coal/natural gas fired brick kiln (EU-NPK) is in operation in order for the kiln to comply with this rule. The pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

- (c) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the one (1) proposed natural gas/propane brick dryer (EU-NPBD1) shall not exceed 31.1 pounds per hour when operating at a process weight rate of 20.55 tons per hour. The potential to emit PM before controls is 3.84 pounds per hour. Therefore, the one (1) proposed natural gas/propane brick dryer (EU-NPBD1) will comply with this rule. The pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

- (d) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the one (1) clay/shale processing operation (EU-001) shall not exceed 51.3 pounds per hour when operating at a process weight rate of 100 tons per hour. The potential to emit PM before controls is 2.50 pounds per hour. Therefore, the one (1) clay/shale processing operation (EU-001) will comply with this rule. The pound per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (e) According to the TSD for the Part 70 Permit Renewal, T 109-16617-00002, the potential particulate emissions from the existing waste brick crushing operations (EU-BC) were less than 0.551 pounds per hour. Therefore, the requirements of 326 IAC 6-3 were not considered applicable. However, according to the calculations in this modification, the potential particulate emissions from the waste brick crushing are greater than 0.551 pound per hour. Therefore, pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the waste brick crushing operations (EU-BC) shall not exceed 55.4 pounds per hour when operating at a process weight rate of 150 tons per hour. The potential to emit PM before controls is 1.01 pounds per hour. Therefore, the waste brick crushing operations (EU-BC) can comply with this rule. The pound per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (f) The two (2) existing mill rooms were not separately listed in the Part 70 Permit Renewal, T 109-16617-00002, although they were considered part of the brick processing line. The two (2) existing mill rooms are separate facilities performing a specific process within brick making. Therefore, the requirements of 326 IAC 6-3-2 are applicable to each of those processes.

(1) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the one (1) mill room (EU-P20-MR) shall not exceed 47.1 pounds per hour when operating at a process weight rate of 65 tons per hour. The potential to emit PM before controls is 41.1 pounds per hour. Therefore, the one (1) mill room (EU-P20-MR) will comply with this rule. Although the control device is not required for compliance with this rule, the control device will be required for the facility to comply with the limits that make the existing source minor pursuant to 326 IAC 2-1.1-5, Nonattainment New Source Review, and 326 IAC 2-2, PSD.

(2) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the one (1) mill room (EU-P32-MR) shall not exceed 47.8 pounds per hour when operating at a process weight rate of 70 tons per hour. The potential to emit PM before controls is 44.2 pounds per hour. Therefore, the one (1) mill room (EU-P32-MR) will comply with this rule. Although the control device is not required for compliance with this rule, the control device will be required for the facility to comply with the limits that make the existing source minor pursuant to 326 IAC 2-1.1-5, Nonattainment New Source

Review, and 326 IAC 2-2, PSD.

The pound per hour limitations were calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

- (a) The potential to emit SO₂ from the one (1) proposed coal/natural gas fired brick kiln (EU-NPK) is greater than twenty-five (25) tons per year or ten (10) pounds per hour. Therefore, the kiln is subject to the requirements of 326 IAC 7-1.1. Pursuant to 326 IAC 7-1.1-2, SO₂ emissions from fuel combustion emissions units shall be limited to six and zero-tenths (6.0) pounds per million British thermal units (MMBtu) for coal combustion. The source must comply with the reporting requirements in 326 IAC 7-2-1.
- (b) The SO₂ emissions from the kiln are less than ten thousand (10,000) tons per year. Therefore, the requirements of 326 IAC 7-3 are not applicable.
- (c) This source is not listed in 326 IAC 7-4-11, Morgan County sulfur dioxide emission limitations. Therefore, the requirements of that rule are not applicable.

326 IAC 8-1-6 (New facilities; General reduction requirements)

The unrestricted potential VOC emissions from the proposed modification are less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.

326 IAC 9-1 (Carbon Monoxide Emission Limits)

There is no emission limitation established in 326 IAC 9-1-2 for brick kilns or dryers. Therefore, the requirements of 326 IAC 9-1 are not applicable.

326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Categories)

This source does not manufacture Portland cement. Therefore, the requirements of 326 IAC 10-3 are not applicable.

326 IAC 20-72-1 (Brick and Structural Clay Products)

The air pollution control board incorporates by reference 40 CFR 63, Subpart JJJJJ (68 FR 26722, May 16, 2003, National Emission Standards for Brick and Structural Clay Products). An amendment to the rule was issued on April 20, 2006. The April 20, 2006 amendments to the federal rule are not approved into the SIP, and the processes at this source are still subject to the previous version of the rule, as well as the amended version addressed under the Federal Rule Applicability section of this document. When the revised rule is incorporated into the 326 IAC, the Permittee may apply for a revision to the permit to remove any requirements from the previous version of the rule that are not present in the updated version of the rule. The April 20, 2006 amendments were part of amendments to 40 CFR 63, Subpart A. The provisions relating to the startup, shutdown, and malfunction plan (SSMP) have been clarified in Subpart A. Until the amendments are approved into the SIP, the old version of the rule will reference the previous version of Subpart A. The requirements of the two (2) versions of Subpart JJJJJ are the same except for the following:

- (a) In 40 CFR 63.8420, the new version of the rule requires the Permittee to develop a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in Sec. 63.6(e)(3), while the previous version requires the Permittee to develop and implement such plan.

- (b) 40 CFR 63.8470(d) has been removed from the rule. The previous version of the rule included "During periods of startup, shutdown, and malfunction, you must operate according to your SSMP."
- (c) 40 CFR 63.8470(e) was also revised, as follows: **Consistent with §§63.6(e) and 63.7(e)(1)**, deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating **in accordance with §63.6(e)(1)** ~~according to an SSMP that satisfies the requirements of Sec. 63.6(e) and your OM&M plan.~~ The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in §63.6(e).

Air Quality Impacts from Minor Sources

Modeling Overview

Pursuant to 326 IAC 2-1.1-5, IDEM, OAQ, has conducted a modeling analysis of the Limited Potential to Emit (PTE) criteria pollutants from this proposed modification to estimate whether the Limited PTE criteria pollutants will cause or contribute to a violation of any National Ambient Air Quality Standard (NAAQS).

Modeling Results – Criteria Pollutants

The modeling results indicate that the Limited PTE criteria pollutants from this modification will not exceed the National Ambient Air Quality Standards (NAAQS).

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance determination requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance determination requirements applicable to this modification are as follows:

1. The Line 1 Kiln/Dryer and the Line 2 Kiln/Dryer have applicable compliance determination conditions as specified below:
 - (a) Within 180 days after the issuance of the Part 70 permit renewal, in order to demonstrate compliance with the 3.77 pounds of SO₂ per ton of bricks limitation in the permit, the Permittee shall perform SO₂ testing for the Line 1 Kiln and Line 2 Kiln stacks utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C-

Performance Testing. After the baghouses on the kilns commence operation, this testing shall not be required.

- (b) Within 180 days after issuance of the Part 70 permit renewal, in order to demonstrate compliance with the requirements of 326 IAC 6-3-2, the Permittee shall perform PM testing for the Line 1 Kiln and Line 2 Kiln stacks utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.
 - (c) Prior to commencing construction of the New Plant, but no later than 180 days after the baghouses on the kilns commence operation, in order to demonstrate compliance with the limitations that make the existing source minor pursuant to 326 IAC 2-2, PSD, 326 IAC 2-3, Emission Offset, and 326 IAC 2-1.1-5, Nonattainment New Source Review, the Permittee shall perform PM, PM₁₀, SO₂ and NO_x testing for the Line 1 Kiln/Dryer stack and the Line 2 Kiln/Dryer stack (DIFF-01 and DIFF-02). PM₁₀ includes filterable and condensable PM₁₀. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.
 - (d) These facilities must also perform compliance testing as required by 40 CFR 63, Subpart JJJJJ.
 - (e) In order to comply with 40 CFR 63, Subpart JJJJJ and the limitations that make the existing source minor pursuant to 326 IAC 2-2, PSD, 326 IAC 2-3, Emission Offset, and 326 IAC 2-1.1-5, Nonattainment New Source Review, the dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01, for particulate and SO₂ control shall be in operation and control emissions from the Line 1 Kiln at all times that the Line 1 Kiln is in operation.
 - (f) In order to comply with 40 CFR 63, Subpart JJJJJ and the limitations that make the existing source minor pursuant to 326 IAC 2-2, PSD, 326 IAC 2-3, Emission Offset, and 326 IAC 2-1.1-5, Nonattainment New Source Review, the dry lime injection baghouse, identified as DIFF-02, for particulate and SO₂ control shall be in operation and control emissions from the Line 2 Kiln at all times that the Line 2 Kiln is in operation.
 - (g) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
 - (h) Pursuant to 326 IAC 7-2, the Permittee shall demonstrate that the sulfur dioxide emissions from the kiln (EU-NPK) does not exceed six (6.0) pounds per million British thermal units. Compliance shall be determined by providing vendor analysis of coal delivered, if accompanied by a certification from the fuel supplier, sampling and analyzing the coal, or by conducting a stack test for sulfur dioxide emissions from the tunnel kilns, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.
2. The two (2) mill rooms, identified as EU-P20-MR and EU-P32-MR, have applicable compliance determination conditions as specified below:

- (a) In order to comply with the limitations that make the existing source minor pursuant to 326 IAC 2-2, PSD, 326 IAC 2-3, Emission Offset, and 326 IAC 2-1.1-5, Nonattainment New Source Review, the baghouse, identified as CD-P20-MR, for particulate control shall be in operation and control emissions from the Line 1 mill room, identified as EU-P20-MR, at all times that the Line 1 mill room is in operation.
 - (b) In order to comply with the limitations that make the existing source minor pursuant to 326 IAC 2-2, PSD, 326 IAC 2-3, Emission Offset, and 326 IAC 2-1.1-5, Nonattainment New Source Review, the baghouse, identified as CD-P32-MR, for particulate control shall be in operation and control emissions from the Line 2 mill room identified as EU-P32-MR, at all times that the Line 2 mill room is in operation.
 - (c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
 - (d) No testing is required for the mill rooms at this time because the limited potential to emit PM_{10} is equal to the post control emission factor in AP-42 and compliance monitoring is required for the control devices.
3. The one (1) coal/natural gas fired brick kiln, identified as EU-NPK, has applicable compliance determination conditions as specified below:
- (a) Within 180 days of startup, in order to demonstrate compliance with the limitations that make the modification minor pursuant to 326 IAC 2-1.1-5, Nonattainment new source review, and 326 IAC 2-2, PSD, and the limitations of 326 IAC 6-3-2, the Permittee shall perform PM, PM_{10} and SO_2 testing for the one (1) coal/natural gas fired brick kiln stack (DIFF-03). PM_{10} includes filterable and condensable PM_{10} . This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.
 - (b) In order to comply with 326 IAC 6-3-2 and the limitations that make the modification minor pursuant to 326 IAC 2-1.1-5, Nonattainment new source review, and 326 IAC 2-2, PSD, the dry lime injection baghouse, identified as DIFF-03, for particulate and SO_2 control shall be in operation and control emissions from the one (1) coal/natural gas fired brick kiln (EU-NPK) at all times that the kiln is in operation.
 - (c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
 - (d) Pursuant to 326 IAC 7-2, the Permittee shall demonstrate that the sulfur dioxide emissions from the kiln (EU-NPK) does not exceed six (6.0) pounds per million British thermal units. Compliance shall be determined by providing vendor analysis of coal delivered, if accompanied by a certification from the fuel supplier, sampling

and analyzing the coal, or by conducting a stack test for sulfur dioxide emissions from the tunnel kilns, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

4. The one (1) brick making room and sand system, identified as EU-NPMR, has applicable compliance determination conditions as specified below:
 - (a) In order to comply with the limitations that make the modification minor pursuant to 326 IAC 2-1.1-5, Nonattainment new source review, and 326 IAC 2-2, PSD, the baghouse, identified as CD-MRBH, for particulate control shall be in operation and control emissions from the one (1) brick making room and sand system, identified as EU-NPMR, at all times that the one (1) brick making room and sand system, identified as EU-NPMR, is in operation.
 - (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
 - (c) No testing is required for the brick making room at this time because the limited potential to emit is equal to the post control emission factor in AP-42.

The compliance monitoring requirements applicable to this modification are as follows:

1. The Line 1 Kiln/Dryer, the Line 2 Kiln/Dryer, and the one (1) proposed coal/natural gas fired brick kiln (EU-NPK) have applicable compliance monitoring conditions as specified below:
 - (a) Visible emission notations of the Line 1 Kiln and Line 2 Kiln stack exhausts (DIFF-01 and DIFF-02) and the one (1) coal/natural gas fired brick kiln (EU-NPK) stack exhaust (DIFF-03) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.
 - (b) Pursuant to 40 CFR 64, Compliance Assurance Monitoring, the Permittee shall perform the following monitoring, which is based on the compliance monitoring requirements in NESHAP Subpart JJJJ:
 - (1) The Permittee shall continuously monitor the dry lime feed rate at the one (1) dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01, and the two (2) dry lime injection baghouses, identified as DIFF-02 and DIFF-03.

- (2) The Permittee shall inspect the dry lime feed system and feeder setting on the one (1) dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01, and the two (2) dry lime injection baghouses, identified as DIFF-02 and DIFF-03, once per shift.
 - (3) If the lime feeder setting drops below the level established during the latest performance test, the switches monitoring the interlock system on the limestone delivery systems, including the lime screw conveyor and holding bin, are not functioning properly, or the Permittee discovers cracks, holes or abnormal/excessive wear on the indicators for the screw conveyor and holding bin, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances.
- (c) These facilities must also perform compliance monitoring as required by 40 CFR 63, Subpart JJJJJ.

These monitoring conditions are necessary because the one (1) dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01, and the two (2) dry lime injection baghouses, identified as DIFF-02 and DIFF-03, must operate properly to ensure compliance with 326 IAC 6-3-2 and 40 CFR 63, Subpart JJJJJ, as incorporated by 326 IAC 20-72, and the limitations that make 326 IAC 2-2, PSD, and nonattainment new source review under 326 IAC 2-1.1-5, Nonattainment New Source Review, not applicable.

2. The two (2) mill rooms, identified as EU-P20-MR and EU-P32-MR, and the one (1) brick making room and sand system, identified as EU-NPMR (also a mill room), have applicable compliance monitoring conditions as specified below:
 - (a) Visible emission notations of the mill room baghouses (CD-P20-MR, CD-P32-MR and CD-NPMR) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.
 - (b) The Permittee shall record the pressure drop across the baghouses (CD-P20-MR, CD-P32-MR and CD-NPMR) used in conjunction with the mill rooms (EU-P20-MR, EU-P32-MR and EU-NPMR) at least once per day when the mill rooms are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit. The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

- (c) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (d) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

These monitoring conditions are necessary because the three (3) baghouses, identified as CD-P20-MR, CD-P32-MR and CD-NPMR, must operate properly to ensure compliance with the limitations that make 326 IAC 2-2, PSD, and nonattainment new source review under 326 IAC 2-1.1-5, Nonattainment New Source Review, not applicable.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit No. 109-16617-00002. Deleted language appears as ~~strike throughs~~ and new language appears in bold:

Change 1:

The source name has been amended as follows:

General Shale **Brick, Inc. Products, LLC** ~~Plants 20 and 32~~

Change 2:

The phone numbers in Condition B.11, Emergency Provisions, and the Emergency Occurrence Report have been revised as follows:

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or

Telephone Number: 317-233-~~5674~~ **0178** (ask for Compliance Section)

Facsimile Number: 317-233-~~5967~~ **6865**

Change 3:

Condition A.2, Source Definition, has been revised to include the new proposed plant, as follows:

A.2 Part 70 Source Definition [326 IAC 2-7-1(22)]

This brick and structural clay products manufacturing company consists of ~~two (2)~~ **three (3)** plants:

(a) Plant No. 20 is located at Highway 67 South and CR 1000 N, Mooresville, ~~Indiana~~; ~~and~~

(b) Plant No. 32 is located at Highway 67 South and CR 1000 N, Mooresville, Indiana; ~~and~~

(c) The New Plant is located at Highway 67 South and CR 1000 N, Mooresville, Indiana.

Since the ~~two (2)~~ **three (3)** plants are located on contiguous or adjacent properties, belong to the

same industrial grouping, and under common control of the same entity, they will be considered one (1) source, ~~effective from the date of issuance of this Part 70 permit.~~

Change 4:

Condition A.3 has been revised to include the proposed facilities. In addition, the description of the existing facilities has been revised to include the control devices. The descriptions were also revised to include the existing mill rooms, which were not specifically mentioned in the renewal, and the waste brick crushing operations, which were considered insignificant, but do not qualify as insignificant activities due to the potential to emit of the process. Changes are as follows:

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) clay/shale processing operation, identified as EU-001, consisting of grinding and screening operations, installed in 1970 with one (1) grinder replaced in 1999, equipped with a baghouse for particulate control, installed in 1993, exhausting to Stack 001, capacity: ~~72.5~~ **100** tons of clay/shale per hour.
- (b) Two (2) brick manufacturing lines, identified as EU-002, consisting of the following:
 - (1) One (1) brick manufacturing line, identified as Line 1, installed in 1970, modified in 1979, located at Plant No. 20, ~~equipped with~~ **consisting of the following:**
 - (A) ~~O~~ne (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 1 Kiln, ~~exhausting to Stack 20DE, as well as~~ **and** one (1) coal and natural gas-fired kiln, **identified as Line 1 Kiln, equipped with a dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01,** exhausting to Stack ~~20KE DIFF-01~~, rated at 25 million British thermal units per hour, capacity: 14.8 tons of bricks per hour. **Pursuant to 40 CFR 63, Subpart JJJJJ, this is an existing affected source using an emissions control system to comply with the rule.**
 - (B) **One (1) mill room, identified as EU-P20-MR, equipped with a baghouse, identified as CD-P20-MR, capacity: 65 tons per hour.**
 - (2) One (1) brick manufacturing line, identified as Line 2, installed in 1987, located at Plant No. 32, ~~equipped with~~ **consisting of the following:**
 - (A) ~~O~~ne (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 2 Kiln, ~~exhausting to Stack 32DE as well as~~ **and** one (1) coal and natural gas-fired kiln, **identified as Line 2 Kiln, equipped with a dry lime injection baghouse, identified as DIFF-02,** exhausting to Stack ~~32KE DIFF-02~~, rated at 25 million British thermal units per hour, capacity: 13.7 tons of bricks per hour. **Pursuant to 40 CFR 63, Subpart JJJJJ, this is an existing affected source using an emissions control system to comply with the rule.**
 - (B) **One (1) mill room, identified as EU-P32-MR, equipped with a baghouse, identified as CD-P32-MR, capacity: 70 tons per hour.**
- (c) **One (1) brick manufacturing line, identified as New Plant, consisting of the following:**
 - (1) **One (1) brick making room and sand system (mill room), identified as EU-NPMR, equipped with a baghouse, identified as CD-MRBH and exhausting to**

Stack MRBH, capacity: 72.5 tons of clay and shale per hour.

- (2) **One (1) coal/natural gas fired brick kiln, identified as EU-NPK, equipped with a dry lime injection baghouse, identified as DIFF-03, and exhausting to Stack DIFF-03, capacity: 20.55 tons of bricks and 25.0 million British thermal units per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is a new affected source, using an emissions control system to comply with the rule.**
- (3) **One (1) natural gas/propane brick dryer, identified as EU-NPBD1, exhausting to Stack NPBD1, capacity: 20.55 tons of bricks and 13.29 million British thermal units per hour.**
- (d) **Waste brick crushing operations, identified as EU-BC, including conveying, crushing and screening, using wet suppression, capacity: 150 tons of bricks per hour.**

Change 5:

Section D.2 has been revised to include the control devices, the emission units not listed in the renewal, and the limits that make the existing source minor pursuant to 326 IAC 2-1.1-5, Nonattainment New Source Review, 326 IAC 2-2, PSD, and 326 IAC 2-3, Emission Offset. The requirements of the NESHAP, 40 CFR 63, Subpart JJJJJ, will be moved to Section E since it applies to facilities in Sections D.2 and D.3, which is added in Change 9. Changes are as follows:

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] Brick Manufacturing Lines

- (b) Two (2) brick manufacturing lines, identified as EU-002, consisting of the following:
 - (1) One (1) brick manufacturing line, identified as Line 1, installed in 1970, modified in 1979, located at Plant No. 20, ~~equipped with~~ **consisting of the following:**
 - (A) ~~O~~ne (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 1 Kiln, ~~exhausting to Stack 20DE, as well as~~ **and one (1) coal and natural gas-fired kiln, identified as Line 1 Kiln, equipped with a dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01, exhausting to Stack 20KE DIFF-01, rated at 25 million British thermal units per hour, capacity: 14.8 tons of bricks per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is an existing affected source using an emissions control system to comply with the rule.**
 - (B) **One (1) mill room, identified as EU-P20-MR, equipped with a baghouse, identified as CD-P20-MR, capacity: 65 tons per hour.**
 - (2) One (1) brick manufacturing line, identified as Line 2, installed in 1987, located at Plant No. 32, equipped with ~~consisting of~~ the following:
 - (A) ~~O~~ne (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 2 Kiln, ~~exhausting to Stack 32DE as well as~~ **and one (1) coal and natural gas-fired kiln, identified as Line 2 Kiln, equipped with a dry lime injection baghouse, identified as DIFF-02, exhausting to Stack 32KE DIFF-02, rated at 25 million British thermal units per hour, capacity: 13.7 tons of bricks per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is an existing affected source using an emissions control system to comply with the rule.**

(B) One (1) mill room, identified as EU-P32-MR, equipped with a baghouse, identified as CD-P32-MR, capacity: 70 tons per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

D.2.1 PSD, Emission Offset and Nonattainment NSR Minor Limits [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-1.1-5]

- (a) ~~The production of bricks at the Line 1 tunnel kiln shall not exceed 129,648 tons per twelve (12) consecutive month period with compliance determined at the end of each month. SO₂ emissions shall not exceed 3.77 pounds of SO₂ per ton of bricks produced. The production and emission limits are required to limit the potential to emit SO₂ from the Line 1 tunnel kiln to less than 250 tons per year.~~
- (b) ~~The production of bricks at the Line 2 tunnel kiln shall not exceed 120,012 tons per twelve (12) consecutive month period with compliance determined at the end of each month. SO₂ emissions shall not exceed 3.77 pounds of SO₂ per ton of bricks produced. The production and emission limits are required to limit the potential to emit SO₂ from the Line 2 tunnel kiln to less than 250 tons per year.~~
- (c) **The production of bricks at the two (2) kilns, Line 1 Kiln and Line 2 Kiln, shall not exceed 243,456 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month.**
- (d) **Prior to operation of the baghouses on Line 1 Kiln and Line 2 Kiln, the SO₂ emissions from each of the kilns shall not exceed 3.77 pounds of SO₂ per ton of bricks. This will continue to limit the potential to emit SO₂ from each kiln to less than two hundred and fifty (250) tons per year.**
- (e) **After the baghouses commence operation, the potential to emit PM, PM₁₀, SO₂ and NO_x shall be limited as follows:**

Facility	NO _x Limit	PM Limit	PM ₁₀ Limit	SO ₂ Limit
	lbs/ton bricks	lbs/ton bricks	lbs/ton bricks	lbs/ton bricks
Line 1 Kiln	0.813	0.336	0.336	1.68
Line 2 Kiln	0.813	0.336	0.336	2.32
Line 1 mill room (EU-P20-MR)	N/A	0.0063	0.0036	N/A
Line 2 mill room (EU-P32-MR)	N/A	0.0063	0.0036	N/A

Compliance with ~~these~~ **limitations in paragraphs (a) and (b) limits the potential to emit PM and PM₁₀ to less than one hundred (100) tons per year, the potential to emit SO₂ to less than two hundred and fifty (250) tons per year and the potential to emit NO_x to less than one hundred (100) tons per year from the source existing prior to the addition of the New Plant. Therefore, the source prior to the addition of the New Plant is a minor source pursuant to 326 IAC 2-1.1-5, Nonattainment NSR, 326 IAC 2-2, PSD, and 326 IAC 2-3, Emission Offset, and these limits renders the requirements of 326 IAC 2-2 and 326 IAC 2-3 not applicable.**

D.2.3 Particulate [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the Line 1 Kiln shall not exceed 24.9 pounds per hour when operating at a process weight rate of 14.8 tons per hour.

This pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the Line 2 Kiln shall not exceed 23.7 pounds per hour when operating at a process weight rate of 13.7 tons per hour.

This pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (c) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the one (1) mill room (EU-P20-MR) shall not exceed 47.1 pounds per hour when operating at a process weight rate of 65 tons per hour.

The pound per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (d) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the one (1) mill room (EU-P32-MR) shall not exceed 47.8 pounds per hour when operating at a process weight rate of 70 tons per hour.

The pound per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.2.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities **and all control devices**.

D.2.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

- (a) Within 180 days after the issuance of this Part 70 permit **renewal, 109-16617-00002**, in order to demonstrate compliance with Condition D.2.1(d), the Permittee shall perform SO₂ testing for the Line 1 Kiln and Line 2 Kiln stacks utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. **After the baghouses on the kilns commence operation, this testing shall be superseded by the testing required in Condition D.2.5(c).**

- (b) Within 180 days after issuance of this Part 70 permit **renewal, 109-16617-00002**, in order to demonstrate compliance with Condition D.2.3, the Permittee shall perform PM testing for the Line 1 Kiln and Line 2 Kiln stacks utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.
- (c) **Prior to commencing construction of the New Plant described in Section D.3, but no later than 180 days after the baghouses on the kilns commence operation, in order to demonstrate compliance with Condition D.2.1(e), the Permittee shall perform PM, PM₁₀, SO₂ and NO_x testing for the Line 1 Kiln/Dryer stack and the Line 2 Kiln/Dryer stack (DIFF-01 and DIFF-02). PM₁₀ includes filterable and condensable PM₁₀. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.**

D.2.7 Particulate and SO₂ Control [326 IAC 2-7-6(6)]

- (a) In order to comply with Condition D.2.1(e), the dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01, for particulate and SO₂ control shall be in operation and control emissions from the Line 1 Kiln at all times that the Line 1 Kiln is in operation.
- (b) In order to comply with Condition D.2.1(e), the dry lime injection baghouse, identified as DIFF-02, for particulate and SO₂ control shall be in operation and control emissions from the Line 2 Kiln at all times that the Line 2 Kiln is in operation.
- (c) In order to comply with Condition D.2.1(e), the baghouse, identified as CD-P20-MR, for particulate control shall be in operation and control emissions from the Line 1 mill room, identified as EU-P20-MR, at all times that the Line 1 mill room is in operation.
- (d) In order to comply with Condition D.2.1(e), the baghouse, identified as CD-P32-MR, for particulate control shall be in operation and control emissions from the Line 2 mill room identified as EU-P32-MR, at all times that the Line 2 mill room is in operation.
- (e) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.2.78 Visible Emissions Notations

- (a) Visible emission notations of the Line 1 Kiln (~~Stack 20KE~~) and Line 2 Kiln (~~Stack 32KE~~) stack exhausts (**DIFF-01 and DIFF-02**) and the mill room baghouses (**CD-P20-MR and CD-P32-MR**) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.2.9 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) **The Permittee shall record the pressure drop across the baghouses (CD-P20-MR and CD-P32-MR) used in conjunction with the mill rooms (EU-P20-MR and EU-P32-MR) at least once per day when the mill rooms are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.**
- (b) **The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.**

D.2.10 Broken or Failed Bag Detection

- (a) **For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).**
- (b) **For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).**

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

D.2.11 Compliance Assurance SO₂ Monitoring [40 CFR 64]

Pursuant to 40 CFR 64, Compliance Assurance Monitoring, the Permittee shall perform the following monitoring, which is based on the compliance monitoring requirements in NESHAP Subpart JJJJ:

- (a) **The Permittee shall continuously monitor the dry lime feed rate at the one (1) dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01, and the one (1) dry lime injection baghouse, identified as DIFF-02.**
- (b) **The Permittee shall inspect the dry lime feed system and feeder setting on the one (1)**

dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01, and the one (1) dry lime injection baghouse, identified as DIFF-02, once per shift.

- (c) **If the lime feeder setting drops below the level established during the latest performance test, the switches monitoring the interlock system on the limestone delivery systems, including the lime screw conveyor and holding bin, are not functioning properly, or the Permittee discovers cracks, holes or abnormal/excessive wear on the indicators for the screw conveyor and holding bin, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances.**

D.2.812 Record Keeping Requirements

- (a) To document compliance with Condition D.2.1 the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the brick production limit as well as the SO₂ emission limits established in Condition D.2.1.
- (1) The total number of bricks produced at each kiln each month;
 - (2) Calendar dates covered in the compliance determination period;
 - (3) Sulfur content, heat content, and ash content of the coal; and
 - (4) Sulfur dioxide emission rates;
- (b) To document compliance with Condition ~~D.2.6~~ **D.2.8**, the Permittee shall maintain records of visible emission notations of the Line 1 Kiln (~~Stack 20KE~~) and Line 2 Kiln (~~Stack 32KE~~) stack exhausts (**DIFF-01 and DIFF-02**) once per day while combusting coal.
- (c) **To document compliance with Condition D.2.9, the Permittee shall maintain records once per day of the pressure drop across the baghouses (CD-P20-MR and CD-P32-MR) used in conjunction with the mill rooms (EU-P20-MR and EU-P32-MR) during normal operation when venting to the atmosphere.**
- (d) **To document compliance with Condition D.2.11, the Permittee shall maintain records of the feeder setting once per shift and continuous records of the dry lime feed rate.**
- (e) **To document compliance with Condition D.2.1(d) and (e), the Permittee shall maintain a record of the date the one (1) dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01, and the one (1) dry lime injection baghouse, identified as DIFF-02, commence operation.**
- ~~(e)~~(f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.913 Reporting Requirements

- (a) A quarterly summary of the information to document compliance with Condition D.2.1(a) **through (c)** shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) **Reports indicating the date the one (1) dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01, and the one (1) dry lime injection baghouse, identified**

as DIFF-02, commence operation shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, within thirty (30) days of commencing operation of each baghouse. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

~~D.2.10 General Provisions Relating to HAPs [326 IAC 20-1] [40 CFR 63, Subpart A]~~

- ~~(a) The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the brick and structural clay products manufacturing affected source, as designated by 40 CFR 63.8385, except when otherwise specified in 40 CFR 63, Subpart JJJJ. The Permittee must comply with these requirements on or after May 23, 2003.~~
- ~~(b) Since the applicable requirements associated with the compliance options are not included and specifically identified in this permit, the permit shield authorized by Section B – Permit Shield, and set out in 326 IAC 2-7-15 does not apply to paragraph (a) of this condition.~~

~~D.2.11 National Emission Standards for Hazardous Air Pollutants for Bricks and Structural Clay Products Manufacturing [40 CFR 63, Subpart JJJJJ] [40 CFR 63.8385] [40 CFR 63.8390]~~

- ~~(a) The affected source, tunnel kilns that manufacture the products described in 40 CFR 63.8385(a), brick (including but not limited to, face brick, structural brick, and brick pavers), clay pipe, roof tile, extruded floor and wall tile, and/or other extruded, dimensional clay products that are associated with the operations described in 40 CFR 63.8390(b)(2), is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Brick and Structural Clay Products Manufacturing (40 CFR 63, Subpart JJJJJ), effective May 16, 2003.~~

~~The Permittee must comply with 40 CFR 63, Subpart JJJJJ on and after May 1, 2007, or accept and meet an enforceable HAP emissions limit below the major source threshold prior to that date.~~
- ~~(b) The following emission units comprise the affected source that is subject to 40 CFR 63, Subpart JJJJJ:~~

~~The following equipment from the two (2) brick manufacturing lines, identified as EU-002:~~

- ~~(1) Line 1 tunnel kiln, exhausting to Stack 20KE, rated at 25 million British thermal units per hour located on a brick manufacturing line, constructed in 1970 and modified in 1979 capacity: 14.8 tons of brick per hour.~~
- ~~(2) Line 2 tunnel kiln, exhausting to Stack 32KE, rated at 25 million British thermal units per hour located on a brick manufacturing line, constructed in 1987 capacity: 13.7 tons of brick per hour.~~
- ~~(c) The definitions in 40 CFR 63.8480 are applicable to this source.~~

~~D.2.12 National Emission Standards for Hazardous Air Pollutants for Bricks and Structural Clay Products Manufacturing [40 CFR 63, Subpart JJJJJ]~~

- ~~(a) Pursuant to 40 CFR 63.8480(a), the Permittee shall submit the notifications in 40 CFR 63.7(b) and (c), 40 CFR 63.8(f)(4), and 40 CFR 63.9(b) through (e), (g)(1), and (h) that apply to the affected source and chosen compliance method by the dates specified.~~
- ~~(b) Pursuant to 40 CFR 63.8480(b), the Permittee submitted an initial notification containing the information specified in 40 CFR 63.9(b)(2) and (3), on August 6, 2003.~~
- ~~(c) Pursuant to 40 CFR 62.8480(c), the Permittee shall submit a notification of compliance status~~

~~required by 40 CFR 63.9(h), no later than 60 calendar days after a performance test is performed in accordance with Table 3 of 40 CFR 63, Subpart JJJJ. The notification of compliance status report shall contain the information specified in 40 CFR 63.10(d)(2) and 40 CFR 63.8480(e)(2)(i) and (ii).~~

~~(d) The notifications required by paragraphs (a) through (c) shall be submitted to:~~

~~Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2254~~

~~and~~

~~United States Environmental Protection Agency, Region V
Director, Air and Radiation Division
77 West Jackson Boulevard
Chicago, Illinois 60604-3590~~

~~D.2.13 Requirement to Submit a Significant Permit Modification Application [326 IAC 2-7-12] [326 IAC 2-7-5]~~

~~The Permittee shall submit an application for a significant permit modification to IDEM, OAQ to include the information regarding which compliance option or options will be chosen in the Part 70 Operating Permit.~~

~~(a) The significant permit modification application shall be consistent with 326 IAC 2-7-12, including information sufficient for IDEM, OAQ to incorporate into the Part 70 Operating Permit the applicable requirements of 40 CFR 63, Subpart JJJJ, a description of the affected source and activities subject to the standard, and description of how the Permittee will meet the applicable requirements of the standard.~~

~~(b) The significant permit modification application shall be submitted no later than August 1, 2006.~~

~~(c) The significant permit modification application shall be submitted to:~~

~~Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2254~~

Change 6:

Section D.3, for the new proposed facilities was added to the permit as follows:

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] Brick Manufacturing Line (New Plant)

(c) One (1) brick manufacturing line, identified as New Plant, consisting of the following:

- (1) One (1) brick making room and sand system (mill room), identified as EU-NPMR, equipped with a baghouse, identified as CD-MRBH and exhausting to Stack MRBH, capacity: 72.5 tons of clay and shale per hour.
- (2) One (1) coal/natural gas fired brick kiln, identified as EU-NPK, equipped with a dry lime injection baghouse, identified as DIFF-03, and exhausting to Stack DIFF-03, capacity: 20.55 tons of bricks and 25.0 million British thermal units per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is a new affected source, using an emissions control system to comply with the rule.
- (3) One (1) natural gas/propane brick dryer, identified as EU-NPBD1, exhausting to Stack NPBD1, capacity: 20.55 tons of bricks and 13.29 million British thermal units per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 PSD and Nonattainment NSR Minor Modification Limits [326 IAC 2-2] [326 IAC 2-1.1-5]

- (a) The construction of these facilities shall not commence until the Permittee demonstrates compliance with the pound per ton emission limitations in Condition D.2.1(e) using the testing required by Condition D.2.5(c).
- (b) The potential to emit PM, PM₁₀, and SO₂ shall be limited as follows:

Facility	PM Limit	PM ₁₀ Limit	SO ₂ Limit
	lbs/ton bricks	lbs/ton bricks	lbs/ton bricks
New Plant Kiln	0.336	0.336	2.60
New Plant Mill Room	0.0063	0.0036	N/A
Total			

Compliance with these limitations limits the potential to emit PM and PM₁₀ to less than one hundred (100) tons per year and the potential to emit SO₂ to less than two hundred and fifty (250) tons per year from the addition of the New Plant. Therefore, this modification is a minor modification pursuant to 326 IAC 2-1.1-5, Nonattainment NSR, 326 IAC 2-2, PSD, and the requirements of 326 IAC 2-2 and 326 IAC 2-3 are not applicable.

D.3.2 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-1]

Pursuant to 326 IAC 7-1.1 (SO₂ Emissions Limitations), the SO₂ emissions from the kiln, identified as EU-NPK, shall not exceed six (6.0) pounds per million British thermal units heat input while combusting coal.

D.3.3 Particulate [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the one (1) proposed brick making room and sand system (EU-NPMR) shall not exceed 48.1 pounds per hour when operating at a process weight rate of 72.5 tons per hour.

The pound per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from one (1) proposed coal/natural gas fired brick kiln (EU-NPK) shall not exceed 31.1 pounds per hour when operating at a process weight rate of 20.55 tons per hour.

This pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (c) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the one (1) proposed natural gas/propane brick dryer (EU-NPBD1) shall not exceed 31.1 pounds per hour when operating at a process weight rate of 20.55 tons per hour.

This pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.3.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and all control devices.

Compliance Determination Requirements

D.3.5 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

Within 180 days of startup, in order to demonstrate compliance with Conditions D.3.1(b) and D.3.3(b), the Permittee shall perform PM, PM₁₀ and SO₂ testing for the one (1) coal/natural gas fired brick kiln stack (DIFF-03). PM₁₀ includes filterable and condensable PM₁₀. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

D.3.6 Particulate and SO₂ Control [326 IAC 2-7-6(6)]

- (a) In order to comply with Conditions D.3.1(b) and D.3.3(b), the dry lime injection baghouse, identified as DIFF-03, for particulate and SO₂ control shall be in operation and control emissions from the one (1) coal/natural gas fired brick kiln (EU-NPK) at all times that the kiln is in operation.
- (b) In order to comply with Condition D.3.1(b), the baghouse, identified as CD-MRBH, for particulate control shall be in operation and control emissions from the one (1) brick making room and sand system, identified as EU-NPMR, at all times that the one (1) brick making room and sand system, identified as EU-NPMR, is in operation.
- (c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.3.7 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 2-7-5(3)(A)] [326 IAC 2-7-6]

Pursuant to 326 IAC 7-2, the Permittee shall demonstrate that the sulfur dioxide emissions from the kiln (EU-NPK) do not exceed six (6.0) pounds per million British thermal units. Compliance shall be determined utilizing one of the following options:

- (a) Providing vendor analysis of coal delivered, if accompanied by a certification from the fuel supplier, as described under 40 CFR 60.48c(f)(3). The certification shall include:
 - (1) The name of the coal supplier; and
 - (2) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the coal was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected); and
 - (3) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and
 - (4) The methods used to determine the properties of the coal; or
- (b) Sampling and analyzing the coal by using one of the following procedures:
 - (1) Minimum Coal Sampling Requirements and Analysis Methods:
 - (A) The coal sample acquisition point shall be at a location where representative samples of the total coal flow to be combusted by the facility or facilities may be obtained. A single as-bunkered or as-burned sampling station may be used to represent the coal to be combusted by multiple facilities using the same stockpile feed system;
 - (B) Coal shall be sampled at least one (1) time per day;

- (C) Minimum sample size shall be five hundred (500) grams;
 - (D) Samples shall be composited and analyzed at the end of each calendar quarter;
 - (E) Preparation of the coal sample, heat content analysis, and sulfur content analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), (e); or
- (2) Sample and analyze the coal pursuant to 326 IAC 3-7-3; or
- (c) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the tunnel kilns, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, which is conducted with such frequency as to generate the amount of information required by (a) or (b) above. [326 IAC 7-2-1(b)]

A determination of noncompliance pursuant to any of the methods specified in (a), (b), or (c) above shall not be refuted by evidence of compliance pursuant to the other method.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.8 Visible Emissions Notations

- (a) Visible emission notations of the one (1) coal/natural gas fired brick kiln (EU-NPK) stack exhaust (DIFF-03) and the one (1) brick making room and sand system (EU-NPMR) baghouse stack exhaust (MRBH) shall be performed once per day during normal daylight operations.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.3.9 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) The Permittee shall record the pressure drop across the baghouse (CD-MRBH) used in conjunction with the one (1) brick making room and sand system (EU-NPMR) at least once per day when the brick making room and sand system is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall

be considered a deviation from this permit.

- (b) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.3.10 Broken or Failed Bag Detection

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

D.3.11 Compliance Assurance SO₂ Monitoring [40 CFR 64]

- (a) The Permittee shall continuously monitor the dry lime feed rate at the one (1) dry lime injection baghouse, identified as DIFF-03.
- (b) The Permittee shall inspect the dry lime feed system and feeder setting on the one (1) dry lime injection baghouse, identified as DIFF-03, once per shift.
- (c) If the lime feeder setting drops below the level established during the latest performance test, the switches monitoring the interlock system on the limestone delivery systems, including the lime screw conveyor and holding bin, are not functioning properly, or the Permittee discovers cracks, holes or abnormal/excessive wear on the indicators for the screw conveyor and holding bin, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.12 Record Keeping Requirements

- (a) To document compliance with Condition D.3.1 the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the brick production limit as well as the SO₂ emission limits established in Condition D.2.1.
 - (1) The total number of bricks produced at each kiln each month;
 - (2) Calendar dates covered in the compliance determination period;
 - (3) Sulfur content, heat content, and ash content of the coal; and
 - (4) Sulfur dioxide emission rates;

- (b) To document compliance with Condition D.3.8, the Permittee shall maintain records of visible emission notations of the one (1) coal/natural gas fired brick kiln (EU-NPK) stack exhaust (DIFF-03) once per day while combusting coal.**
- (c) To document compliance with Condition D.3.9, the Permittee shall maintain records once per day of the pressure drop across the baghouse (CD-MRBH) used in conjunction with the one (1) brick making room and sand system (EU-NPMR) during normal operation when venting to the atmosphere.**
- (d) To document compliance with Condition D.3.11, the Permittee shall maintain records of the feeder setting once per shift.**
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.**

Change 7:

Section D.4 has been added to the permit for the existing waste brick crushing operations, which were previously considered insignificant, but do not meet the criteria for an insignificant activity. The following Section has been added to the permit:

SECTION D.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] Waste Brick Crushing

- (d) Waste brick crushing operations, identified as EU-BC, including conveying, crushing and screening, using wet suppression, capacity: 150 tons of bricks per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.4.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the waste brick crushing operations (EU-BC) shall not exceed 55.4 pounds per hour when operating at a process weight rate of 150 tons per hour.

The pound per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Change 8:

The following report form has been added to the permit:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: General Shale Brick, Inc.
Source Address: Highway 67 South and CR 1000 North, Mooreville, Indiana 46158
Mailing Address: P.O. Box 156, Mooreville, Indiana 46518
Part 70 Permit No.: T 109-16617-00002
Facilities: Line 1 Kiln and Line 2 Kiln
Parameter: Brick Produced
Limit: Not to exceed 243,456 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month.

YEAR: _____

Month	Bricks Produced (tons)	Bricks Produced (tons)	Bricks Produced (tons)
	This Month	Previous 11 Months	12 Month Total

No deviation occurred in this quarter.

Deviation/s occurred in this quarter.

Deviation has been reported on: _____

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Change 9:

The requirements of the National Emission Standards for Hazardous Air Pollutants for Brick and Structural Clay Products Manufacturing (40 CFR 63, Subpart JJJJJ), which is incorporated by reference as 326 IAC 20-72-1, has been added to the permit as Section E.1, as follows:

SECTION E.1 FACILITY OPERATION CONDITIONS

NESHAP Subpart JJJJJ

- (a) One (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 1 Kiln and one (1) coal and natural gas-fired kiln, identified as Line 1 Kiln, equipped with a dry lime/sodium bicarbonate injection baghouse, identified as DIFF-01, exhausting to Stack DIFF-01, rated at 25 million British thermal units per hour, capacity: 14.8 tons of bricks per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is an existing affected source using an emissions control system to comply with the rule.
- (b) One (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 2 Kiln, and one (1) coal and natural gas-fired kiln, identified as Line 2 Kiln, equipped with a dry lime injection baghouse, identified as DIFF-02, exhausting to Stack DIFF-02, rated at 25 million British thermal units per hour, capacity: 13.7 tons of bricks per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is an existing affected source using an emissions control system to comply with the rule.
- (c) One (1) coal/natural gas fired brick kiln, identified as EU-NPK, equipped with a dry lime injection baghouse, identified as DIFF-03, and exhausting to Stack DIFF-03, capacity: 20.55 tons per hour. Pursuant to 40 CFR 63, Subpart JJJJJ, this is a new affected source, using an emissions control system to comply with the rule.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-7-5(1)]

E.1.1 General Provisions Relating to NESHAP Subpart JJJJJ [326 IAC 20-1] [40 CFR Part 63, Subpart A]

Pursuant to 40 CFR 63.8505, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, as specified in Table 7 of 40 CFR Part 63, Subpart JJJJJ and in accordance with the schedule in 40 CFR 63 Subpart JJJJJ.

E.1.2 NESHAP Subpart JJJJJ Requirements [40 CFR Part 63, Subpart JJJJJ]

Pursuant to 40 CFR Part 63, Subpart JJJJJ, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart JJJJJ, for the facilities listed in this section, with a compliance date of May 1, 2007 for the one (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 1 Kiln and one (1) coal and natural gas-fired kiln, identified as Line 1 Kiln, and the one (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 2 Kiln, and one (1) coal and natural gas-fired kiln, identified as Line 2 Kiln, and upon startup for the one (1) coal/natural gas fired brick kiln, identified as EU-NPK, as specified as follows:

What This Subpart Covers

§ 63.8380 What is the purpose of this subpart?

This subpart establishes national emission limitations for hazardous air pollutants (HAP) emitted from brick and structural clay products (BSCP) manufacturing facilities. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

§ 63.8385 Am I subject to this subpart?

You are subject to this subpart if you own or operate a BSCP manufacturing facility that is, is located at, or is part of, a major source of HAP emissions according to the criteria in paragraphs (a) and (b) of this section.

(a) A BSCP manufacturing facility is a plant site that manufactures brick (including, but not limited to, face brick, structural brick, and brick pavers); clay pipe; roof tile; extruded floor and wall tile; and/or other extruded, dimensional clay products. Brick and structural clay products manufacturing facilities typically process raw clay and shale, form the processed materials into bricks or shapes, and dry and fire the bricks or shapes.

(b) A major source of HAP emissions is any stationary source or group of stationary sources within a contiguous area under common control that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (10 tons) or more per year or any combination of HAP at a rate of 22.68 megagrams (25 tons) or more per year.

§ 63.8390 What parts of my plant does this subpart cover?

(a) This subpart applies to each existing, new, or reconstructed affected source at a BSCP manufacturing facility.

(b) The existing affected source is an existing tunnel kiln with a design capacity equal to or greater than 9.07 megagrams per hour (Mg/hr) (10 tons per hour (tph)) of fired product according to paragraphs (b)(1) through (3) of this section. For the remainder of this subpart, a tunnel kiln with a design capacity equal to or greater than 9.07 Mg/hr (10 tph) of fired product will be called a large tunnel kiln, and a tunnel kiln with a design capacity less than 9.07 Mg/hr (10 tph) of fired product will be called a small tunnel kiln.

(1) For existing tunnel kilns that do not have sawdust dryers, the kiln exhaust process stream (i.e., the only process stream) is subject to the requirements of this subpart.

(e) Each new or reconstructed tunnel kiln is an affected source regardless of design capacity. All process streams from each new or reconstructed tunnel kiln are subject to the requirements of this subpart.

(h) A source is a new affected source if construction of the affected source began after July 22, 2002, and you met the applicability criteria at the time you began construction.

(j) An affected source is existing if it is not new or reconstructed.

§ 63.8395 When do I have to comply with this subpart?

(a) If you have a new or reconstructed affected source, you must comply with this subpart according to paragraphs (a)(1) and (2) of this section.

(2) If the initial startup of your affected source is after May 16, 2003, then you must comply with the applicable emission limitations in Tables 1 and 2 to this subpart upon initial startup of your affected source.

(b) If you have an existing affected source, you must comply with the applicable emission limitations in Tables 1 and 2 to this subpart no later than May 16, 2003. On February 2, 2006, IDEM, OAQ approved an extension of the final compliance date contained in 40 CFR Part 63, Subpart JJJJJ, for the two (2) existing tunnel kilns. The termination date of this extension is May 1, 2007, which is the final compliance date. The Permittee must comply with the terms of the extension as required by Condition C.10.

(e) You must meet the notification requirements in §63.8480 according to the schedule in §63.8480 and in 40 CFR part 63, subpart A. Some of the notifications must be submitted before you are required to comply with the emission limitations in this subpart.

Emission Limitations

§ 63.8405 What emission limitations must I meet?

- (a) You must meet each emission limit in Table 1 to this subpart that applies to you.
- (b) You must meet each operating limit in Table 2 to this subpart that applies to you.

§ 63.8410 What are my options for meeting the emission limitations?

To meet the emission limitations in Tables 1 and 2 to this subpart, you must use one or more of the options listed in paragraphs (a) and (b) of this section.

- (a) *Emissions control system.* Use an emissions capture and collection system and an APCD and demonstrate that the resulting emissions or emissions reductions meet the emission limits in Table 1 to this subpart, and that the capture and collection system and APCD meet the applicable operating limits in Table 2 to this subpart.

General Compliance Requirements

§ 63.8420 What are my general requirements for complying with this subpart?

- (a) You must be in compliance with the emission limitations (including operating limits) in this subpart at all times, except during periods of startup, shutdown, and malfunction and during periods of routine control device maintenance as specified in paragraph (e) of this section.
- (b) Except as specified in paragraph (e) of this section, you must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in §63.6(e)(1)(i). During the period between the compliance date specified for your affected source in §63.8395 and the date upon which continuous monitoring systems (CMS) (e.g., continuous parameter monitoring systems) have been installed and verified and any applicable operating limits have been set, you must maintain a log detailing the operation and maintenance of the process and emissions control equipment.
- (c) You must develop a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in §63.6(e)(3).
- (d) You must prepare and implement a written operation, maintenance, and monitoring (OM&M) plan according to the requirements in §63.8425.
- (e) If you own or operate an affected kiln and must perform routine maintenance on the control device for that kiln, you may bypass the kiln control device and continue operating the kiln upon approval by the Administrator provided you satisfy the conditions listed in paragraphs (e)(1) through (5) of this section.
 - (1) You must request a routine control device maintenance exemption from the Administrator. Your request must justify the need for the routine maintenance on the control device and the time required to accomplish the maintenance activities, describe the maintenance activities and the frequency of the maintenance activities, explain why the maintenance cannot be accomplished during kiln shutdowns, describe how you plan to minimize emissions to the greatest extent possible during the maintenance, and provide any other documentation required by the Administrator.
 - (2) The routine control device maintenance exemption must not exceed 4 percent of the annual operating uptime for each kiln.
 - (3) The request for the routine control device maintenance exemption, if approved by the Administrator, must be incorporated by reference in and attached to the affected source's title V permit.
 - (4) You must minimize HAP emissions during the period when the kiln is operating and the control device is offline.
 - (5) You must minimize the time period during which the kiln is operating and the control device is offline.
- (f) You must be in compliance with the provisions of subpart A of this part, except as noted in Table 7 to this subpart.

§ 63.8425 What do I need to know about operation, maintenance, and monitoring plans?

(a) You must prepare, implement, and revise as necessary an OM&M plan that includes the information in paragraph (b) of this section. Your OM&M plan must be available for inspection by the permitting authority upon request.

(b) Your OM&M plan must include, as a minimum, the information in paragraphs (b)(1) through (13) of this section.

(1) Each process and APCD to be monitored, the type of monitoring device that will be used, and the operating parameters that will be monitored.

(2) A monitoring schedule that specifies the frequency that the parameter values will be determined and recorded.

(3) The limits for each parameter that represent continuous compliance with the emission limitations in §63.8405. The limits must be based on values of the monitored parameters recorded during performance tests.

(4) Procedures for the proper operation and routine and long-term maintenance of each APCD, including a maintenance and inspection schedule that is consistent with the manufacturer's recommendations.

(5) Procedures for installing the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last APCD).

(6) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction system.

(7) Continuous monitoring system performance evaluation procedures and acceptance criteria (e.g., calibrations).

(8) Procedures for the proper operation and maintenance of monitoring equipment consistent with the requirements in §§63.8450 and 63.8(c)(1), (3), (4)(ii), (7), and (8).

(9) Continuous monitoring system data quality assurance procedures consistent with the requirements in §63.8(d).

(10) Continuous monitoring system recordkeeping and reporting procedures consistent with the requirements in §63.10(c), (e)(1), and (e)(2)(i).

(11) Procedures for responding to operating parameter deviations, including the procedures in paragraphs (b)(11)(i) through (iii) of this section.

(i) Procedures for determining the cause of the operating parameter deviation.

(ii) Actions for correcting the deviation and returning the operating parameters to the allowable limits.

(iii) Procedures for recording the times that the deviation began and ended and corrective actions were initiated and completed.

(12) Procedures for keeping records to document compliance.

(13) If you operate an affected kiln and you plan to take the kiln control device out of service for routine maintenance, as specified in §63.8420(e), the procedures specified in paragraphs (b)(13)(i) and (ii) of this section.

(i) Procedures for minimizing HAP emissions from the kiln during periods of routine maintenance of the kiln control device when the kiln is operating and the control device is offline.

(ii) Procedures for minimizing the duration of any period of routine maintenance on the kiln control device when the kiln is operating and the control device is offline.

(c) Changes to the operating limits in your OM&M plan require a new performance test. If you are revising an operating limit parameter value, you must meet the requirements in paragraphs (c)(1) and (2) of this section.

(1) Submit a notification of performance test to the Administrator as specified in §63.7(b).

(2) After completing the performance tests to demonstrate that compliance with the emission limits can be achieved at the revised operating limit parameter value, you must submit the performance test results and the revised operating limits as part of the Notification of Compliance Status required under §63.9(h).

(d) If you are revising the inspection and maintenance procedures in your OM&M plan, you do not need to conduct a new performance test.

Testing and Initial Compliance Requirements

§ 63.8435 By what date must I conduct performance tests?

You must conduct performance tests within 180 calendar days after the compliance date that is specified for your source in §63.8395 and according to the provisions in §63.7(a)(2).

§ 63.8440 When must I conduct subsequent performance tests?

(a) You must conduct a performance test before renewing your 40 CFR part 70 operating permit or at least every 5 years following the initial performance test.

(b) You must conduct a performance test when you want to change the parameter value for any operating limit specified in your OM&M plan.

§ 63.8445 How do I conduct performance tests and establish operating limits?

(a) You must conduct each performance test in Table 3 to this subpart that applies to you.

(b) Before conducting the performance test, you must install and calibrate all monitoring equipment.

(c) Each performance test must be conducted according to the requirements in §63.7 and under the specific conditions in Table 3 to this subpart.

(d) You must test while operating at the maximum production level.

(e) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §63.7(e)(1).

(f) You must conduct at least three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour.

(g) You must use the data gathered during the performance test and the equations in paragraphs (g)(1) and (2) of this section to determine compliance with the emission limitations.

(1) To determine compliance with the production-based hydrogen fluoride (HF), hydrogen chloride (HCl), and particulate matter (PM) emission limits in Table 1 to this subpart, you must calculate your mass emissions per unit of production for each test run using Equation 1 of this section:

$$MP = \frac{ER}{P} \quad (\text{Eq. 1})$$

Where:

MP=mass per unit of production, kilograms (pounds) of pollutant per megagram (ton) of fired product

ER=mass emission rate of pollutant (HF, HCl, or PM) during each performance test run, kilograms (pounds) per hour

P=production rate during each performance test run, megagrams (tons) of fired product per hour.

(2) To determine compliance with the percent reduction HF and HCl emission limits in Table 1 to this subpart, you must calculate the percent reduction for each test run using Equation 2 of this section:

$$PR = \frac{ER_i - ER_o}{ER_i} (100) \quad (\text{Eq. 2})$$

Where:

PR=percent reduction, percent

ER_i=mass emission rate of specific HAP (HF or HCl) entering the APCD, kilograms (pounds) per hour

ER_o=mass emission rate of specific HAP (HF or HCl) exiting the APCD, kilograms (pounds) per hour.

(h) You must establish each site-specific operating limit in Table 2 to this subpart that applies to you as specified in Table 3 to this subpart.

§ 63.8450 What are my monitoring installation, operation, and maintenance requirements?

(a) You must install, operate, and maintain each CMS according to your OM&M plan and the requirements in paragraphs (a)(1) through (5) of this section.

(1) Conduct a performance evaluation of each CMS according to your OM&M plan.

(2) The CMS must complete a minimum of one cycle of operation for each successive 15-minute period. To have a valid hour of data, you must have at least three of four equally spaced data values (or at least 75 percent if you collect more than four data values per hour) for that hour (not including startup, shutdown, malfunction, out-of-control periods, or periods of routine control device maintenance covered by a routine control device maintenance exemption as specified in §63.8420(e)).

(3) Determine and record the 3-hour block averages of all recorded readings, calculated after every 3 hours of operation as the average of the previous 3 operating hours. To calculate the average for each 3-hour average period, you must have at least 75 percent of the recorded readings for that period (not including startup, shutdown, malfunction, out-of-control periods, or periods of routine control device maintenance covered by a routine control device maintenance exemption as specified in §63.8420(e)).

(4) Record the results of each inspection, calibration, and validation check.

(5) At all times, maintain the monitoring equipment including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(f) For each lime or chemical feed rate measurement device, you must meet the requirements in paragraphs (a)(1) through (5) and paragraphs (f)(1) and (2) of this section.

(1) Locate the measurement device in a position that provides a representative feed rate measurement.

(2) At least semiannually, conduct a calibration check.

(h) Requests for approval of alternate monitoring procedures must meet the requirements in §§63.8445(i) and 63.8(f).

§ 63.8455 How do I demonstrate initial compliance with the emission limitations?

(a) You must demonstrate initial compliance with each emission limitation that applies to you according to Table 4 to this subpart.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.8480(e).

Continuous Compliance Requirements

§ 63.8465 How do I monitor and collect data to demonstrate continuous compliance?

(a) You must monitor and collect data according to this section.

(b) Except for periods of monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must monitor continuously (or collect data at all required intervals) at all times that the affected source is operating. This includes periods of startup, shutdown, malfunction, and routine control device maintenance as specified in §63.8420(e) when the affected source is operating.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities for purposes of calculating data averages. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. You must use all the valid data collected during all other periods in assessing compliance. Any averaging period for which you do not have valid monitoring data and such data are required constitutes a deviation from the monitoring requirements.

§ 63.8470 How do I demonstrate continuous compliance with the emission limitations?

(a) You must demonstrate continuous compliance with each emission limit and operating limit in Tables 1 and 2 to this subpart that applies to you according to the methods specified in Table 5 to this subpart.

(c) You must report each instance in which you did not meet each emission limit and each operating limit in this subpart that applies to you. This includes periods of startup, shutdown, malfunction, and routine control device maintenance. These instances are deviations from the emission limitations in this subpart. These deviations must be reported according to the requirements in §63.8485.

(e) Consistent with §§63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with §63.6(e)(1) and your OM&M plan. The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in §63.6(e).

(f) Deviations that occur during periods of control device maintenance covered by an approved routine control device maintenance exemption according to §63.8420(e) are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with the approved routine control device maintenance exemption.

(g) You must demonstrate continuous compliance with the operating limits in Table 2 to this subpart for visible emissions (VE) from tunnel kilns equipped with DLA, DIFF, or DLS/FF by monitoring VE at each kiln stack according to the requirements in paragraphs (g)(1) through (3) of this section.

(1) Perform daily VE observations of each kiln stack according to the procedures of Method 22 of 40 CFR part 60, appendix A. You must conduct the Method 22 test while the affected source is operating under normal conditions. The duration of each Method 22 test must be at least 15 minutes.

(2) If VE are observed during any daily test conducted using Method 22 of 40 CFR part 60, appendix A, you must promptly initiate and complete corrective actions according to your OM&M plan. If no VE are observed in 30 consecutive daily Method 22 tests for any kiln stack, you may decrease the frequency of Method 22 testing from daily to weekly for that kiln stack. If VE are observed during any weekly test, you must promptly initiate and complete corrective actions according to your OM&M plan, resume Method 22 testing of that kiln stack on a daily basis, and maintain that schedule until no VE are observed in 30 consecutive daily tests, at which time you may again decrease the frequency of Method 22 testing to a weekly basis.

(3) If VE are observed during any test conducted using Method 22 of 40 CFR part 60, appendix A, you must report these deviations by following the requirements in §63.8485.

Notifications, Reports, and Records

§ 63.8480 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(f)(4), and 63.9 (b) through (e), (g)(1), and (h) that apply to you, by the dates specified.

(c) As specified in §63.9(b)(3), if you start up your new or reconstructed affected source on or after May 16, 2003, you must submit an Initial Notification not later than 120 calendar days after you become subject to this subpart.

(d) If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin, as required in §63.7(b)(1).

(e) If you are required to conduct a performance test as specified in Table 3 to this subpart, you must submit a Notification of Compliance Status as specified in §63.9(h) and paragraphs (e)(1) and (2) of this section.

(1) For each compliance demonstration that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test, according to §63.10(d)(2).

(2) In addition to the requirements in §63.9(h)(2)(i), you must include the information in paragraphs (e)(2)(i) and (ii) of this section in your Notification of Compliance Status.

(i) The operating limit parameter values established for each affected source with supporting documentation and a description of the procedure used to establish the values.

(f) If you request a routine control device maintenance exemption according to §63.8420(e), you must submit your request for the exemption no later than 30 days before the compliance date.

§ 63.8485 What reports must I submit and when?

(a) You must submit each report in Table 6 to this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 6 to this subpart and as specified in paragraphs (b)(1) through (5) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.8395 and ending on June 30 or December 31, and lasting at least 6 months, but less than 12 months. For example, if your compliance date is March 1, then the first semiannual reporting period would begin on March 1 and end on December 31.

(2) The first compliance report must be postmarked or delivered no later than July 31 or January 31 for compliance periods ending on June 30 and December 31, respectively.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31 for compliance periods ending on June 30 and December 31, respectively.

(5) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) The compliance report must contain the information in paragraphs (c)(1) through (7) of this section.

(1) Company name and address.

(2) Statement by a responsible official with that official's name, title, and signature, certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a startup, shutdown or malfunction during the reporting period and you took actions consistent with your SSMP and OM&M plan, the compliance report must include the information specified in §63.10(d)(5)(i).

(5) A description of control device maintenance performed while the control device was offline and the kiln controlled by the control device was operating, including the information specified in paragraphs (c)(5)(i) through (iii) of this section.

(i) The date and time when the control device was shutdown and restarted.

(ii) Identification of the kiln that was operating and the number of hours that the kiln operated while the control device was offline.

(iii) A statement of whether or not the control device maintenance was included in your approved routine control device maintenance exemption developed as specified in §63.8420(e). If the control device maintenance was included in your approved routine control device maintenance exemption, then you must report the information in paragraphs (c)(5)(iii)(A) through (C) of this section.

(A) The total amount of time that the kiln controlled by the control device operated during the current semiannual compliance period and during the previous semiannual compliance period.

(B) The amount of time that each kiln controlled by the control device operated while the control device was offline for maintenance covered under the routine control device maintenance exemption during the current semiannual compliance period and during the previous semiannual compliance period.

(C) Based on the information recorded under paragraphs (c)(5)(iii)(A) and (B) of this section, compute the annual percent of kiln operating uptime during which the control device was offline for routine maintenance using Equation 1 of this section.

Where:

RM=Annual percentage of kiln uptime during which control device was offline for routine control device maintenance

DT_p=Control device downtime claimed under the routine control device maintenance exemption for the previous semiannual compliance period

DT_c=Control device downtime claimed under the routine control device maintenance exemption for the current semiannual compliance period

KU_p=Kiln uptime for the previous semiannual compliance period

KU_c=Kiln uptime for the current semiannual compliance period

(6) If there are no deviations from any emission limitations (emission limits or operating limits) that apply to you, the compliance report must contain a statement that there were no deviations from the emission limitations during the reporting period.

(7) If there were no periods during which the CMS was out-of-control as specified in your OM&M plan, the compliance report must contain a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(e) For each deviation from an emission limitation (emission limit or operating limit) occurring at an affected source where you are using a CMS to comply with the emission limitations in this subpart, you must include the information in paragraphs (c)(1) through (5) and paragraphs (e)(1) through (13) of this section. This includes periods of startup, shutdown, malfunction, and routine control device maintenance.

(1) The total operating time of each affected source during the reporting period.

(2) The date and time that each malfunction started and stopped.

(3) The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.

(4) The date, time, and duration that each CMS was out-of-control, including the pertinent information in your OM&M plan.

(5) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction; during routine control device maintenance covered in your approved routine control device maintenance exemption; or during another period.

(6) A description of corrective action taken in response to a deviation.

(7) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(8) A breakdown of the total duration of the deviations during the reporting period into those that were due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(9) A summary of the total duration of CMS downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during that reporting period.

(10) A brief description of the process units.

(11) A brief description of the CMS.

(12) The date of the latest CMS certification or audit.

(13) A description of any changes in CMS, processes, or control equipment since the last reporting period.

(f) If you have obtained a title V operating permit according to 40 CFR part 70 or 40 CFR part 71, you must report all deviations as defined in this subpart in the semiannual monitoring

report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If you submit a compliance report according to Table 6 to this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all required information concerning deviations from any emission limitation (including any operating limit), then submitting the compliance report will satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submitting a compliance report will not otherwise affect any obligation you may have to report deviations from permit requirements to the permitting authority.

§ 63.8490 What records must I keep?

- (a) You must keep the records listed in paragraphs (a)(1) through (4) of this section.
- (1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirements in §63.10(b)(2)(xiv).
 - (2) The records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.
 - (3) Records of performance tests as required in §63.10(b)(2)(viii).
 - (4) Records relating to control device maintenance and documentation of your approved routine control device maintenance exemption, if you request such an exemption under §63.8420(e).
- (b) You must keep the records required in Table 5 to this subpart to show continuous compliance with each emission limitation that applies to you.
- (c) You must also maintain the records listed in paragraphs (c)(1) through (6) of this section.
- (2) For each deviation of an operating limit parameter value, the date, time, and duration of the deviation, a brief explanation of the cause of the deviation and the corrective action taken, and whether the deviation occurred during a period of startup, shutdown, or malfunction.
 - (3) For each affected source, records of production rates on a fired-product basis.
 - (4) Records for any approved alternative monitoring or test procedures.
 - (5) Records of maintenance and inspections performed on the APCD.
 - (6) Current copies of your SSMP and OM&M plan, including any revisions, with records documenting conformance.

§ 63.8495 In what form and for how long must I keep my records?

- (a) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1).
- (b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
- (c) You must keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You may keep the records offsite for the remaining 3 years.

Other Requirements and Information

§ 63.8505 What parts of the General Provisions apply to me?

Table 7 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

§ 63.8510 Who implements and enforces this subpart?

- (a) This subpart can be implemented and enforced by us, the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to your State, local, or tribal agency.
- (b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under section 40 CFR part 63, subpart E, the authorities contained in paragraph

(c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that cannot be delegated to State, local, or tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the applicability requirements in §§63.8385 and 63.8390, the compliance date requirements in §63.8395, and the non-opacity emission limitations in §63.8405.

(2) Approval of major changes to test methods under §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major changes to monitoring under §63.8(f) and as defined in §63.90.

(4) Approval of major changes to recordkeeping and reporting under §63.10(f) and as defined in §63.90.

§ 63.8515 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in §63.2, and in this section as follows:

Air pollution control device (APCD) means any equipment that reduces the quantity of a pollutant that is emitted to the air.

Bag leak detection system means an instrument that is capable of monitoring PM loadings in the exhaust of a fabric filter in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light-scattering, light-transmittance, or other effects to monitor relative PM loadings.

Brick and structural clay products (BSCP) manufacturing facility means a plant site that manufactures brick (including, but not limited to, face brick, structural brick, and brick pavers); clay pipe; roof tile; extruded floor and wall tile; and/or other extruded, dimensional clay products. Brick and structural clay products manufacturing facilities typically process raw clay and shale, form the processed materials into bricks or shapes, and dry and fire the bricks or shapes.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limitation (including any operating limit) or work practice standard;
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart for any affected source required to obtain such a permit; or
- (3) Fails to meet any emission limitation (including any operating limit) or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Dry lime injection fabric filter (DIFF) means an APCD that includes continuous injection of hydrated lime or other sorbent into a duct or reaction chamber followed by a fabric filter.

Dry lime scrubber/fabric filter (DLS/FF) means an APCD that includes continuous injection of humidified hydrated lime or other sorbent into a reaction chamber followed by a fabric filter. These systems typically include recirculation of some of the sorbent.

Dry limestone adsorber (DLA) means an APCD that includes a limestone storage bin, a reaction chamber that is essentially a packed tower filled with limestone, and may or may not include a peeling drum that mechanically scrapes reacted limestone to regenerate the stone for reuse.

Emission limitation means any emission limit or operating limit.

Fabric filter means an APCD used to capture PM by filtering a gas stream through filter media; also known as a baghouse.

Initial startup means:

- (1) For a new or reconstructed tunnel kiln controlled with a DLA, and for a tunnel kiln that would be considered reconstructed but for §63.8390(i)(1) or §63.8390(i)(2), the time at which the temperature in the kiln first reaches 260 °C (500 °F) and the kiln contains product; or

(2) For a new or reconstructed tunnel kiln controlled with a DIFF, DLS/FF, or WS, the time at which the kiln first reaches a level of production that is equal to 75 percent of the kiln design capacity or 12 months after the affected source begins firing BSCP, whichever is earlier.

Kiln exhaust process stream means the portion of the exhaust from a tunnel kiln that exhausts directly to the atmosphere (or to an APCD), rather than to a sawdust dryer.

Large tunnel kiln means a tunnel kiln (existing, new, or reconstructed) with a design capacity equal to or greater than 9.07 Mg/hr (10 tph) of fired product.

Particulate matter (PM) means, for purposes of this subpart, emissions of PM that serve as a measure of total particulate emissions, as measured by Method 5 (40 CFR part 60, appendix A), and as a surrogate for metal HAP contained in the particulates including, but not limited to, antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium.

Plant site means all contiguous or adjoining property that is under common control, including properties that are separated only by a road or other public right-of-way. Common control includes properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, or any combination thereof.

Research and development kiln means any kiln whose purpose is to conduct research and development for new processes and products and is not engaged in the manufacture of products for commercial sale, except in a de minimis manner.

Responsible official means responsible official as defined in 40 CFR 70.2.

Small tunnel kiln means a tunnel kiln (existing, new, or reconstructed) with a design capacity less than 9.07 Mg/hr (10 tph) of fired product.

Startup means the setting in operation of an affected source and starting the production process.

Tunnel kiln means any continuous kiln that is used to fire BSCP. Some tunnel kilns have two process streams, including a process stream that exhausts directly to the atmosphere or to an APCD, and a process stream in which the kiln exhaust is ducted to a sawdust dryer where it is used to dry sawdust before being emitted to the atmosphere.

Tunnel kiln design capacity means the maximum amount of brick, in Mg (tons), that a kiln is designed to produce in one year divided by the number of hours in a year (8,760 hours). If a kiln is modified to increase the capacity, the design capacity is considered to be the capacity following modifications.

Wet scrubber (WS) means an APCD that uses water, which may include caustic additives or other chemicals, as the sorbent. Wet scrubbers may use any of various design mechanisms to increase the contact between exhaust gases and the sorbent.

Table 1 to Subpart JJJJJ of Part 63—Emission Limits

As stated in §63.8405, you must meet each emission limit in the following table that applies to you.

For each . . .	You must meet the following emission limits . . .	Or you must comply with the following . . .
1. Existing large tunnel kiln (design capacity >=10 tph of fired product), excluding any process stream that is ducted to a sawdust dryer prior to July 22, 2002;	a. HF emissions must not exceed 0.029 kilograms per megagram (kg/Mg) (0.057 pounds per ton (lb/ton)) of fired product. b. HCl emissions must not exceed 0.13 kg/Mg (0.26	Reduce uncontrolled HF emissions by at least 90 percent. Reduce uncontrolled HCl emissions by at least 30 percent. Not applicable.

- lb/ton) of fired product.
- c. PM emissions must not exceed 0.21 kg/Mg (0.42 lb/ton) of fired product.
2. New or reconstructed large tunnel kiln, including all process streams.
- a. HF emissions must not exceed 0.029 kg/Mg (0.057 lb/ton) of fired product. Reduce uncontrolled HF emissions by at least 90 percent.
- b. HCl emissions must not exceed 0.028 kg/Mg (0.056 lb/ton) of fired product. Reduce uncontrolled HCl emissions by at least 85 percent.
- c. PM emissions must not exceed 0.060 kg/Mg (0.12 lb/ton) of fired product. Not applicable.

Table 2 to Subpart JJJJJ of Part 63—Operating Limits

As stated in §63.8405, you must meet each operating limit in the following table that applies to you.

For each . . .	You must . . .
2. Kiln equipped with a DIFF or DLS/FF.	a. or maintain no VE from the DIFF or DLS/FF stack; and b. Maintain free-flowing lime in the feed hopper or silo and to the APCD at all times for continuous injection systems; maintain the feeder setting at or above the level established during the performance test for continuous injection systems.

Table 3 to Subpart JJJJJ of Part 63—Requirements for Performance Tests

As stated in §63.8445, you must conduct each performance test in the following table that applies to you.

For each . . .	You must . . .	Using . . .	According to the following requirements . . .
1. Kiln.....	a. Select locations of sampling ports and the number of	Method 1 or 1A of 40 CFR part 60, appendix A.	Sampling sites must be located at the

traverse points.

outlet of the APCD and prior to any releases to the atmosphere for all affected sources. If you choose to meet the percent emission reduction requirements for HF or HCl, a sampling site must also be located at the APCD inlet.

b. Determine velocities and volumetric flow rate.

Method 2 of 40 CFR part 60, appendix A.

You may use Method 2A, 2C, 2D, 2F, or 2G of 40 CFR part 60, appendix A, as appropriate, as an alternative to using Method 2 of 40 CFR part 60, appendix A.

c. Conduct gas molecular weight analysis.

Method 3 of 40 CFR part 60, appendix A.

You may use Method 3A or 3B of 40 CFR part 60, appendix A, as appropriate, as an alternative to using Method 3 of 40 CFR part 60, appendix A.

d. Measure moisture content of the stack gas.

Method 4 of 40 CFR part 60, appendix A.

.....

e. Measure HF and

Method 26A of 40

Conduct the

HCl emissions.

CFR part 60,
appendix A; or

test while
operating at
the maximum
production
level. You
may use
Method 26 of
40 CFR part
60, appendix
A, as an
alternative
to using
Method 26A
of 40 CFR
part 60,
appendix A,
when no acid
PM (e.g., HF
or HCl
dissolved in
water
droplets
emitted by
sources
controlled
by a WS) is
present.

Method 320 of 40
CFR part 63,
appendix A.

Conduct the
test while
operating at
the maximum
production
level. When
using Method
320 of 40
CFR part 63,
appendix A,
you must
follow the
analyte
spiking
procedures
of section
13 of Method
320 of 40
CFR part 63,
appendix A,
unless you
can
demonstrate
that the
complete
spiking
procedure
has been
conducted at

	f. Measure PM emissions.	Method 5 of 40 CFR part 60, appendix A.	a similar source. Conduct the test while operating at the maximum production level.
4. Kiln equipped with a DIFF or DLS/FF.	Establish the operating limit for the lime feeder setting.	Data from the lime feeder during the performance test.	For continuous lime injection systems, you must ensure that lime in the feed hopper or silo and to the APCD is free-flowing at all times during the performance test and record the feeder setting for the three test runs. If the feed rate setting varies during the three test runs, determine and record the average feed rate from the three test runs.

Table 4 to Subpart JJJJJ of Part 63—Initial Compliance with Emission Limitations
 As stated in §63.8455, you must demonstrate initial compliance with each emission limitation that applies to you according to the following table:

For each . . .	For the following emission limitation . . .	You have demonstrated initial compliance if . . .
1. Existing large tunnel kiln (design capacity >=10 tph of fired product), excluding any	a. HF emissions must not exceed 0.029 kg/Mg	i. The HF emissions measured using

process stream that is ducted to a sawdust dryer prior to July 22, 2002; or including any process stream that exhausts directly to the atmosphere or to an APCD and any process stream that is first ducted to a sawdust dryer on or after July 22, 2002; each new or reconstructed small tunnel kiln (design capacity <10 tph of fired product), including all process streams; each tunnel kiln that would be considered reconstructed but for § 63.8390(i)(1), including all process streams; and each large tunnel kiln previously equipped with a DLA that would be considered reconstructed but for § 63.8390(i)(2), including all process streams.

(0.057 lb/ton) of fired product; or uncontrolled HF emissions must be reduced by at least 90 percent; and

Method 26A of 40 CFR part 60, appendix A or Method 320 of 40 CFR part 63, appendix A over the period of the initial performance test, according to the calculations in § 63.8445(g)(1), do not exceed 0.029 kg/Mg (0.057 lb/ton); or uncontrolled HF emissions measured using Method 26A of 40 CFR part 60, appendix A or Method 320 of 40 CFR part 63, appendix A over the period of the initial performance test are reduced by at least 90 percent, according to the calculations in § 63.8445(g)(2); and

ii. You establish and have a record of the operating limits listed in Table 2 to this subpart over the 3-hour performance test during which HF emissions did not exceed 0.029 kg/Mg (0.057 lb/ton) or uncontrolled HF emissions were reduced by at least 90 percent.

b. HCl emissions must not exceed 0.13 kg/Mg (0.26 lb/ton) of fired product; or

i. The HCl emissions measured using Method 26A of 40 CFR part 60,

uncontrolled HCl emissions must be reduced by at least 30 percent; and

appendix A or Method 320 of 40 CFR part 63, appendix A over the period of the initial performance test, according to the calculations in §

63.8445(g)(1), do not exceed 0.13 kg/Mg (0.26 lb/ton); or

uncontrolled HCl emissions measured using Method 26A of 40 CFR part 60, appendix A or Method 320 of 40 CFR part 63, appendix A over the period of the initial performance test are reduced by at least 30 percent, according to the calculations in §

63.8445(g)(2); and

ii. You establish and have a record of the operating limits listed in Table 2 to this subpart over the 3-hour performance test during which HCl emissions did not exceed 0.13 kg/Mg (0.26 lb/ton) or uncontrolled HCl emissions were reduced by at least 30 percent.

c. PM emissions must not exceed 0.21 kg/Mg (0.42 lb/ton) of fired product.

i. The PM emissions measured using Method 5 of 40 CFR part 60, appendix A, over the period of the

2. New or reconstructed large tunnel kiln, including all process streams.

a. HF emissions must not exceed 0.029 kg/Mg (0.057 lb/ton) of fired product; or uncontrolled HF emissions must be reduced by at least 90 percent; and

initial performance test, according to the calculations in § 63.8445(g)(1), do not exceed 0.21 kg/Mg (0.42 lb/ton); and
ii. You establish and have a record of the operating limits listed in Table 2 to this subpart over the 3-hour performance test during which PM emissions did not exceed 0.21 kg/Mg (0.42 lb/ton).

i. The HF emissions measured using Method 26A of 40 CFR part 60, appendix A or Method 320 of 40 CFR part 63, appendix A over the period of the initial performance test, according to the calculations in § 63.8445(g)(1), do not exceed 0.029 kg/Mg (0.057 lb/ton); or uncontrolled HF emissions measured using Method 26A of 40 CFR part 60, appendix A or Method 320 of 40 CFR part 63, appendix A over the period of the initial performance test are reduced by at least 90 percent, according to the calculations in

§

63.8445(g)(2);

and

ii. You establish and have a record of the operating limits listed in Table 2 to this subpart over the 3-hour performance test during which HF emissions did not exceed 0.029 kg/Mg (0.057 lb/ton) or uncontrolled HF emissions were reduced by at least 90 percent.

b. HCl emissions must not exceed 0.028 kg/Mg (0.056 lb/ton) of fired product; or uncontrolled HCl emissions must be reduced by at least 85 percent; and

i. The HCl emissions measured using Method 26A of 40 CFR part 60, appendix A or Method 320 of 40 CFR part 63, appendix A over the period of the initial performance test, according to the calculations in §

63.8445(g)(1), do not exceed 0.028 kg/Mg (0.056 lb/ton); or uncontrolled HCl emissions measured using Method 26A of 40 CFR part 60, appendix A or Method 320 of 40 CFR part 63, appendix A over the period of the initial performance test are reduced by at least 85 percent, according to the calculations in §

§

63.8445(g)(2);

- and
- ii. You establish and have a record of the operating limits listed in Table 2 to this subpart over the 3-hour performance test during which HCl emissions did not exceed 0.028 kg/Mg (0.056 lb/ton) or uncontrolled HCl emissions were reduced by at least 85 percent.
- c. PM emissions must not exceed 0.060 kg/Mg (0.12 lb/ton) of fired product.
 - i. The PM emissions measured using Method 5 of 40 CFR part 60, appendix A, over the period of the initial performance test, according to the calculations in § 63.8445(g)(1), do not exceed 0.060 kg/Mg (0.12 lb/ton); and
 - ii. You establish and have a record of the operating limits listed in Table 2 to this subpart over the 3-hour performance test during which PM emissions did not exceed 0.060 kg/Mg (0.12 lb/ton).

Table 5 to Subpart JJJJJ of Part 63—Continuous Compliance With Emission Limits and Operating Limits
As stated in §63.8470, you must demonstrate continuous compliance with each emission limit and operating limit that applies to you according to the following table:

	For the following emission limits and operating	You must demonstrate continuous compliance
For each . . .		

limits . . . by . . .

2. Kiln equipped with a DIFF or DLS/FF.	Each emission limit in Table 1 to this subpart and each operating limit in Item 2 of Table 2 to this subpart for kilns equipped with DIFF or DLS/FF.	i. If you use a bag leak detection system, initiating corrective action within 1 hour of a bag leak detection system alarm and completing corrective actions in accordance with your OM&M plan; operating and maintaining the fabric filter such that the alarm is not engaged for more than 5 percent of the total operating time in a 6-month block reporting period; in calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted; if corrective action is required, each alarm is counted as a minimum of 1 hour; if you take longer than 1 hour to initiate corrective action, the alarm time is counted as the actual amount of time taken by you to initiate corrective action; or performing VE observations of the DIFF or DLS/FF stack at the frequency specified in § 63.8470(g) using Method 22 of 40 CFR part 60, appendix A; maintaining no VE from the DIFF or DLS/FF stack; and
---	--	---

ii. Verifying that lime is free-flowing via a load cell, carrier gas/lime flow indicator, carrier gas pressure drop measurement system, or other system; recording all monitor or sensor output, and if lime is found not to be free flowing, promptly initiating and completing corrective actions in accordance with your OM&M plan; recording the feeder setting once during each shift of operation to verify that the feeder setting is being maintained at or above the level established during the performance test.

Table 6 to Subpart JJJJJ of Part 63—Requirements for Reports
As stated in §63.8485, you must submit each report that applies to you according to the following table:

You must submit . . .	The report must contain . . .	You must submit the report . . .
1. A compliance report.....	a. If there are no deviations from any emission limitations (emission limits, operating limits) that apply to you, a statement that there were no deviations from the emission limitations during the reporting period. If there were no periods during which the CMS was out-of-control as specified in your OM&M plan, a statement that there were no periods during which the CMS was out-of-control during the reporting period. b. If you have a deviation from any emission limitation (emission limit, operating limit) during the reporting period, the report must contain the information in § 63.8485(d) or (e). If there were periods during which the CMS was out-of-control, as specified in your OM&M plan, the report must contain the information in § 63.8485(e). c. If you had a startup, shutdown or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information in § 63.10(d)(5)(i).	Semiannually according to the requirements in § 63.8485(b). Semiannually according to the requirements in § 63.8485(b). Semiannually according to the requirements in § 63.8485(b).
2. An immediate startup, shutdown, and	a. Actions taken for the event according	By fax or telephone within

malfunction report if you took actions during a startup, shutdown, or malfunction during the reporting period that are not consistent with your SSMP.

to the requirements in § 63.10(d)(5)(ii).

b. The information in § 63.10(d)(5)(ii).

2 working days after starting actions inconsistent with the plan.

By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority.

E.1.3 State Only National Emission Standards for Hazardous Air Pollutants for Brick and Structural Clay Products Manufacturing Requirements [326 IAC 20-72]

Pursuant to 326 IAC 20-72, the Permittee shall comply with the May 3, 2003 version of 40 CFR Part 63, Subpart JJJJJ, which is incorporated by reference as 326 IAC 20-72, for the facilities listed in this section. The Permittee shall comply with the provisions of 40 CFR Part 63, Subpart JJJJJ, as listed in Condition E.1.2, except the Permittee shall also follow the requirements of the May 3, 2003 version, as incorporated into 326 IAC 20-72, as follows.

Sec. 63.8420 What are my general requirements for complying with this subpart?

(c) You must develop and implement a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in Sec. 63.6(e)(3).

Sec. 63.8470 How do I demonstrate continuous compliance with the emission limitations?

(d) During periods of startup, shutdown, and malfunction, you must operate according to your SSMP.

(e) Deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating according to an SSMP that satisfies the requirements of Sec. 63.6(e) and your OM&M plan. ***

This condition refers to the version of 40 CFR 63.6(e) which is the same as the April 20, 2006 version, except for the following:

Sec. 63.6 Compliance with standards and maintenance requirements.

(e) ***

(1) ***

(ii) Malfunctions must be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan required in paragraph (e)(3) of this section. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, an owner or operator must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices. ***

(3) ***

(i) The owner or operator of an affected source must develop and implement a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction; a program of corrective action for malfunctioning process; and air pollution control and monitoring equipment used to comply with the relevant standard. This plan must be developed by the

owner or operator by the source's compliance date for that relevant standard. The purpose of the startup, shutdown, and malfunction plan is to--* * *

* * * * *

(iii) When actions taken by the owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator must keep records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a "checklist," or other effective form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan for that event. In addition, the owner or operator must keep records of these events as specified in Sec. 63.10(b), including records of the occurrence and duration of each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control and monitoring equipment.

* * *

* * * * *

(ix) The title V permit for an affected source must require that the owner or operator adopt a startup, shutdown, and malfunction plan which conforms to the provisions of this part, and that the owner or

operator operate and maintain the source in accordance with the procedures specified in the current startup, shutdown, and malfunction plan. However, any revisions made to the startup, shutdown, and malfunction plan in accordance with the procedures established by this part shall not be deemed to constitute permit revisions under part 70 or part 71 of this chapter. Moreover, none of the procedures specified by the startup, shutdown, and malfunction plan for an affected source shall be deemed to fall within the permit shield provision in section 504(f) of the Act.

* * *

* * * * *

E.1.4 One Time Deadlines Relating to NESHAP Subpart JJJJJ

- (a) The Permittee must conduct performance tests for the one (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 1 Kiln and one (1) coal and natural gas-fired kiln, identified as Line 1 Kiln, and the one (1) tunnel pre-dryer and one (1) tunnel dryer using waste heat from Line 2 Kiln, and one (1) coal and natural gas-fired kiln, identified as Line 2 Kiln, by October 28, 2007. A notification of intent to conduct a performance test at least sixty (60) calendar days before the performance test is scheduled to begin.
- (b) The Permittee must conduct performance tests for the one (1) coal/natural gas fired brick kiln, identified as EU-NPK, within 180 calendar days after startup. A notification of intent to conduct a performance test at least sixty (60) calendar days before the performance test is scheduled to begin.
- (c) An initial notification shall be submitted for the one (1) coal/natural gas fired brick kiln, identified as EU-NPK, within 120 days of startup.
- (d) The Permittee shall submit the Notification of Compliance Status, including the performance test results, before the close of business on the sixtieth (60th) calendar day following the completion of the performance test.

Change 10:

The responsible official name in Condition A.1 has been revised as follows:

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary brick and structural clay manufacturing source.

Responsible Official: ~~Director of Environment~~ **Manager of Environmental Compliance**
Source Address: Highway 67 South and CR 1000 North, Mooresville, Indiana 46158
Mailing Address: P.O. Box 156, Mooresville, Indiana 46518
General Source Phone Number: (317) 831-3317
SIC Code: 3251
County Location: Morgan
Source Location Status: Nonattainment for ozone under 8-hour standard and PM_{2.5}
Attainment for all other criteria pollutants
Source Status: Part 70 Permit Program
Major Source, under PSD Rules and Emission Offset;
Major Source, Section 112 of the Clean Air Act

Change 11:

The following change have been made to Section D.1 of the permit, due to the change in capacity of the one (1) clay/shale processing operation, identified as EU-001:

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)] Clay/Shale Processing

- (a) One (1) clay/shale processing operation, identified as EU-001, consisting of grinding and screening operations, installed in 1970 with one (1) grinder replaced in 1999, equipped with a baghouse for particulate control, installed in 1993, exhausting to Stack 001, capacity: ~~72.5~~ **100** tons of clay/shale per hour.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

D.1.1 Particulate [326 IAC 6-3-2]

Pursuant to ~~Condition D.1.1 of T 109-7388-00002, issued on January 25, 1999 and 326 IAC 6-3-2~~ (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from clay and shale processing (screening and grinding) operation shall not exceed ~~48.4~~ **51.3** pounds per hour when operating at a process weight rate of ~~72.5~~ **100** tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

Conclusion and Recommendation

The construction and operation of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 109-22854-00002 and Significant Permit Modification No. 109-22865-00002. The staff recommends to the Commissioner that these Part 70 Significant Source and Permit Modifications be approved.

**Appendix A: Potential Emission Calculations
Existing Brick Manufacturing Lines**

Company Name: General Shale Brick, Inc.
Address City IN Zip: Highway 67, South and CR 1000 North, Mooresville, Indiana 46158
Source Modification No.: 109-22854-00002
Permit Modification No.: 109-22865-00002
Reviewer: CarrieAnn Paukowits
Application Date: March 23, 2006

Emission Unit **EU-001**
Processing Shale/Clay

Baghouse Control Eff = 99.0%

Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/ton)	Potential to Emit Before Controls (lbs/hr)	Potential to Emit Before Controls (tons/yr)	Control Efficiency (%)	Potential to Emit After Controls (lbs/hr)	Potential to Emit After Controls (tons/yr)
PM	100	0.025	2.50	11.0	99.0%	0.025	0.110
PM-10	100	0.0023	0.230	1.01	99.0%	0.002	0.010

PM and PM-10 are from AP-42 Table 11.3-1 for Grinding and Screening Operations (SCC 3-05-003-02)

Emission Unit **EU-002**
Kilns and dryers

Pollutant	Limited Rate (tons/yr)	AP-42 Emission Factor (lbs/ton)	Emission Factor based on Test (lbs/ton)	Limited Potential to Emit Before Controls (lbs/yr)	Limited Potential to Emit Before Controls (tons/yr)	Control Efficiency (%)	Limited Potential to Emit After Controls (lbs/yr)	Limited Potential to Emit After Controls (tons/yr)
Line 1								
PM	129648	1.79	1.87	242442	121	82.00%	43640	21.8
PM-10	129648	1.35	1.87	242442	121	82.00%	43640	21.8
SO2	129648	5.10	5.79	750662	375	71.00%	217692	109
NOx	129648	0.510	0.813	105404	52.7	0.00%	105404	52.7
VOC	129648	0.024		3112	1.56	0.00%	3112	1.56
CO	129648	0.800		103718	51.9	0.00%	103718	51.9
HF	129648		0.470	60935	30.5	90.00%	6093	3.05
HCl	129648		0.210	27226	13.61	85.00%	4084	2.04
All other HAPs	129648	0.010		1322	0.66	0.00%	1322	0.66
Line 2								
PM	120012	1.79	1.87	224422	112	82.00%	40396	20.2
PM-10	120012	1.35	1.87	224422	112	82.00%	40396	20.2
SO2	120012	5.10	5.79	694869	347	60.00%	277948	139
NOx	120012	0.510	0.813	97570	48.8	0.00%	97570	48.8
VOC	120012	0.024		2880	1.44	0.00%	2880	1.44
CO	120012	0.800		96010	48.0	0.00%	96010	48.0
HF	120012		0.470	56406	28.20	90.00%	5641	2.82
HCl	120012		0.210	25203	12.60	85.00%	3780	1.89
All other HAPs	120012	0.010		1224	0.61	0.00%	1224	0.61
NOx limit								
NOx	243456	0.510	0.813	197930	99.0	0.00%	197930	99.0

Methodology

PM, PM10, VOC, CO and NOx Emission Factors are from AP-42 Tables 11.3-1, 11.3-2, 11.3-3, 11.3-5 for a coal-fired kiln (SCC 3-05-003-13) and from an engineering stack test conducted 11/11/04

PM and PM-10 Emission Factors Include Filterable PM and PM-10 as well as Condensable Organic and Inorganic PM

The worse case of the AP-42 and engineering stack test emission factors were used to calculate emissions.

SO2 Emission Factors are from stacks tests of Plant 20 kiln

PM and PM-10 control efficiency is based on after control emission factor provided by the applicant.

Mill Rooms (Extrusion Line)

Pollutant	Throughput Rate (tons/hr)	Emission Factor (lbs/ton)	Limited Potential to Emit Before Controls (lbs/hr)	Limited Potential to Emit Before Controls (tons/yr)	Control Efficiency (%)	Limited Potential to Emit After Controls (lbs/yr)	Limited Potential to Emit After Controls (tons/yr)
Line 1							
PM	65	0.63	41.1	180	99.00%	0.411	1.80
PM-10	65	0.36	23.4	102	99.00%	0.234	1.02
Line 2							
PM	70	0.63	44.2	194	99.00%	0.442	1.94
PM-10	70	0.36	25.2	110	99.00%	0.252	1.10

Methodology

PM10 Emission Factor is from AP-42 Table 11.3-1 for an extrusion line with a fabric filter (SCC 3-05-003-42)

PM emission factor is scaled up using 57% of PM is PM10

Pre-control emission factor is the after control emission factor of 0.0036 lbs/ton / (1-control efficiency (99%))

**Appendix A: Potential Emission Calculations
Brick Crushing**

**Company Name: General Shale Brick, Inc.
Address City IN Zip: Highway 67, South and CR 1000 North, Mooresville, Indiana 46158
Source Modification No.: 109-22854-00002
Permit Modification No.: 109-22865-00002
Reviewer: CarrieAnn Paukowits
Application Date: March 23, 2006**

Brick Crushing

Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/ton)	Potential to Emit Before Controls (lbs/hr)	Potential to Emit Before Controls (tons/yr)
Conveying				
Hopper/Feeder				
PM	300	0.00014	0.042	0.184
PM-10	300	0.000046	0.014	0.060
Conveyor 1				
PM	300	0.00014	0.042	0.184
PM-10	300	0.000046	0.014	0.060
Conveyor 2				
PM	300	0.00014	0.042	0.184
PM-10	300	0.000046	0.014	0.060
Conveyor 3				
PM	300	0.00014	0.042	0.184
PM-10	300	0.000046	0.014	0.060
Conveyor 4				
PM	300	0.00014	0.042	0.184
PM-10	300	0.000046	0.014	0.060
Conveyor 5				
PM	300	0.00014	0.042	0.184
PM-10	300	0.000046	0.014	0.060
Conveyor 6				
PM	300	0.00014	0.042	0.184
PM-10	300	0.000046	0.014	0.060
Crushing				
PM	150	0.0012	0.180	0.788
PM-10	150	0.00054	0.081	0.355
Screens				
PM	150	0.0036	0.540	2.37
PM-10	150	0.0022	0.330	1.45
Totals:		PM	1.01	4.44
		PM-10	0.508	2.22

Emission factors are from AP-42, Chapter 11.19.2-2 for tertiary crushing, conveying and fines screening of crushed stone with wet suppression.

A rate of 300 tons per hour is used for conveying to account for 2 transfer points (150 TPH x 2 = 300)

**Appendix A: Emissions Calculations
Existing Natural Gas Combustion Only
MM BTU/HR <100**

Company Name: General Shale Brick, Inc.
Address City IN Zip: Highway 67, South and CR 1000 North, Mooresville, Indiana 46158
Source Modification No.: 109-22854-00002
Permit Modification No.: 109-22865-00002
Reviewer: CarrieAnn Paukowits
Application Date: March 23, 2006

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Two (2) water heaters rated at 0.00139 MMBtu/hr tota
0.00139	0.0122	

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx 100 **see below	VOC	CO
Potential Emission in tons/yr	0.00001	0.00005	0.000004	0.0006	0.00003	0.0005

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Potential Emission in tons/yr	0.00000001	0.00000001	0.00000046	0.00001096	0.00000002

Emission Factor in lb/MMcf	HAPs - Metals					Total
	Lead	Cadmium	Chromium	Manganese	Nickel	
Potential Emission in tons/yr	0.000000003	0.00000001	0.00000001	0.000000002	0.00000001	0.0000115

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

(SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Appendix A: Emissions Calculations
Welding and Thermal Cutting**

**Company Name: General Shale Brick, Inc.
Address City IN Zip: Highway 67, South and CR 1000 North, Mooresville, Indiana 46158
Source Modification No.: 109-22854-00002
Permit Modification No.: 109-22865-00002
Reviewer: CarrieAnn Paukowits
Application Date: March 23, 2006**

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	EMISSION FACTORS* (lb pollutant/lb electrode)				EMISSIONS (lbs/hr)				HAPS (lbs/hr)			
			PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr				
WELDING														
Stick (E7018 electrode)	7	1				0.0211	0.0009			0.148	0.006	0.000	0.000	0.006
FLAME CUTTING	Number of Stations	Max. Metal Thickness Cut (in.)	Max. Metal Cutting Rate (in./minute)	EMISSION FACTORS (lb pollutant/1,000 inches cut, 1" thick)**				EMISSIONS (lbs/hr)				HAPS (lbs/hr)		
				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr			
Oxyacetylene	9	1	8	0.1622	0.0005	0.0001	0.0003	0.701	0.002	0.0004	0.001	0.001	0.004	
EMISSION TOTALS														
Potential Emissions lbs/hr								0.85	0.008	0.0004	0.001		0.010	
Potential Emissions lbs/day								20.36	0.20	0.010	0.031		0.245	
Potential Emissions tons/year								3.72	0.037	0.002	0.006		0.045	

METHODOLOGY

*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column.

Using AWS average values: (0.25 g/min)/(3.6 m/min) x (0.0022 lb/g)/(39.37 in./m) x (1,000 in.) = 0.0039 lb/1,000 in. cut, 8 mm thick

Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" t

Welding emissions, lb/hr: (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)

Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day

Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lb

Appendix A: Potential Emission Calculations
Existing Insignificant Activities other than Welding and Combustion

Company Name: General Shale Brick, Inc.
Address City IN Zip: Highway 67, South and CR 1000 North, Mooresville, Indiana 46158
Source Modification No.: 109-22854-00002
Permit Modification No.: 109-22865-00002
Reviewer: CarrieAnn Paukowits
Application Date: March 23, 2006

Sand Storage Silos
Total for two silos

EU-SS1 & 2

Filter Control Eff = 99.9%

Pollutant	Maximum Rate (tons/hr)	Emission Factor (lbs/ton)	Potential to Emit Before Controls (lbs/hr)	Potential to Emit Before Controls (tons/yr)	Control Efficiency (%)	Potential to Emit After Controls (lbs/hr)	Potential to Emit After Controls (tons/yr)
PM	2.73	2.200	6.01	26.31	99.9%	0.006	0.026
PM-10	2.73	2.200	6.01	26.31	99.9%	0.006	0.026

PM and PM-10 are from AP-42 Table 11.17-4 for Lime transfer and conveying

Coal Processing

Pollutant	Maximum Rate (tons/yr)	Emission Factor (lbs/ton)	Potential to Emit Before Controls (lbs/yr)	Potential to Emit Before Controls (tons/yr)	Control Efficiency (%)	Potential to Emit After Controls (lbs/yr)	Potential to Emit After Controls (tons/yr)
Unloading							
PM	10950	0.020	219.00	0.110	0.0%	219.000	0.110
PM-10	10950	0.0200	219.000	0.110	0.0%	219.000	0.110
Crushing							
PM	10950	0.020	219.00	0.110	90.0%	21.900	0.011
PM-10	10950	0.0200	219.000	0.110	90.0%	21.900	0.011
Totals:		PM	438.00	0.219		240.90	0.120
		PM-10	438.00	0.219		240.90	0.120

Emission factors for Coal Processing are from AIRS SCC #3-050-010-08 & 10, as indicated in the TSD for the TV renewal

Vacuum Systems

Unit ID	Grain Loading per Actual Cubic foot of Outlet Air (grains/dscfm)	Gas or Air Flow Rate (dscfm.)	PM Emission Rate after Controls (lb/hr)	PM Emission Rate after Controls (tons/yr)
EU-P20VS	0.0100	1336	0.1145	0.502
EU-P32VS	0.0100	1336	0.1145	0.502

Methodology

Emission Rate in lbs/hr (after controls) = (grains/cub. ft.) (cub. ft./min.) (60 min/hr) (lb/7000 grains)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Emission Rate in lbs/hr (before controls) = Emission Rate (after controls): (lbs/hr)/(1-control efficiency)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

**Appendix A: Potential Emission Calculations
Proposed New Plant**

Company Name: General Shale Brick, Inc.
Address City IN Zip: Highway 67, South and CR 1000 North, Mooresville, Indiana 46158
Source Modification No.: 109-22854-00002
Permit Modification No.: 109-22865-00002
Reviewer: CarrieAnn Paukowitz
Application Date: March 23, 2006

Emission Unit Capacity 20.55 TPH
New Plant Kiln

Pollutant	Limited Rate (tons/yr)	AP-42 Emission Factor (lbs/ton)	Emission Factor based on Test (lbs/ton)	Potential to Emit Before Controls (lbs/yr)	Potential to Emit Before Controls (tons/yr)	Control Efficiency (%)	Potential to Emit After Controls (lbs/yr)	Potential to Emit After Controls (tons/yr)
New Line								
PM	180018	1.79	1.87	336634	168	82.00%	60594	30.3
PM-10	180018	1.35	1.87	336634	168.3	82.00%	60594	30.3
SO2	180018	5.10	5.79	1042304	521	55.00%	469037	235
NOx	180018	0.510	0.813	146355	73.2	0.00%	146355	73.2
VOC	180018	0.024		4320	2.16	0.00%	4320	2.16
CO	180018	0.800		144014	72.0	0.00%	144014	72.0
HF	180018		0.470	84608	42.3	90.00%	8461	4.23
HCl	180018		0.210	37804	18.90	85.00%	5671	2.84
All other HAPs	180018	0.010		1836	0.92	0.00%	1836	0.92

Methodology

PM, PM10, VOC, CO and NOx Emission Factors are from AP-42 Tables 11.3-1, 11.3-2, 11.3-3, 11.3-5 for a coal-fired kiln (SCC 3-05-003-13) and from an engineering stack test conducted 11/11/04
 PM and PM-10 Emission Factors Include Filterable PM and PM-10 as well as Condensable Organic and Inorganic PM
 The worse case of the AP-42 and engineering stack test emission factors were used to calculate emissions.
 SO2 Emission Factors are from stacks tests of Plant 20 kiln
 The total Limited Potential to Emit is the highest of Line 1 and Line 2 because the limited throughput rate is a total for the two lines.
 PM and PM-10 control efficiency is based on after control emission factor provided by the applicant.

Brick Dryer

Pollutant	Limited Rate (tons/yr)	AP-42 Emission Factor (lbs/ton)	Potential to Emit Before Controls (lbs/yr)	Potential to Emit Before Controls (tons/yr)	Control Efficiency (%)	Potential to Emit After Controls (lbs/yr)	Potential to Emit After Controls (tons/yr)
New Line							
PM	180018	0.187	33663	16.8	0.00%	33663	16.8
PM-10	180018	0.187	33663	16.8	0.00%	33663	16.8
NOx	180018	0.098	17642	8.82	0.00%	17642	8.82
VOC	180018	0.030	5401	2.70	0.00%	5401	2.70
CO	180018	0.310	55806	27.9	0.00%	55806	27.9

Methodology

PM, PM10, VOC, CO and NOx Emission Factors are from AP-42 Tables 11.3-1, 11.3-2, 11.3-3, 11.3-5 for a brick dryer with supplemental gas burner (SCC 3-05-003-51)
 PM and PM-10 Emission Factors Include Filterable PM and PM-10 as well as Condensable Organic and Inorganic PM

Brick Making Room (Extrusion Line)

Pollutant	Throughput Rate (tons/hr)	Emission Factor (lbs/ton)	Limited Potential to Emit Before Controls (lbs/hr)	Limited Potential to Emit Before Controls (tons/yr)	Control Efficiency (%)	Limited Potential to Emit After Controls (lbs/yr)	Limited Potential to Emit After Controls (tons/yr)
New Line							
PM	72.5	0.63	45.8	201	99.00%	0.458	2.01
PM-10	72.5	0.36	26.1	114	99.00%	0.261	1.14

Methodology

PM10 Emission Factor is from AP-42 Table 11.3-1 for an extrusion line with a fabric filter (SCC 3-05-003-42)
 PM emission factor is scaled up using 57% of PM is PM10
 Pre-control emission factor is the after control emission factor of 0.0036 lbs/ton / (1-control efficiency (99%))

**Appendix A: Potential Emission Calculations
Insignificant Activities for New Plant**

Company Name: General Shale Brick, Inc.
Address City IN Zip: Highway 67, South and CR 1000 North, Mooresville, Indiana 46158
Source Modification No.: 109-22854-00002
Permit Modification No.: 109-22865-00002
Reviewer: CarrieAnn Paukowits
Application Date: March 23, 2006

Vacuum Systems

Unit ID	Grain Loading per Actual Cubic foot of Outlet Air (grains/dscfm)	Gas or Air Flow Rate (dscfm.)	PM Emission Rate after Controls (lb/hr)	PM Emission Rate after Controls (tons/yr)
EU-NPVS	0.0100	1336	0.1145	0.502

Methodology

Emission Rate in lbs/hr (after controls) = (grains/cub. ft.) (cub. ft./min.) (60 min/hr) (lb/7000 grains)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

Emission Rate in lbs/hr (before controls) = Emission Rate (after controls): (lbs/hr)/(1-control efficiency)

Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)

New Conveyors - Fugitive

Pollutant	Potential to Emit Before Controls (lbs/hr)	Emit Before Controls (tons/yr)	Control Efficiency (%)	Potential to Emit After Controls (tons/yr)
PM	0.200	0.876	0.0%	0.876
PM-10	0.110	0.482	0.0%	0.482

PM and PM10 emissions calculated by the applicant and based on Chapter 13.2.4 of AP-42.

**Appendix A: Emissions Calculations
Emissions Summary**

Company Name: General Shale Brick, Inc.
Address City IN Zip: Highway 67, South and CR 1000 North, Mooresville, Indiana 46158
Source Modification No.: 109-22854-00002
Permit Modification No.: 109-22865-00002
Reviewer: CarrieAnn Paukowits
Application Date: March 23, 2006

Existing Source

Potential to Emit before Controls

Facility or Emissions Unit	PM	PM10	SO2	NOx	VOC	CO	HF	HCI	Other HAPs	Total HAPs
EU-001	10.95	1.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EU-002	607	446	723	99.0	3.00	99.9	58.7	26.2	1.27	86.2
Brick Crushing	4.44	2.22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Insignificant Activities	31.2	31.2	0.000004	0.001	0.00003	0.001	0.000	0.000	0.045	0.045
Total	654	481	723	99.0	3.00	99.9	58.7	26.2	1.32	86.2

Potential to Emit after Enforceable Controls

Facility or Emissions Unit	PM	PM10	SO2	NOx	VOC	CO	HF	HCI	Other HAPs	Total HAPs
EU-001	11.0	1.01	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EU-002	45.8	44.1	248	99.0	3.00	99.9	5.87	3.93	1.27	11.1
Brick Crushing	4.44	2.22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Insignificant Activities	31.2	31.2	0.000004	0.001	0.00003	0.001	0.000	0.000	0.045	0.045
Total	92.4	78.6	248	99.0	3.00	99.9	5.87	3.93	1.32	11.1

New Facility

Unrestricted Potential Emissions

Facility or Emissions Unit	PM	PM10	SO2	NOx	VOC	CO	HF	HCI	Other HAPs	Total HAPs
Kiln	168	168	521	73.2	2.16	72.0	42.3	18.9	0.918	62.1
Drying	16.8	16.8	0.000	8.82	2.70	27.9	0.000	0.000	0.000	0.000
Millroom	201	114	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Insignificant Activity - Vacuum System	0.502	0.502	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Insignificant Activity - Fugitive Conveying	0.876	0.482	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
New Facilities Total	387	300	521	82.0	4.86	99.9	42.3	18.9	0.918	62.1

Potential to Emit after Enforceable Controls

Facility or Emissions Unit	PM	PM10	SO2	NOx	VOC	CO	HF	HCI	Other HAPs	Total HAPs
Kiln	30.3	30.3	235	73.2	2.16	72.0	4.23	2.84	0.918	7.98
Drying	16.8	16.8	0.000	8.821	2.70	27.9	0.000	0.000	0.000	0.000
Millroom	2.01	1.14	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Insignificant Activity - Vacuum System	0.502	0.502	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Insignificant Activity - Fugitive Conveying	0.876	0.482	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
New Facilities Total	50.5	49.3	235	82.0	4.86	99.9	4.23	2.84	0.918	7.98

Total Source

Potential to Emit after Enforceable Controls

Facility or Emissions Unit	PM	PM10	SO2	NOx	VOC	CO	HF	HCI	Other HAPs	Total HAPs
Existing Source Total excluding Fugitives	92.4	78.6	248	99.0	3.00	100	5.87	3.93	1.32	11.1
New Facilities Total	50.5	49.3	235	82.0	4.86	99.9	4.23	2.84	0.918	7.98
New Facilities Total excluding Fugitives	49.6	48.8	234.5	82.0	4.86	99.9	4.23	2.84	0.918	7.98
Overall Total excluding Fugitives	142	127	482	181	7.86	200	10.1	6.77	2.24	19.1