



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

100 N. Senate Avenue • Indianapolis, IN 46204

(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

TO: Interested Parties / Applicant

DATE: July 18, 2013

RE: General Shale Brick, Inc. / 109-29661-00002

FROM: Matthew Stuckey, Branch 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, 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 4-21.5-3-7 and IC 13-15-6-1(b) or IC 13-15-6-1(a) 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, Suite N 501E, Indianapolis, IN 46204.

For an **initial Title V Operating Permit**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **thirty (30)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(b).

For a **Title V Operating Permit renewal**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **fifteen (15)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(a).

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.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of an initial Title V operating permit, permit renewal, or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impracticable to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency
401 M Street
Washington, D.C. 20406

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.



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Part 70 Operating Permit Renewal OFFICE OF AIR QUALITY

**General Shale Brick, Inc.
148 Sycamore Lane
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 2-2 and 326 IAC 2-7-10.5, applicable to those conditions.

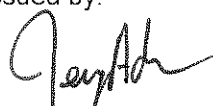
Operation Permit No.: T109-29661-00002	
Issued by:  Jenny Acker, Section Chief Permits Branch Office of Air Quality	Issuance Date: July 18, 2013 Expiration Date: July 18, 2018

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SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1, A.2, and A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(14)] [326 IAC 2-7-1(22)]

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

Source Address:	148 Sycamore Lane, Mooreville, Indiana 46158
General Source Phone Number:	(317) 831-3317
SIC Code:	3251
County Location:	Morgan
Source Location Status:	Nonattainment for PM _{2.5} standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD and Nonattainment NSR Rules Minor Source, under Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

- (a) Plant No. 32 is located at 148 Sycamore Lane, Mooreville, Indiana;
- (b) Plant No. 43 is located at 148 Sycamore Lane, Mooreville, Indiana; and
- (c) The quarry is located west of the intersection of Merriman Road and North Bethel Road (North County Road 200E), Mooreville, Indiana.

However, these plants are located on one or more contiguous or adjacent properties, have the same two digit SIC code or have a support relationship, and are still under common ownership or common control; therefore, they are considered one (1) major source, as defined by 326 IAC 2-7-1(22).

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(14)]

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

- (a) One (1) quarry, constructed in 1970, with a capacity of 100 tons of raw material per hour.
- (b) One (1) clay/shale processing operation, identified as EU-001, with a maximum throughput of 100 tons of raw material per hour, using baghouse CD-001 (installed in 1993) as particulate control, exhausting to Stack EP-001, consisting of the following equipment:
 - (1) One (1) primary crusher, installed in 1970 and replaced in 1999, with a maximum capacity of 100 tons of raw material per hour. Under NSPS Subpart OOO, the primary crusher is an affected facility vented through a stack and is subject to the provisions listed in 40 CFR 60.670(d)(1).

- (2) Two (2) Deister screens, approved in 2011 for construction, with a maximum capacity of 200 tons of raw material per hour. Under NSPS Subpart OOO, the screens are affected facilities vented through a stack.
 - (3) One (1) secondary crusher, approved in 2011 for construction, with a maximum capacity of 200 tons of raw material per hour. Under NSPS Subpart OOO, the secondary crusher is an affected facility vented through a stack.
 - (4) Raw material conveyance equipment, installed in 1970.
- (c) One (1) sand processing system, installed in 1985, consisting of the following equipment:
 - (1) Two (2) sand storage silos, identified as EU-SS1 and EU-SS2, each with a maximum capacity of 50 tons and a maximum throughput of 25 tons per hour, using baghouse CD-SS as particulate control, exhausting internally to Plant No. 32 Mill Room.
 - (2) One (1) dynamic air system, for conveyance of sand to Plant No. 32 and Plant No. 43, with a maximum capacity of 2.73 tons per hour, using baghouses CD-P32-MR and CD-P43-MR as particulate control, exhausting to Stacks EP-P32-MR and EP-P32-MR, respectively.
- (d) One (1) coal processing system, installed in 1979, with a maximum capacity of 1.5 tons per hour, consisting of one (1) coal crusher, identified as EU-CP, using baghouse CD-CP as particulate control, exhausting to Stack EP-CP.
- (e) One (1) brick manufacturing line, identified as Plant No. 32, installed in 1989 and modified in 2006 with the addition of dry injection fabric filter DIFF-02, consisting of the following equipment:
 - (1) One (1) brick making room and sand system (mill room), identified as EU-P32-MR, with a maximum capacity of 70 tons of green brick per hour, consisting of one (1) extrusion operation using baghouse CD-P32-MR as particulate control exhausting to Stack EP-P32-MR, and the Plant Room 32 pugmill, material storage and conveyance equipment.
 - (2) One (1) tunnel pre-dryer and one (1) tunnel dryer, identified as EU-P32-BD1, using waste heat from Plant No. 32 Kiln, with a maximum capacity of 13.7 tons of green brick per hour, using dry injection fabric filter DIFF-02 as particulate, SO₂, and HAP control, exhausting to Stack 32KE.
 - (3) One (1) coal and natural gas-fired kiln, identified as EU-P32-K, rated at 25 million British thermal units per hour, with a maximum capacity of 13.7 tons of brick per hour, using dry injection fabric filter DIFF-02 as particulate, SO₂, and HAP control, exhausting to Stack 32KE.
 - (4) One (1) lime/sodium bicarbonate storage silo, identified as EU-LS2, with a maximum capacity of 50 tons and a maximum throughput of 25 tons per hour, using dry injection fabric filter DIFF-02 as particulate control, exhausting to Stack 32KE.

- (f) One (1) brick manufacturing line, identified as Plant No. 43, permitted in 2006, consisting of the following equipment:
- (1) One (1) brick making room and sand system (mill room), identified as EU-P43-MR, with a maximum capacity of 72.5 tons of green brick per hour, consisting of one (1) extrusion operation using baghouse CD-P43-MR as particulate control exhausting to Stack EP-P43-MR, and the Plant Room 43 pugmill, material storage and conveyance equipment.
 - (2) One (1) natural gas/propane brick dryer, identified as EU-P43-BD1, rated at 13.29 million British thermal units per hour, with a maximum capacity of 20.55 tons of green brick per hour, exhausting to Stack 43BD1.
 - (3) One (1) coal/natural gas fired brick kiln, identified as EU-P43-K, rated at 25 million British thermal units per hour, with a maximum capacity of 20.55 tons of brick per hour, using dry injection fabric filter DIFF-03 as particulate, SO₂, and HAP control, exhausting to Stack EP-P43-K.
 - (4) One (1) lime/sodium bicarbonate storage silo, identified as EU-LS3, with a maximum capacity of 50 tons and a maximum throughput of 25 tons per hour, using dry injection fabric filter DIFF-03 as particulate control, exhausting to Stack 43KE.

A.4 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(14)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour:
- Two (2) process water heaters, identified as EU-PWH1 and EU-PWH2, with a combined maximum heat input capacity of 2.50 MMBtu per hour.
- (b) Combustion source flame safety purging on start-up.
- (c) Gasoline fuel transfer dispensing operations handling less than or equal to 1,300 gallons per day and filling storage tanks having a capacity equal to or less than 10,500 gallons:
- One (1) storage tank, installed in 1991, identified as Gasoline, for storage of gasoline, with a maximum volume of 250 gallons. Under NESHAP Subpart CCCCCC, this is an existing affected facility. [326 IAC 8-4-6] [326 IAC 8-4-9] [40 CFR 64, Subpart CCCCCC]
- (d) Petroleum fuel (other than gasoline) dispensing facilities, having a storage tank capacity less than or equal to 10,500 gallons, and dispensing 3,500 gallons per day or less:
- (1) One (1) storage tank, installed before 1985, identified as On-Road Fuel, for storage of diesel fuel, with a maximum volume of 250 gallons.
 - (2) One (1) storage tank, installed before 1985, identified as Off-Road Fuel, for storage of diesel fuel, with a maximum volume of 250 gallons.
 - (3) One (1) storage tank, installed before 1985, identified as Off-Road Fuel, for storage of diesel fuel, with a maximum volume of 1,000 gallons.

- (e) VOC and HAP storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
- (f) Refractory storage not requiring air pollution control equipment.
- (g) Degreasing operations that do not exceed one hundred forty-five (145) gallons per twelve (12) months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2]
- (h) Welding equipment related to manufacturing activities not resulting in the emission of HAPs.
- (i) Replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.
- (j) Paved and unpaved roads. [326 IAC 6-4]
- (k) Covered coal or coke conveying of less than or equal to three hundred sixty (360) tons per day, including the following equipment:
 - (1) One (1) dynamic air system, for conveyance of crushed coal to Plant No. 32. [326 IAC 6-3-2]
 - (2) One (1) dynamic air system, for conveyance of crushed coal to Plant No. 43. [326 IAC 6-3-2]
- (l) Uncovered coal or coke conveying of less than or equal to one hundred twenty (120) tons per day.
- (m) Emergency generators, including one (1) natural gas-fired emergency generator, located in Plant 43, installed in 2007, with a maximum generating rate of 25 hp. [40 CFR 60, Subpart JJJJ] [40 CFR 63, Subpart ZZZZ]
- (n) Farm operations, except concentrated animal feeding operations as defined in 40 CFR 122.23.
- (o) A laboratory as defined in 326 IAC 2-7-1(21)(H).
- (p) Activities with potential emissions within any of the following thresholds: equal to or less than 5 pounds per hour or 25 pounds per day PM₁₀, SO₂, or NO_x; equal to or less than 3 pounds per hour or 15 pounds per day VOC; equal to or less than 25 pounds per day CO; equal to or less than 0.6 tons per year or 3.29 pounds per day Pb; or greater than 1 pound per day but less than 5 pounds per day or 1 ton per year single HAP (and not regulated by a NESHAP):
 - (1) One (1) outdoor raw material storage pile, identified as EU-RMS, with a capacity of 100 tons of shale per hour.
 - (2) One (1) raw material feed hopper, installed in 1970, with emissions uncontrolled.
 - (3) One (1) ground material transfer conveyor, identified as F-GMC, installed in 1970, with emissions uncontrolled.
 - (4) One (1) ground material transfer conveyor to Plant No. 32, identified as F-C32-1, installed in 1987, with emissions uncontrolled. Under NSPS Subpart OOO, this is an affected facility enclosed in a building.

- (5) Plant No. 32 ground material storage pile, identified as EU-P32-GMS, located indoors, with emissions uncontrolled.
- (6) One (1) ground material transfer conveyor to Former Plant No. 20, identified as F-C20-1, installed in 1970, with emissions uncontrolled.
- (7) One (1) ground material transfer conveyor to Plant No. 43, identified as F-C43-1, permitted in 2006, with emissions uncontrolled. Under NSPS Subpart OOO, this is an affected facility enclosed in a building.
- (8) Plant No. 43 ground material storage pile, identified as EU-P43-GMS, located indoors, with emissions uncontrolled.
- (9) One (1) ground material transfer conveyor to Plant No. 43, identified as F-C43-2, permitted in 2006, with emissions uncontrolled.
- (10) One (1) coal storage area, installed in 1979, with a maximum capacity of 1.5 tons per hour, with emissions uncontrolled, consisting of one (1) outdoor coal stockpile (EU-CPILE) and one (1) coal storage hopper (EU-CH).
- (11) One (1) Plant No. 32 kiln car vacuum cleaning system, identified as EU-P32VS. [326 IAC 6-3-2]
- (12) One (1) Plant No. 43 kiln car vacuum cleaning system, identified as EU-P43VS. [326 IAC 6-3-2]
- (13) Nine (9) flame cutting stations, using oxyacetylene, each with a maximum capacity of 1 inch cutting thickness at 8 inches per minute.
- (14) Outdoor waste brick crushing operations, identified as EU-BC, with a maximum capacity of 7 tons of waste brick per hour, with emissions uncontrolled, consisting of one (1) waste brick storage pile, one (1) crushed brick storage pile, and one (1) brick dust storage pile.

A.5 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

B.1 Definitions [326 IAC 2-7-1]

B.2 Permit Term [326 IAC 2-7-5(2)] [326 IAC 2-1.1-9.5] [326 IAC 2-7-4(a)(1)(D)] [IC 13-15-3-6(a)]

- ### B.3 Term of Conditions [326 IAC 2-1.1-9.5]

B.4 Enforceability [326 IAC 2-7-7] [IC 13-17-12]

B.5 Severability [326 IAC 2-7-5(5)]

B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

- (a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:
 - (1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(34), and
 - (2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) A "responsible official" is defined at 326 IAC 2-7-1(34).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590
- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and

- (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)] [326 IAC 1-6-3]

- (a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

- (b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

The Permittee shall implement the PMPs.

- (c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance

causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

- (d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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 and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality,
Compliance and Enforcement Branch)
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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
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 a certification that meets the requirements of 326 IAC 2-7-6(1) by a "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)(8) 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.

B.12 Permit Shield [326 IAC 2-7-15] [326 IAC 2-7-20] [326 IAC 2-7-12]

- (a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

- (b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable

requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

- (c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.
- (d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:
 - (1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;
 - (2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;
 - (3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and
 - (4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.
- (e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).
- (f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]
- (g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5] [326 IAC 2-7-10.5]

- (a) All terms and conditions of permits established prior to T109-29661-00002 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised under 326 IAC 2-7-10.5, or
 - (3) deleted under 326 IAC 2-7-10.5.
- (b) Provided that all terms and conditions are accurately reflected in this combined permit, all previous registrations and permits are superseded by this combined new source review and part 70 operating permit.

B.14 Termination of Right to Operate [326 IAC 2-7-10] [326 IAC 2-7-4(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-7-3 and 326 IAC 2-7-4(a).

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination
[326 IAC 2-7-5(6)(C)] [326 IAC 2-7-8(a)] [326 IAC 2-7-9]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
 - (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

B.16 Permit Renewal [326 IAC 2-7-3] [326 IAC 2-7-4] [326 IAC 2-7-8(e)]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
 - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the

document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

- (a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.18 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)] [326 IAC 2-7-12(b)(2)]

- (a) No Part 70 permit revision or notice shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.
- (b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.19 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) or (c) without a prior permit revision, if each of the following conditions is met:
 - (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
 - (2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b) or (c). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1) and (c)(1).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

- (d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.20 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.21 Inspection and Entry [326 IAC 2-7-6] [IC 13-14-2-2] [IC 13-30-3-1] [IC 13-17-3-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)] [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Credible Evidence [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

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

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted. The provisions of 326 IAC 1-7-1(3), 326 IAC 1-7-2, 326 IAC 1-7-3(c) and (d), 326 IAC 1-7-4, and 326 IAC 1-7-5(a), (b), and (d) are not federally enforceable.

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least

thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to

thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.8 Performance Testing [326 IAC 3-6]

- (a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

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

C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)] [40 CFR 64] [326 IAC 3-8]

- (a) Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

- (b) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.
- (c) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.12 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.13 Risk Management Plan [326 IAC 2-7-5(11)] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.14 Response to Excursions or Exceedances [40 CFR 64] [326 IAC 3-8] [326 IAC 2-7-5]
[326 IAC 2-7-6]

- (I) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, in this permit:
 - (a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
 - (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.
 - (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
 - (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
 - (e) The Permittee shall record the reasonable response steps taken.
- (II)
 - (a) CAM Response to excursions or exceedances.
 - (1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of

the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

- (2) Determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.
- (b) If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.
- (c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a QIP. The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.
- (d) Elements of a QIP:
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8 b (2).
- (e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.
- (f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(a)(2) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:
 - (1) Failed to address the cause of the control device performance problems;
or
 - (2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.

(h) CAM recordkeeping requirements.

- (1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(a)(2) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.
- (2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

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

C.16 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)] [326 IAC 2-6]

Pursuant to 326 IAC 2-6-3(b)(2), starting in 2005 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

- (1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);
- (2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

C.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2]
[326 IAC 2-3]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following:
- (AA) All calibration and maintenance records.
 - (BB) All original strip chart recordings for continuous monitoring instrumentation.
 - (CC) Copies of all reports required by the Part 70 permit.

Records of required monitoring information include the following:

- (AA) The date, place, as defined in this permit, and time of sampling or measurements.
- (BB) The dates the analyses were performed.
- (CC) The company or entity that performed the analyses.
- (DD) The analytical techniques or methods used.
- (EE) The results of such analyses.
- (FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

- (b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.
- (c) If there is a reasonable possibility (as defined in 326 IAC 2-2-8(b)(6)(A), 326 IAC 2-2-8(b)(6)(B), 326 IAC 2-3-2(l)(6)(A), and/or 326 IAC 2-3-2(l)(6)(B)) that a "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:
- (1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, document and maintain the following records:
 - (A) A description of the project.

- (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.
- (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:
 - (i) Baseline actual emissions;
 - (ii) Projected actual emissions;
 - (iii) Amount of emissions excluded under section 326 IAC 2-2-1(pp)(2)(A)(iii) and/or 326 IAC 2-3-1(kk)(2)(A)(iii); and
 - (iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.
- (d) If there is a reasonable possibility (as defined in 326 IAC 2-2-8(b)(6)(A) and/or 326 IAC 2-3-2(l)(6)(A)) that a "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:
 - (1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and
 - (2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]
[40 CFR 64] [326 IAC 3-8]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B – Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

On and after the date by which the Permittee must use monitoring that meets the requirements of 40 CFR Part 64 and 326 IAC 3-8, the Permittee shall submit CAM reports to the IDEM, OAQ.

A report for monitoring under 40 CFR Part 64 and 326 IAC 3-8 shall include, at a minimum, the information required under paragraph (a) of this condition and the following information, as applicable:

- (1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
- (2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
- (3) A description of the actions taken to implement a QIP during the reporting period as specified in Section C-Response to Excursions or Exceedances. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

The Permittee may combine the Quarterly Deviation and Compliance Monitoring Report and a report pursuant to 40 CFR 64 and 326 IAC 3-8.

- (b) The address for report submittal is:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.
- (e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:
- (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1(ww) and/or 326 IAC 2-3-1(pp), for that regulated NSR pollutant, and
 - (2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).

- (f) The report for project at an existing emissions unit shall be submitted no later than sixty (60) days after the end of the year and contain the following:
- (1) The name, address, and telephone number of the major stationary source.
 - (2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.
 - (3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).
 - (4) Any other information that the Permittee wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.

Reports required in this part shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (g) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

Stratospheric Ozone Protection

C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(14)]: Raw Material Processing

- (b) One (1) clay/shale processing operation, identified as EU-001, with a maximum throughput of 100 tons of raw material per hour, using baghouse CD-001 (installed in 1993) as particulate control, exhausting to Stack EP-001, consisting of the following equipment:
 - (1) One (1) primary crusher, installed in 1970 and replaced in 1999, with a maximum capacity of 100 tons of raw material per hour. Under NSPS Subpart OOO, the primary crusher is an affected facility vented through a stack and is subject to the provisions listed in 40 CFR 60.670(d)(1).
 - (2) Two (2) Deister screens, approved in 2011 for construction, with a maximum capacity of 200 tons of raw material per hour. Under NSPS Subpart OOO, the screens are affected facilities vented through a stack.
 - (3) One (1) secondary crusher, approved in 2011 for construction, with a maximum capacity of 200 tons of raw material per hour. Under NSPS Subpart OOO, the secondary crusher is an affected facility vented through a stack.
 - (4) Raw material conveyance equipment, installed in 1970.
- (c) One (1) sand processing system, installed in 1985, consisting of the following equipment:
 - (1) Two (2) sand storage silos, identified as EU-SS1 and EU-SS2, each with a maximum capacity of 50 tons and a maximum throughput of 25 tons per hour, using baghouse CD-SS as particulate control, exhausting internally to Plant No. 32 Mill Room.
 - (2) One (1) dynamic air system, for conveyance of sand to Plant No. 32 and Plant No. 43, with a maximum capacity of 2.73 tons per hour, using baghouses CD-P32-MR and CD-P43-MR as particulate control, exhausting to Stacks EP-P32-MR and EP-P32-MR, respectively.
- (d) One (1) coal processing system, installed in 1979, with a maximum capacity of 1.5 tons per hour, consisting of one (1) coal crusher, identified as EU-CP, using baghouse CD-CP as particulate control, exhausting to Stack EP-CP.

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

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

D.1.1 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emissions from each of the following processes shall not exceed the pound per hour limitations specified in the following table:

Unit Description	Max. Process Weight Rate (tons/hr)	Particulate Emission Limit (lb/hr)
Clay/Shale Processing Operation (EU-001)	100	51.3
Sand Processing System	2.73	8.04
Coal Processing System	1.50	5.38

The pounds per hour limitations were calculated with the following equations:

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:

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

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.1.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(14)]: Brick Manufacturing Line (Plant No. 32)

- (e) One (1) brick manufacturing line, identified as Plant No. 32, installed in 1989 and modified in 2006 with the addition of dry injection fabric filter DIFF-02, consisting of the following equipment:
- (1) One (1) brick making room and sand system (mill room), identified as EU-P32-MR, with a maximum capacity of 70 tons of green brick per hour, consisting of one (1) extrusion operation using baghouse CD-P32-MR as particulate control exhausting to Stack EP-P32-MR, and the Plant Room 32 pugmill, material storage and conveyance equipment.
 - (2) One (1) tunnel pre-dryer and one (1) tunnel dryer, identified as EU-P32-BD1, using waste heat from Plant No. 32 Kiln, with a maximum capacity of 13.7 tons of green brick per hour, using dry injection fabric filter DIFF-02 as particulate, SO₂, and HAP control, exhausting to Stack 32KE.
 - (3) One (1) coal and natural gas-fired kiln, identified as EU-P32-K, rated at 25 million British thermal units per hour, with a maximum capacity of 13.7 tons of brick per hour, using dry injection fabric filter DIFF-02 as particulate, SO₂, and HAP control, exhausting to Stack 32KE.
 - (4) One (1) lime/sodium bicarbonate storage silo, identified as EU-LS2, with a maximum capacity of 50 tons and a maximum throughput of 25 tons per hour, using dry injection fabric filter DIFF-02 as particulate control, exhausting to Stack 32KE.

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

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

D.2.1 Avoidance Limits for PSD and Nonattainment NSR [326 IAC 2-2] [326 IAC 2-1.1-5]

- (a) The production of bricks from Plant No. 32 shall not exceed 120,012 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The PM_{2.5} emissions from the following operations shall not exceed the emission limits listed in the table below:

Unit(s)	Unit ID(s)	Control Device ID	PM _{2.5} Emission Limit (lb/ton)
Plant No. 32 Brick Dryer, Plant No. 32 Brick Kiln, & Plant No. 32 Injection Silo	EU-P32-BD1, EU-P32-K, & EU-LS2	DIFF-02	0.336

- (c) The SO₂ emissions from the following operations shall not exceed the emission limits listed in the table below:

Unit(s)	Unit ID(s)	Control Device ID	SO ₂ Emission Limit (lb/ton)
Plant No. 32 Brick Dryer & Plant No. 32 Brick Kiln	EU-P32-BD1 & EU-P32-K	DIFF-02	2.50

Compliance with these limits, combined with the potential to emit PM₁₀ and SO₂ from other emission units at the source, shall limit the SO₂ emissions to less than 250 tons per twelve (12) consecutive month period and the PM_{2.5} emissions to less than 100 tons per twelve (12) consecutive month period from the source existing prior to the addition of Plant No. 43. This shall render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable to the source existing prior to the addition of Plant No. 43.

D.2.2 Avoidance Limits for HAPs [40 CFR 63, Subpart JJJJJ]

The combined HF emissions from brick kiln EU-P32-K and brick kiln EU-P43-K shall not exceed 9.90 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits, combined with the limited emissions in Condition D.3.2 and the potential to emit HAPs from other emission units at the source, shall limit single HAP emissions from the entire source to less than ten (10) tons per twelve (12) consecutive month period and combined HAP emissions from the entire source to less than twenty-five (25) tons per twelve (12) consecutive month period. This shall render the requirements of 40 CFR 63, Subpart JJJJJ not applicable to the source.

D.2.3 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-1]

Pursuant to 326 IAC 7-1.1 (SO₂ Emissions Limitations), the SO₂ emissions from brick kiln EU-P32-K shall not exceed six (6.0) pounds per million British thermal units heat input while combusting coal.

D.2.4 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(1), the allowable particulate emissions from each of the following processes shall not exceed the pound per hour limitations specified in the following table:

Unit Description	Max. Process Weight Rate (tons/hr)	Particulate Emission Limit (lb/hr)
Plant No. 32 Mill Room	70	47.8
Brick Dryer (Plant No. 32)	13.7	23.7
Brick Kiln (Plant No. 32)	13.7	23.7
Injection System (Plant No. 32)	0.21	1.44

The pounds per hour limitations were calculated with the following equations:

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:

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

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.2.5 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.2.6 Particulate, SO₂, and HAP Control [326 IAC 2-7-6(6)]

In order to ensure compliance with Conditions D.2.1, D.2.2, D.2.3, and D.2.4, the dry injection fabric filter, identified as DIFF-02, for particulate, SO₂, and HAP control shall be in operation and control emissions from the Plant No. 32 brick dryer, kiln, and injection silo at all times that the emission units are in operation.

D.2.7 Broken or Failed Bag Detection – Single Compartment Baghouse

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, the feed to the 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 emissions unit. 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.2.8 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

- (a) In order to demonstrate compliance with Condition D.2.1(b), the Permittee shall perform PM_{2.5} testing of the Plant No. 32 brick dryer (EU-P32-BD1), kiln (EU-P32-K), and injection silo (EU-LS2) controlled by dry injection fabric filter DIFF-02 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM_{2.5} includes filterable and condensable PM_{2.5}.
- (b) In order to demonstrate compliance with Conditions D.2.1(c) and D.2.3, the Permittee shall perform SO₂ testing of the Plant No. 32 brick dryer (EU-P32-BD1) and kiln (EU-P32-K) controlled by dry injection fabric filter DIFF-02 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.
- (c) In order to demonstrate compliance with Conditions D.2.2 and D.3.2, the Permittee shall perform HF and HCl testing of the Plant No. 32 brick dryer (EU-P32-BD1) and kiln (EU-P32-K) controlled by dry injection fabric filter DIFF-02 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.2.9 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 2-7-5(3)(A)] [326 IAC 2-7-6]

Pursuant to 326 IAC 7-2 and in order to ensure compliance with Condition D.2.3, the Permittee shall utilize 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 Plant No. 32 brick dryer (EU-P32-BD1) and kiln (EU-P32-K) controlled by dry injection fabric filter DIFF-02, 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.

D.2.10 Hydrogen Fluoride/Hydrofluoric Acid (HF)

In order to determine compliance with the HF emissions limit in Condition D.2.2(c), the HF emissions from brick kiln EU-P32-K and brick kiln EU-P43-K shall be calculated using the following formula:

$$E_{TOTAL} = (EF_{32} \times H_{32} / 2000) + (EF_{43} \times H_{43} / 2000)$$

where:

- E_{TOTAL} = combined total tons of HF emissions per month
- EF_{32} = HF emission factor from the Plant No. 32 brick kiln, which equals 0.057 lb/ton or the most recent valid compliance demonstration
- H_{32} = tons of brick per month produced from the Plant No. 32 tunnel kiln
- 2000 = lb/ton
- EF_{43} = HF emission factor from the Plant No. 43 brick kiln, which equals 0.057 lb/ton or the most recent valid compliance demonstration
- H_{43} = tons of brick per month produced from the Plant No. 43 tunnel kiln

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

D.2.11 Visible Emissions Notations

- (a) Visible emission notations of the Plant No. 32 mill room stack exhaust (Stack EP-P32-MR) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) Visible emission notations of the Plant No. 32 brick dryer, kiln, and injection silo stack exhaust (Stack 32KE) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (c) 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.
- (d) 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.
- (e) 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.
- (f) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.2.12 Compliance Assurance SO₂ Monitoring [40 CFR 64]

Pursuant to 40 CFR 64 (CAM), the Permittee shall perform the following monitoring:

- (a) The Permittee shall continuously monitor the reagent feed rate at the dry injection fabric filter, identified as DIFF-02.
- (b) The Permittee shall inspect the reagent system and feeder setting on the dry injection fabric filter, identified as DIFF-02, once per shift.

- (c) If the reagent feeder setting drops below the level established during the latest performance test, the switches monitoring the interlock system on the reagent delivery systems, including the reagent 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. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

D.2.13 Broken or Failed Bag Detection – Multi-Compartment Baghouse

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.

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

D.2.14 Record Keeping Requirements

- (a) To document the compliance status with Conditions D.2.1 and D.2.2 the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the emission limits established in Conditions D.2.1 and D.2.2.
 - (1) Calendar dates covered in the compliance determination period.
 - (2) Sulfur content, heat content, and ash content of the coal.
 - (3) Sulfur dioxide emission rates.
 - (4) The total weight of bricks produced at Plant No. 32 each month.
 - (5) Monthly records of Hydrogen Fluoride/Hydrofluoric Acid (HF) emission rates.
- (b) To document the compliance status with Condition D.2.11, the Permittee shall maintain records of once per day visible emission notations of the Plant No. 32 brick dryer, kiln, and injection silo stack exhaust (Stack 32KE) and the Plant No. 32 mill room stack exhaust (Stack EP-P32-MR). The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (c) To document the compliance status with Condition D.2.12, the Permittee shall maintain records of the feeder setting once per shift and continuous records of the dry lime/sodium bicarbonate feed rate. The Permittee shall include in its once per shift record when a feeder setting reading is not taken and the reason for the lack of the feeder setting reading (e.g. the process did not operate that shift).
- (d) Section C – General Record Keeping Requirements, of this permit contains the Permittee's obligations with regard to the records required by this condition.

D.2.15 Reporting Requirements

- (a) A quarterly report of brick production to document the compliance status with Condition D.2.1(a) shall be submitted not later than thirty (30) days after the end of the quarter being reported.

- (b) A quarterly report of HF emissions to document the compliance status with Conditions D.2.2 and D.3.2 shall be submitted not later than thirty (30) days after the end of the quarter being reported.

Section C – General Reporting contains the Permittee's obligations with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1(34).

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(14)]: Brick Manufacturing Line (Plant No. 43)

- (f) One (1) brick manufacturing line, identified as Plant No. 43, permitted in 2006, consisting of the following equipment:
- (1) One (1) brick making room and sand system (mill room), identified as EU-P43-MR, with a maximum capacity of 72.5 tons of green brick per hour, consisting of one (1) extrusion operation using baghouse CD-P43-MR as particulate control exhausting to Stack EP-P43-MR, and the Plant Room 43 pugmill, material storage and conveyance equipment.
 - (2) One (1) natural gas/propane brick dryer, identified as EU-P43-BD1, rated at 13.29 million British thermal units per hour, with a maximum capacity of 20.55 tons of green brick per hour, exhausting to Stack 43BD1.
 - (3) One (1) coal/natural gas fired brick kiln, identified as EU-P43-K, rated at 25 million British thermal units per hour, with a maximum capacity of 20.55 tons of brick per hour, using dry injection fabric filter DIFF-03 as particulate, SO₂, and HAP control, exhausting to Stack EP-P43-K.
 - (4) One (1) lime/sodium bicarbonate storage silo, identified as EU-LS3, with a maximum capacity of 50 tons and a maximum throughput of 25 tons per hour, using dry injection fabric filter DIFF-03 as particulate control, exhausting to Stack 43KE.

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

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

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

- (a) The production of bricks from Plant No. 43 shall not exceed 180,018 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The PM_{2.5} emissions from the following operations shall not exceed the emission limits listed in the table below:

Unit(s)	Unit ID(s)	Control Device ID	PM _{2.5} Emission Limit (lb/ton)
Plant No. 43 Brick Kiln & Plant No. 43 Injection Silo	EU-P43-K & EU-LS3	DIFF-03	0.336

- (c) The SO₂ emissions from the following operations shall not exceed the emission limits listed in the table below:

Unit(s)	Unit ID(s)	Control Device ID	SO ₂ Emission Limit (lb/ton)
Plant No. 43 Brick Kiln	EU-P43-K	DIFF-03	2.60

Compliance with these limits, combined with the potential to emit PM₁₀ and SO₂ from other emission units at the source, shall limit the SO₂ emissions to less than 250 tons per twelve (12) consecutive month period each and the PM_{2.5} emissions to less than 100 tons per twelve (12) consecutive month period from the Plant No. 43 modification. This shall render the requirements

of 326 IAC 2-2 (PSD), 326 IAC 2-3 (Emission Offset), and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable to the Plant No. 43 modification.

D.3.2 Avoidance Limits for HAPs [326 IAC 2-4.1] [40 CFR 63, Subpart JJJJJ]

The combined HF emissions from brick kiln EU-P32-K and brick kiln EU-P43-K shall not exceed 9.90 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits shall limit single HAP emissions from the brick kiln EU-P43-K to less than ten (10) tons per twelve (12) consecutive month period and combined HAP emissions from the brick kiln EU-P43-K to less than 25 tons per twelve (12) consecutive month period. This shall render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable to brick kiln EU-P43-K.

Compliance with these limits, combined with the limited emissions in Condition D.2.2 and the potential to emit HAPs from other emission units at the source, shall limit single HAP emissions from the entire source to less than ten (10) tons per twelve (12) consecutive month period and combined HAP emissions from the entire source to less than 25 tons per twelve (12) consecutive month period. This shall render the requirements of 40 CFR 63, Subpart JJJJJ not applicable to the source.

D.3.3 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-1]

Pursuant to 326 IAC 7-1.1 (SO₂ Emissions Limitations), the SO₂ emissions from brick kiln EU-P43-K shall not exceed six (6.0) pounds per million British thermal units heat input while combusting coal.

D.3.4 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(1), the allowable particulate emissions from each of the following processes shall not exceed the pound per hour limitations specified in the following table:

Unit Description	Max. Process Weight Rate (tons/hr)	Particulate Emission Limit (lb/hr)
Plant No. 43 Mill Room	72.5	48.1
Brick Dryer (Plant No. 43)	20.55	31.1
Brick Kiln (Plant No. 43)	20.55	31.1
Injection System (Plant No. 43)	0.21	1.44

The pounds per hour limitations were calculated with the following equations:

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:

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

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.3.5 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

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

In order to ensure compliance with Conditions D.3.1, D.3.2, D.3.3, and D.3.4, the dry injection fabric filter, identified as DIFF-03, for particulate, SO₂, and HAP control shall be in operation and control emissions from the Plant No. 43 brick kiln at all times that the emission unit is in operation.

D.3.7 Broken or Failed Bag Detection – Single Compartment Baghouse

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, the feed to the 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 emissions unit. 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.3.8 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

- (a) In order to demonstrate compliance with Conditions D.3.1(b) and D.3.4, the Permittee shall perform PM_{2.5} testing of the Plant No. 43 brick kiln (EU-P43-K) and injection silo (EU-LS3) controlled by dry injection fabric filter DIFF-03 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM_{2.5} includes filterable and condensable PM_{2.5}.
- (b) In order to demonstrate compliance with Conditions D.3.1(c) and D.3.3, the Permittee shall perform SO₂ testing of the Plant No. 43 brick kiln (EU-P43-K) controlled by dry injection fabric filter DIFF-03 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.
- (c) In order to demonstrate compliance with Conditions D.2.2 and D.3.2, the Permittee shall perform HF and HCl testing of the Plant No. 43 brick kiln (EU-P43-K) controlled by dry injection fabric filter DIFF-03 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.3.9 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 2-7-5(3)(A)] [326 IAC 2-7-6]

Pursuant to 326 IAC 7-2 and in order to ensure compliance with Condition D.3.3, the Permittee shall utilize 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 Plant No. 43 brick kiln (EU-P43-K) controlled by dry injection fabric filter DIFF-03, 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.

D.3.10 Hydrogen Fluoride/Hydrofluoric Acid (HF)

In order to determine compliance with the HF emissions limit in Condition D.3.2(c), the HF emissions from brick kiln EU-P32-K and brick kiln EU-P43-K shall be calculated using the following formula:

$$E_{TOTAL} = (EF_{32} \times H_{32} / 2000) + (EF_{43} \times H_{43} / 2000)$$

where:

- E_{TOTAL} = combined total tons of HF emissions per month
- EF_{32} = HF emission factor from the Plant No. 32 brick kiln, which equals 0.057 lb/ton or the most recent valid compliance demonstration
- H_{32} = tons of brick per month produced from the Plant No. 32 tunnel kiln
- 2000 = lb/ton
- EF_{43} = HF emission factor from the Plant No. 43 brick kiln, which equals 0.057 lb/ton or the most recent valid compliance demonstration
- H_{43} = tons of brick per month produced from the Plant No. 43 tunnel kiln

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

D.3.11 Visible Emissions Notations

- (a) Visible emission notations of the Plant No. 43 mill room stack exhaust (Stack EP-P43-MR) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) Pursuant 40 CFR 64 (CAM), visible emission notations of the Plant No. 43 kiln and injection silo stack exhaust (Stack EP-P43-K) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (c) 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.
- (d) 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.
- (e) 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.
- (f) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.3.12 Compliance Assurance SO₂ Monitoring [40 CFR 64]

Pursuant to 40 CFR 64 (CAM), the Permittee shall perform the following monitoring:

- (a) The Permittee shall continuously monitor the reagent feed rate at the dry injection fabric filter, identified as DIFF-03.
- (b) The Permittee shall inspect the reagent system and feeder setting on the dry injection fabric filter, identified as DIFF-03, once per shift.

- (c) If the reagent feeder setting drops below the level established during the latest performance test, the switches monitoring the interlock system on the reagent delivery systems, including the reagent 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. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

D.3.13 Broken or Failed Bag Detection – Multi-Compartment Baghouse

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.

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

D.3.14 Record Keeping Requirements

- (a) To document the compliance status with Conditions D.3.1 and D.3.2 the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the emission limits established in Conditions D.3.1 and D.3.2.
 - (1) Calendar dates covered in the compliance determination period.
 - (2) Sulfur content, heat content, and ash content of the coal.
 - (3) Sulfur dioxide emission rates.
 - (4) The total weight of bricks produced at Plant No. 43 each month; and
 - (5) Monthly records of Hydrogen Fluoride/Hydrofluoric Acid (HF) emission rates.
- (b) To document the compliance status with Condition D.3.11, the Permittee shall maintain records of once per day visible emission notations of the Plant No. 43 brick kiln stack exhaust (Stack EP-P43-K) and the Plant No. 43 mill room stack exhaust (Stack EP-P43-MR). The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (c) To document the compliance status with Condition D.3.12, the Permittee shall maintain records of the feeder setting once per shift and continuous records of the dry lime/sodium bicarbonate feed rate. The Permittee shall include in its once per shift record when a feeder setting reading is not taken and the reason for the lack of the feeder setting reading (e.g. the process did not operate that shift).
- (d) Section C – General Record Keeping Requirements, of this permit contains the Permittee's obligations with regard to the records required by this condition.

D.3.15 Reporting Requirements

- (a) A quarterly report of brick production to document the compliance status with Condition D.3.1(a) shall be submitted not later than thirty (30) days after the end of the quarter being reported.
- (b) A quarterly report of HF emissions to document the compliance status with Conditions D.2.2 and D.3.2 shall be submitted not later than thirty (30) days after the end of the quarter being reported.

Section C – General Reporting contains the Permittee's obligations with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1(34).

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(14)]: Insignificant Activities

- (c) Gasoline fuel transfer dispensing operations handling less than or equal to 1,300 gallons per day and filling storage tanks having a capacity equal to or less than 10,500 gallons:
- One (1) storage tank, installed in 1991, identified as Gasoline, for storage of gasoline, with a maximum volume of 250 gallons. Under NESHAP Subpart CCCCCC, this is an existing affected facility. [326 IAC 8-4-6] [326 IAC 8-4-9] [40 CFR 64, Subpart CCCCCC]
- (g) Degreasing operations that do not exceed one hundred forty-five (145) gallons per twelve (12) months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2]
- (k) Covered coal or coke conveying of less than or equal to three hundred sixty (360) tons per day, including the following equipment:
- (1) One (1) dynamic air system, for conveyance of crushed coal to Plant No. 32. [326 IAC 6-3-2]
- (2) One (1) dynamic air system, for conveyance of crushed coal to Plant No. 43. [326 IAC 6-3-2]
- (p) Activities with potential emissions within any of the following thresholds: equal to or less than 5 pounds per hour or 25 pounds per day PM_{10} , SO_2 , or NO_x ; equal to or less than 3 pounds per hour or 15 pounds per day VOC; equal to or less than 25 pounds per day CO; equal to or less than 0.6 tons per year or 3.29 pounds per day Pb; or greater than 1 pound per day but less than 5 pounds per day or 1 ton per year single HAP (and not regulated by a NESHAP):
- (11) One (1) Plant No. 32 kiln car vacuum cleaning system, identified as EU-P32VS. [326 IAC 6-3-2]
- (12) One (1) Plant No. 43 kiln car vacuum cleaning system, identified as EU-P43VS. [326 IAC 6-3-2]

(The information describing the process contained in this emissions unit 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 Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the coal processing system shall not exceed 5.38 pounds per hour when operating at a process weight rate of 1.50 tons per hour. 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:

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

- (b) Pursuant to 326 IAC 6-3-2(e)(2), the allowable particulate emissions from the vacuum cleaning systems EU-P32VS and EU-P43VS shall not exceed 0.551 lb/hr, each.

D.4.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Degreaser Control Equipment and Operating Requirements) for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the degreaser with a cover;
- (b) Equip the degreaser with a device for draining cleaned parts;
- (c) Close the degreaser covers whenever parts are not being handled in the degreaser;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements; and
- (f) Store waste solvent only in closed containers; and
- (g) Prohibit the dispose or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.4.3 Avoidance Limit for VOC [326 IAC 8-4-6] [326 IAC 8-4-9]

In order to render the requirements of 326 IAC 8-4-6 and 326 IAC 8-4-9 not applicable to the storage tank identified as Gasoline, the monthly gasoline throughput from the storage tank shall not exceed 10,000 gallons per month. Compliance with the above limit will render the requirements of 326 IAC 8-4-6 and 326 IAC 8-4-9 not applicable to the storage tank.

Compliance Determination Requirements

D.4.4 Particulate Control [326 IAC 2-7-6(6)]

In order to ensure compliance with Condition D.4.1(b), bag filters for particulate control shall be in operation and control emissions from the vacuum cleaning systems (EU-P32-VS and EU-P43VS) at all times that the corresponding system is in operation.

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

D.4.5 Record Keeping Requirements

- (a) To document the compliance status with Condition D.4.3, the Permittee shall maintain monthly records of gasoline throughput from the storage tank identified as Gasoline.
- (b) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required to be maintained by this condition.

SECTION E.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]: Clay and Shale Processing

- (b) One (1) clay/shale processing operation, identified as EU-001, with a maximum throughput of 100 tons of raw material per hour, using baghouse CD-001 (installed in 1993) as particulate control, exhausting to Stack EP-001, consisting of the following equipment:
- (1) One (1) primary crusher, installed in 1970 and replaced in 1999, with a maximum capacity of 100 tons of raw material per hour. Under NSPS Subpart OOO, the primary crusher is an affected facility vented through a stack and is subject to the provisions listed in 40 CFR 60.670(d)(1).
 - (2) Two (2) Deister screens, approved in 2011 for construction, with a maximum capacity of 200 tons of raw material per hour. Under NSPS Subpart OOO, the screens are affected facilities vented through a stack.
 - (3) One (1) secondary crusher, approved in 2011 for construction, with a maximum capacity of 200 tons of raw material per hour. Under NSPS Subpart OOO, the secondary crusher is an affected facility vented through a stack.

Insignificant Activities

- (p) Activities with potential emissions within any of the following thresholds: equal to or less than 5 pounds per hour or 25 pounds per day PM₁₀, SO₂, or NO_x; equal to or less than 3 pounds per hour or 15 pounds per day VOC; equal to or less than 25 pounds per day CO; equal to or less than 0.6 tons per year or 3.29 pounds per day Pb; or greater than 1 pound per day but less than 5 pounds per day or 1 ton per year single HAP (and not regulated by a NESHAP):
- (4) One (1) ground material transfer conveyor to Plant No. 32, identified as F-C32-1, installed in 1987, with emissions uncontrolled. Under NSPS Subpart OOO, this is an affected facility enclosed in a building.
 - (7) One (1) ground material transfer conveyor to Plant No. 43, identified as F-C43-1, permitted in 2006, with emissions uncontrolled. Under NSPS Subpart OOO, this is an affected facility enclosed in a building.

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

E.1.1 General Provisions Relating to NSPS, Subpart OOO [326 IAC 12] [40 CFR Part 60, Subpart A]

Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 12, except as otherwise specified in 40 CFR 60, Subpart OOO.

E.1.2 New Source Performance Standards for Nonmetallic Mineral Processing Plants [326 IAC 12] [40 CFR Part 60, Subpart OOO]

The Permittee who operates a stationary brick and structural clay manufacturing source shall comply with the following provisions of 40 CFR Part 60, Subpart OOO (included, in its entirety, as Attachment A of this permit):

- (a) 40 CFR 60.670(a), (d), (e), (f);
- (b) 40 CFR 60.671;
- (c) 40 CFR 60.672(a), (b), (d), (e);

- (d) 40 CFR 60.673;
- (e) 40 CFR 60.674(c), (d);
- (f) 40 CFR 60.675(a), (b), (c)(1)(i), (c)(1)(ii), (c)(3), (d), (e), (g), (i);
- (g) 40 CFR 60.676(a)(1), (b), (f), (h), (i)(1), (j), (k);
- (h) Table 1 to 40 CFR 63, Subpart OOO;
- (i) Table 2 to 40 CFR 63, Subpart OOO; and
- (j) Table 3 to 40 CFR 63, Subpart OOO.

SECTION E.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]: Spark Ignition Internal Combustion Engines

Insignificant Activities

- (m) Emergency generators, including one (1) natural gas-fired emergency generator, located in Plant 43, installed in 2007, with a maximum generating rate of 25 hp. [40 CFR 60, Subpart JJJJ] [40 CFR 63, Subpart ZZZZ]

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

E.2.1 General Provisions Relating to NSPS, Subpart JJJJ [326 IAC 12] [40 CFR Part 60, Subpart A]

Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 12, except as otherwise specified in 40 CFR 60, Subpart JJJJ.

E.2.2 New Source Performance Standards for Spark Ignition Internal Combustion Engines [326 IAC 12] [40 CFR Part 60, Subpart JJJJ]

The Permittee who operates a spark ignition internal combustion engine shall comply with the following provisions of 40 CFR Part 60, Subpart JJJJ (included, in its entirety, as Attachment B of this permit):

- (a) 40 CFR 63.4230(a)(6);
- (b) 40 CFR 63.4236; and
- (c) 40 CFR 63.4248.

SECTION E.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]: Reciprocating Internal Combustion Engines

Insignificant Activities

- (m) Emergency generators, including one (1) natural gas-fired emergency generator, located in Plant 43, installed in 2007, with a maximum generating rate of 25 hp. [40 CFR 60, Subpart JJJJ] [40 CFR 63, Subpart ZZZZ]

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

E.3.1 General Provisions Relating to NESHAP ZZZZ [326 IAC 20-1] [40 CFR Part 63, Subpart A]

- (a) Pursuant to 40 CFR 63.6580, 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 40 CFR 63, Subpart ZZZZ in accordance with Table 8 in 40 CFR Part 63, Subpart ZZZZ.

- (b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

E.3.2 Stationary Reciprocating Internal Combustion Engines NESHAP [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

The Permittee which engages in the use of a reciprocating internal combustion engine shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included, in its entirety, as Attachment C of this permit):

- (a) 40 CFR 63.6580;
(b) 40 CFR 63.6585(a), (c); and
(c) 40 CFR 63.6590(a)(2)(iii), (c)(1).

SECTION E.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]: Gasoline Dispensing Facilities

Insignificant Activities

- (c) Gasoline fuel transfer dispensing operations handling less than or equal to 1,300 gallons per day and filling storage tanks having a capacity equal to or less than 10,500 gallons:

One (1) storage tank, installed in 1991, identified as Gasoline, for storage of gasoline, with a maximum volume of 250 gallons. Under NESHAP Subpart CCCCCC, this is an existing affected facility. [326 IAC 8-4-6] [326 IAC 8-4-9] [40 CFR 64, Subpart CCCCCC]

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

E.4.1 General Provisions Relating to NESHAP CCCCCC [326 IAC 20-1] [40 CFR Part 63, Subpart A]

- (a) Pursuant to 40 CFR 63.11130, 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 40 CFR Part 63, Subpart CCCCCC in accordance with the schedule in 40 CFR 63 Subpart CCCCCC.

- (b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

E.4.2 National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities [40 CFR Part 63, Subpart CCCCCC]

The Permittee which engages in gasoline dispensing activities shall comply with the following provisions of 40 CFR 63, Subpart CCCCCC (included, in its entirety, as Attachment D of this permit), as specified as follows:

- (a) 40 CFR 63.11110;
- (b) 40 CFR 63.11111(a), (b), (e), (f), (h), (i), (j), (k);
- (c) 40 CFR 63.11112(a), (d);
- (d) 40 CFR 63.11113(b), (c), (e)(2);
- (e) 40 CFR 63.11115;
- (f) 40 CFR 63.11116;
- (g) 40 CFR 63.11125(b), (d);
- (h) 40 CFR 63.11126(b);
- (i) 40 CFR 63.11130;
- (j) 40 CFR 63.11131; and
- (k) 40 CFR 63.11132.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION**

Source Name: General Shale Brick, Inc.
Source Address: 148 Sycamore Lane, Mooreville, Indiana 46158
Part 70 Permit No.: T109-29661-00002

This certification shall be included when submitting monitoring, testing reports/results, or other documents as required by this permit.

Please check what document is being certified:

- ☐ Annual Compliance Certification Letter
- ☐ Test Result (specify)
- ☐ Report (specify)
- ☐ Notification (specify)
- ☐ Affidavit (specify)
- ☐ Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Phone:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
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: 148 Sycamore Lane, Mooreville, Indiana 46158
Part 70 Permit No.: T109-29661-00002

This form consists of 2 pages

Page 1 of 2

- | |
|---|
| <p><input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <ul style="list-style-type: none">• 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); and• 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: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
Part 70 Quarterly Report

Source Name: General Shale Brick, Inc.
Source Address: 148 Sycamore Lane, Mooreville, Indiana 46158
Part 70 Permit No.: T109-16617-00002
Facility: Brick Manufacturing Line (Plant 32)
Parameter: Brick Produced
Limit: Shall not exceed 120,012 tons per twelve (12) consecutive month period 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: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
Part 70 Quarterly Report

Source Name: General Shale Brick, Inc.
Source Address: 148 Sycamore Lane, Mooreville, Indiana 46158
Part 70 Permit No.: T109-16617-00002
Facility: Brick Manufacturing Line (Plant 43)
Parameter: Brick Produced
Limit: Shall not exceed 180,018 tons per twelve (12) consecutive month period 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: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
Part 70 Quarterly Report

Source Name: General Shale Brick, Inc.
Source Address: 148 Sycamore Lane, Mooreville, Indiana 46158
Part 70 Permit No.: T109-16617-00002
Facility: Brick Kiln (EU-P32-K and EU-P43-K)
Parameter: Hydrogen Fluoride (HF) Emissions
Limit: shall not exceed 9.90 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: _____

Month	HF Emissions (tons)	HF Emissions (tons)	HF Emissions (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: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: General Shale Brick, Inc.
Source Address: 148 Sycamore Lane, Mooreville, Indiana 46158
Part 70 Permit No.: T109-29661-00002

Months: _____ **to** _____ **Year:** _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B – Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C - General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attachment A
to Part 70 Operating Permit Renewal No. T109-29661-00002

General Shale Brick, Inc.
148 Sycamore Lane, Mooresville, IN 46158

Title 40: Protection of Environment

Subpart 000—Standards of Performance for Nonmetallic Mineral Processing Plants

Source: 74 FR 19309, Apr. 28, 2009, unless otherwise noted.

§ 60.670 Applicability and designation of affected facility.

(a)(1) Except as provided in paragraphs (a)(2), (b), (c), and (d) of this section, the provisions of this subpart 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. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin are subject to the provisions of this subpart.

(2) The provisions of this subpart do not apply to the following operations: All facilities located in underground mines; plants without crushers or grinding mills above ground; and wet material processing operations (as defined in §60.671).

(b) An affected facility that is subject to the provisions of subparts F or I of this part or that follows in the plant process any facility subject to the provisions of subparts F or I of this part is not subject to the provisions of this subpart.

(c) Facilities at the following plants are not subject to the provisions of this subpart:

(1) Fixed sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 23 megagrams per hour (25 tons per hour) or less;

(2) Portable sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 136 megagrams per hour (150 tons per hour) or less; and

(3) Common clay plants and pumice plants with capacities, as defined in §60.671, of 9 megagrams per hour (10 tons per hour) or less.

(d)(1) When an existing facility is replaced by a piece of equipment of equal or smaller size, as defined in §60.671, having the same function as the existing facility, and there is no increase in the amount of emissions, the new facility is exempt from the provisions of §§60.672, 60.674, and 60.675 except as provided for in paragraph (d)(3) of this section.

(2) An owner or operator complying with paragraph (d)(1) of this section shall submit the information required in §60.676(a).

(3) An owner or operator replacing all existing facilities in a production line with new facilities does not qualify for the exemption described in paragraph (d)(1) of this section and must comply with the provisions of §§60.672, 60.674 and 60.675.

(e) An affected facility under paragraph (a) of this section that commences construction, modification, or reconstruction after August 31, 1983, is subject to the requirements of this part.

(f) Table 1 of this subpart specifies the provisions of subpart A of this part 60 that do not apply to owners and operators of affected facilities subject to this subpart or that apply with certain exceptions.

§ 60.671 Definitions.

All terms used in this subpart, but not specifically defined in this section, shall have the meaning given them in the Act and in subpart A of this part.

Bagging operation means the mechanical process by which bags are filled with nonmetallic minerals.

Belt conveyor means a conveying device that transports material from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.

Bucket elevator means a conveying device of nonmetallic minerals consisting of a head and foot assembly which supports and drives an endless single or double strand chain or belt to which buckets are attached.

Building means any frame structure with a roof.

Capacity means the cumulative rated capacity of all initial crushers that are part of the plant.

Capture system means the equipment (including enclosures, hoods, ducts, fans, dampers, etc.) used to capture and transport particulate matter generated by one or more affected facilities to a control device.

Control device means the air pollution control equipment used to reduce particulate matter emissions released to the atmosphere from one or more affected facilities at a nonmetallic mineral processing plant.

Conveying system means a device for transporting materials from one piece of equipment or location to another location within a plant. Conveying systems include but are not limited to the following: Feeders, belt conveyors, bucket elevators and pneumatic systems.

Crush or *Crushing* means to reduce the size of nonmetallic mineral material by means of physical impact of the crusher or grinding mill upon the material.

Crusher means a machine used to crush any nonmetallic minerals, and includes, but is not limited to, the following types: Jaw, gyratory, cone, roll, rod mill, hammermill, and impactor.

Enclosed truck or railcar loading station means that portion of a nonmetallic mineral processing plant where nonmetallic minerals are loaded by an enclosed conveying system into enclosed trucks or railcars.

Fixed plant means any nonmetallic mineral processing plant at which the processing equipment specified in §60.670(a) is attached by a cable, chain, turnbuckle, bolt or other means (except electrical connections) to any anchor, slab, or structure including bedrock.

Fugitive emission means particulate matter that is not collected by a capture system and is released to the atmosphere at the point of generation.

Grinding mill means a machine used for the wet or dry fine crushing of any nonmetallic mineral. Grinding mills include, but are not limited to, the following types: Hammer, roller, rod, pebble and ball, and fluid energy. The grinding mill includes the air conveying system, air separator, or air classifier, where such systems are used.

Initial crusher means any crusher into which nonmetallic minerals can be fed without prior crushing in the plant.

Nonmetallic mineral means any of the following minerals or any mixture of which the majority is any of the following minerals:

(1) Crushed and Broken Stone, including Limestone, Dolomite, Granite, Traprock, Sandstone, Quartz, Quartzite, Marl, Marble, Slate, Shale, Oil Shale, and Shell.

(2) Sand and Gravel.

(3) Clay including Kaolin, Fireclay, Bentonite, Fuller's Earth, Ball Clay, and Common Clay.

(4) Rock Salt.

(5) Gypsum (natural or synthetic).

(6) Sodium Compounds, including Sodium Carbonate, Sodium Chloride, and Sodium Sulfate.

(7) Pumice.

- (8) Gilsonite.
- (9) Talc and Pyrophyllite.
- (10) Boron, including Borax, Kernite, and Colemanite.
- (11) Barite.
- (12) Fluorospars.
- (13) Feldspar.
- (14) Diatomite.
- (15) Perlite.
- (16) Vermiculite.
- (17) Mica.
- (18) Kyanite, including Andalusite, Sillimanite, Topaz, and Dumortierite.

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).

Portable plant means any nonmetallic mineral processing plant that is mounted on any chassis or skids and may be moved by the application of a lifting or pulling force. In addition, there shall be no cable, chain, turnbuckle, bolt or other means (except electrical connections) by which any piece of equipment is attached or clamped to any anchor, slab, or structure, including bedrock that must be removed prior to the application of a lifting or pulling force for the purpose of transporting the unit.

Production line means all affected facilities (crushers, grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins, and enclosed truck and railcar loading stations) which are directly connected or are connected together by a conveying system.

Saturated material means, for purposes of this subpart, mineral material with sufficient surface moisture such that particulate matter emissions are not generated from processing of the material through screening operations, bucket elevators and belt conveyors. Material that is wetted solely by wet suppression systems is not considered to be "saturated" for purposes of this definition.

Screening operation means a device for separating material according to size by passing undersize material through one or more mesh surfaces (screens) in series, and retaining oversize material on the mesh surfaces (screens). Grizzly feeders associated with truck dumping and static (non-moving) grizzlies used anywhere in the nonmetallic mineral processing plant are not considered to be screening operations.

Seasonal shut down means shut down of an affected facility for a period of at least 45 consecutive days due to weather or seasonal market conditions.

Size means the rated capacity in tons per hour of a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station; the total surface area of the top screen of a screening operation; the width of a conveyor belt; and the rated capacity in tons of a storage bin.

Stack emission means the particulate matter that is released to the atmosphere from a capture system.

Storage bin means a facility for storage (including surge bins) of nonmetallic minerals prior to further processing or loading.

Transfer point means a point in a conveying operation where the nonmetallic mineral is transferred to or from a belt conveyor except where the nonmetallic mineral is being transferred to a stockpile.

Truck dumping means the unloading of nonmetallic minerals from movable vehicles designed to transport nonmetallic minerals from one location to another. Movable vehicles include but are not limited to: Trucks, front end loaders, skip hoists, and railcars.

Vent means an opening through which there is mechanically induced air flow for the purpose of exhausting from a building air carrying particulate matter emissions from one or more affected facilities.

Wet material processing operation(s) means any of the following:

(1) Wet screening operations (as defined in this section) and subsequent screening operations, bucket elevators and belt conveyors in the production line that process saturated materials (as defined in this section) up to the first crusher, grinding mill or storage bin in the production line; or

(2) Screening operations, bucket elevators and belt conveyors in the production line downstream of wet mining operations (as defined in this section) that process saturated materials (as defined in this section) up to the first crusher, grinding mill or storage bin in the production line.

Wet mining operation means a mining or dredging operation designed and operated to extract any nonmetallic mineral regulated under this subpart from deposits existing at or below the water table, where the nonmetallic mineral is saturated with water.

Wet screening operation means a screening operation at a nonmetallic mineral processing plant which removes unwanted material or which separates marketable fines from the product by a washing process which is designed and operated at all times such that the product is saturated with water.

§ 60.672 Standard for particulate matter (PM).

(a) Affected facilities must meet the stack emission limits and compliance requirements in Table 2 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.8. The requirements in Table 2 of this subpart apply for affected facilities with capture systems used to capture and transport particulate matter to a control device.

(b) Affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.11. The requirements in Table 3 of this subpart apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems.

(c) [Reserved]

(d) Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section.

(e) If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in paragraphs (a) and (b) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits:

(1) Fugitive emissions from the building openings (except for vents as defined in §60.671) must not exceed 7 percent opacity; and

(2) Vents (as defined in §60.671) in the building must meet the applicable stack emission limits and compliance requirements in Table 2 of this subpart.

(f) Any baghouse that controls emissions from only an individual, enclosed storage bin is exempt from the applicable stack PM concentration limit (and associated performance testing) in Table 2 of this subpart but must meet the applicable stack opacity limit and compliance requirements in Table 2 of this subpart. This exemption from the stack PM concentration limit does not apply for multiple storage bins with combined stack emissions.

§ 60.673 Reconstruction.

(a) The cost of replacement of ore-contact surfaces on processing equipment shall not be considered in calculating either the "fixed capital cost of the new components" or the "fixed capital cost that would be required to construct a comparable new facility" under §60.15. Ore-contact surfaces are crushing surfaces; screen meshes, bars, and plates; conveyor belts; and elevator buckets.

(b) Under §60.15, the "fixed capital cost of the new components" includes the fixed capital cost of all depreciable components (except components specified in paragraph (a) of this section) which are or will be replaced pursuant to all continuous programs of component replacement commenced within any 2-year period following August 31, 1983.

§ 60.674 Monitoring of operations.

(a) The owner or operator of any affected facility subject to the provisions of this subpart which uses a wet scrubber to control emissions shall install, calibrate, maintain and operate the following monitoring devices:

(1) A device for the continuous measurement of the pressure loss of the gas stream through the scrubber. The monitoring device must be certified by the manufacturer to be accurate within ± 250 pascals ± 1 inch water gauge pressure and must be calibrated on an annual basis in accordance with manufacturer's instructions.

(2) A device for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within ± 5 percent of design scrubbing liquid flow rate and must be calibrated on an annual basis in accordance with manufacturer's instructions.

(b) The owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expeditiously as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under §60.676(b).

(1) If an affected facility relies on water carryover from upstream water sprays to control fugitive emissions, then that affected facility is exempt from the 5-year repeat testing requirement specified in Table 3 of this subpart provided that the affected facility meets the criteria in paragraphs (b)(1)(i) and (ii) of this section:

(i) The owner or operator of the affected facility conducts periodic inspections of the upstream water spray(s) that are responsible for controlling fugitive emissions from the affected facility. These inspections are conducted according to paragraph (b) of this section and §60.676(b), and

(ii) The owner or operator of the affected facility designates which upstream water spray(s) will be periodically inspected at the time of the initial performance test required under §60.11 of this part and §60.675 of this subpart.

(2) If an affected facility that routinely uses wet suppression water sprays ceases operation of the water sprays or is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under §60.676(b) must specify the control mechanism being used instead of the water sprays.

(c) Except as specified in paragraph (d) or (e) of this section, the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions must conduct quarterly 30-minute visible emissions inspections using EPA Method 22 (40 CFR part 60, Appendix A-7). The Method 22 (40 CFR part 60, Appendix A-7) test shall be conducted while the baghouse is operating. The test is successful if no visible emissions are observed. If any visible emissions are observed, the owner or operator of the affected facility must initiate corrective action within 24 hours to return the baghouse to normal operation. The owner or operator must record each Method 22 (40 CFR part 60, Appendix A-7) test, including the date and any corrective actions taken, in the logbook required under §60.676(b). The owner or operator of the affected facility may establish a different baghouse-specific success level for the visible emissions test (other than no visible emissions) by conducting a PM performance test according to §60.675(b) simultaneously with a Method 22 (40 CFR part 60, Appendix A-7) to determine what constitutes normal visible emissions from that affected facility's baghouse when it is in compliance with the applicable PM concentration limit in Table 2 of this subpart. The revised visible emissions success level must be incorporated into the permit for the affected facility.

(d) As an alternative to the periodic Method 22 (40 CFR part 60, Appendix A-7) visible emissions inspections specified in paragraph (c) of this section, the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions may use a bag leak detection system. The owner or operator must install, operate, and maintain the bag leak detection system according to paragraphs (d)(1) through (3) of this section.

(1) Each bag leak detection system must meet the specifications and requirements in paragraphs (d)(1)(i) through (viii) of this section.

(i) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 1 milligram per dry standard cubic meter (0.00044 grains per actual cubic foot) or less.

(ii) The bag leak detection system sensor must provide output of relative PM loadings. The owner or operator shall continuously record the output from the bag leak detection system using electronic or other means (e.g. , using a strip chart recorder or a data logger).

(iii) The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to paragraph (d)(1)(iv) of this section, and the alarm must be located such that it can be heard by the appropriate plant personnel.

(iv) In the initial adjustment of the bag leak detection system, the owner or operator must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time.

(v) Following initial adjustment, the owner or operator shall not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority except as provided in paragraph (d)(1)(vi) of this section.

(vi) Once per quarter, the owner or operator may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by paragraph (d)(2) of this section.

(vii) The owner or operator must install the bag leak detection sensor downstream of the fabric filter.

(viii) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(2) The owner or operator of the affected facility must develop and submit to the Administrator or delegated authority for approval of a site-specific monitoring plan for each bag leak detection system. The owner or operator must operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. Each monitoring plan must describe the items in paragraphs (d)(2)(i) through (vi) of this section.

(i) Installation of the bag leak detection system;

(ii) Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point will be established;

(iii) Operation of the bag leak detection system, including quality assurance procedures;

(iv) How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list;

(v) How the bag leak detection system output will be recorded and stored; and

(vi) Corrective action procedures as specified in paragraph (d)(3) of this section. In approving the site-specific monitoring plan, the Administrator or delegated authority may allow owners and operators more than 3 hours to alleviate a specific condition that causes an alarm if the owner or operator identifies in the monitoring plan this specific condition as one that could lead to an alarm, adequately explains why it is not feasible to alleviate this condition within 3 hours of the time the alarm occurs, and demonstrates that the requested time will ensure alleviation of this condition as expeditiously as practicable.

(3) For each bag leak detection system, the owner or operator must initiate procedures to determine the cause of every alarm within 1 hour of the alarm. Except as provided in paragraph (d)(2)(vi) of this section, the owner or

operator must alleviate the cause of the alarm within 3 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following:

- (i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM emissions;
- (ii) Sealing off defective bags or filter media;
- (iii) Replacing defective bags or filter media or otherwise repairing the control device;
- (iv) Sealing off a defective fabric filter compartment;
- (v) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system; or
- (vi) Shutting down the process producing the PM emissions.

(e) As an alternative to the periodic Method 22 (40 CFR part 60, Appendix A-7) visible emissions inspections specified in paragraph (c) of this section, the owner or operator of any affected facility that is subject to the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart AAAAA) may follow the continuous compliance requirements in row 1 items (i) through (iii) of Table 6 to Subpart AAAAA of 40 CFR part 63.

§ 60.675 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendices A-1 through A-7 of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (e) of this section.

(b) The owner or operator shall determine compliance with the PM standards in §60.672(a) as follows:

(1) Except as specified in paragraphs (e)(3) and (4) of this section, Method 5 of Appendix A-3 of this part or Method 17 of Appendix A-6 of this part shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5 (40 CFR part 60, Appendix A-3), if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.

(2) Method 9 of Appendix A-4 of this part and the procedures in §60.11 shall be used to determine opacity.

(c)(1) In determining compliance with the particulate matter standards in §60.672(b) or §60.672(e)(1), the owner or operator shall use Method 9 of Appendix A-4 of this part and the procedures in §60.11, with the following additions:

(i) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(ii) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9 of Appendix A-4 of this part, Section 2.1) must be followed.

(iii) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

(2)(i) In determining compliance with the opacity of stack emissions from any baghouse that controls emissions only from an individual enclosed storage bin under §60.672(f) of this subpart, using Method 9 (40 CFR part 60, Appendix A-4), the duration of the Method 9 (40 CFR part 60, Appendix A-4) observations shall be 1 hour (ten 6-minute averages).

(ii) The duration of the Method 9 (40 CFR part 60, Appendix A-4) observations may be reduced to the duration the affected facility operates (but not less than 30 minutes) for baghouses that control storage bins or enclosed truck or railcar loading stations that operate for less than 1 hour at a time.

(3) When determining compliance with the fugitive emissions standard for any affected facility described under §60.672(b) or §60.672(e)(1) of this subpart, the duration of the Method 9 (40 CFR part 60, Appendix A–4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Table 3 of this subpart must be based on the average of the five 6-minute averages.

(d) To demonstrate compliance with the fugitive emission limits for buildings specified in §60.672(e)(1), the owner or operator must complete the testing specified in paragraph (d)(1) and (2) of this section. Performance tests must be conducted while all affected facilities inside the building are operating.

(1) If the building encloses any affected facility that commences construction, modification, or reconstruction on or after April 22, 2008, the owner or operator of the affected facility must conduct an initial Method 9 (40 CFR part 60, Appendix A–4) performance test according to this section and §60.11.

(2) If the building encloses only affected facilities that commenced construction, modification, or reconstruction before April 22, 2008, and the owner or operator has previously conducted an initial Method 22 (40 CFR part 60, Appendix A–7) performance test showing zero visible emissions, then the owner or operator has demonstrated compliance with the opacity limit in §60.672(e)(1). If the owner or operator has not conducted an initial performance test for the building before April 22, 2008, then the owner or operator must conduct an initial Method 9 (40 CFR part 60, Appendix A–4) performance test according to this section and §60.11 to show compliance with the opacity limit in §60.672(e)(1).

(e) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For the method and procedure of paragraph (c) of this section, if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:

(i) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

(ii) Separate the emissions so that the opacity of emissions from each affected facility can be read.

(2) A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:

(i) No more than three emission points may be read concurrently.

(ii) All three emission points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.

(iii) If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer must stop taking readings for the other two points and continue reading just that single point.

(3) Method 5I of Appendix A–3 of this part may be used to determine the PM concentration as an alternative to the methods specified in paragraph (b)(1) of this section. Method 5I (40 CFR part 60, Appendix A–3) may be useful for affected facilities that operate for less than 1 hour at a time such as (but not limited to) storage bins or enclosed truck or railcar loading stations.

(4) In some cases, velocities of exhaust gases from building vents may be too low to measure accurately with the type S pitot tube specified in EPA Method 2 of Appendix A–1 of this part [i.e., velocity head <1.3 mm H₂O (0.05 in. H₂O)] and referred to in EPA Method 5 of Appendix A–3 of this part. For these conditions, the owner or operator may determine the average gas flow rate produced by the power fans (e.g., from vendor-supplied fan curves) to the building vent. The owner or operator may calculate the average gas velocity at the building vent measurement site using Equation 1 of this section and use this average velocity in determining and maintaining isokinetic sampling rates.

$$v_e = \frac{Q_f}{A_e} \quad (\text{Eq. 1})$$

Where:

V_e = average building vent velocity (feet per minute);

Q_f = average fan flow rate (cubic feet per minute); and

A_e = area of building vent and measurement location (square feet).

(f) To comply with §60.676(d), the owner or operator shall record the measurements as required in §60.676(c) using the monitoring devices in §60.674 (a)(1) and (2) during each particulate matter run and shall determine the averages.

(g) For performance tests involving only Method 9 (40 CFR part 60 Appendix A–4) testing, the owner or operator may reduce the 30-day advance notification of performance test in §60.7(a)(6) and 60.8(d) to a 7-day advance notification.

(h) [Reserved]

(i) If the initial performance test date for an affected facility falls during a seasonal shut down (as defined in §60.671 of this subpart) of the affected facility, then with approval from the permitting authority, the owner or operator may postpone the initial performance test until no later than 60 calendar days after resuming operation of the affected facility.

§ 60.676 Reporting and recordkeeping.

(a) Each owner or operator seeking to comply with §60.670(d) shall submit to the Administrator the following information about the existing facility being replaced and the replacement piece of equipment.

(1) For a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station:

(i) The rated capacity in megagrams or tons per hour of the existing facility being replaced and

(ii) The rated capacity in tons per hour of the replacement equipment.

(2) For a screening operation:

(i) The total surface area of the top screen of the existing screening operation being replaced and

(ii) The total surface area of the top screen of the replacement screening operation.

(3) For a conveyor belt:

(i) The width of the existing belt being replaced and

(ii) The width of the replacement conveyor belt.

(4) For a storage bin:

(i) The rated capacity in megagrams or tons of the existing storage bin being replaced and

(ii) The rated capacity in megagrams or tons of replacement storage bins.

(b)(1) Owners or operators of affected facilities (as defined in §§60.670 and 60.671) for which construction, modification, or reconstruction commenced on or after April 22, 2008, must record each periodic inspection required under §60.674(b) or (c), including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Administrator upon request.

(2) For each bag leak detection system installed and operated according to §60.674(d), the owner or operator must keep the records specified in paragraphs (b)(2)(i) through (iii) of this section.

(i) Records of the bag leak detection system output;

(ii) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and

(iii) The date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and whether the cause of the alarm was alleviated within 3 hours of the alarm.

(3) The owner or operator of each affected facility demonstrating compliance according to §60.674(e) by following the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart AAAAA) must maintain records of visible emissions observations required by §63.7132(a)(3) and (b) of 40 CFR part 63, subpart AAAAA.

(c) During the initial performance test of a wet scrubber, and daily thereafter, the owner or operator shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate.

(d) After the initial performance test of a wet scrubber, the owner or operator shall submit semiannual reports to the Administrator of occurrences when the measurements of the scrubber pressure loss and liquid flow rate decrease by more than 30 percent from the average determined during the most recent performance test.

(e) The reports required under paragraph (d) of this section shall be postmarked within 30 days following end of the second and fourth calendar quarters.

(f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in §60.672 of this subpart, including reports of opacity observations made using Method 9 (40 CFR part 60, Appendix A-4) to demonstrate compliance with §60.672(b), (e) and (f).

(g) The owner or operator of any wet material processing operation that processes saturated and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. At the time of such change, this screening operation, bucket elevator, or belt conveyor becomes subject to the applicable opacity limit in §60.672(b) and the emission test requirements of §60.11.

(h) The subpart A requirement under §60.7(a)(1) for notification of the date construction or reconstruction commenced is waived for affected facilities under this subpart.

(i) A notification of the actual date of initial startup of each affected facility shall be submitted to the Administrator.

(1) For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the owner or operator to the Administrator. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available.

(2) For portable aggregate processing plants, the notification of the actual date of initial startup shall include both the home office and the current address or location of the portable plant.

(j) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected facilities within the State will be relieved of the obligation to comply with the reporting requirements of this section, provided that they comply with requirements established by the State.

(k) Notifications and reports required under this subpart and under subpart A of this part to demonstrate compliance with this subpart need only to be sent to the EPA Region or the State which has been delegated authority according to §60.4(b).

Table 1 to Subpart 000—Exceptions to Applicability of Subpart A to Subpart 000

Table 1 to Subpart 000—Exceptions to Applicability of Subpart A to Subpart 000

Subpart A reference	Applies to subpart 000	Explanation
60.4, Address	Yes	Except in §60.4(a) and (b) submittals need not be submitted to both the EPA Region and delegated State authority (§60.676(k)).
60.7, Notification and recordkeeping	Yes	Except in (a)(1) notification of the date construction or reconstruction commenced (§60.676(h)).
		Also, except in (a)(6) performance tests involving only Method 9 (40 CFR part 60, Appendix A–4) require a 7-day advance notification instead of 30 days (§60.675(g)).
60.8, Performance tests	Yes	Except in (d) performance tests involving only Method 9 (40 CFR part 60, Appendix A–4) require a 7-day advance notification instead of 30 days (§60.675(g)).
60.11, Compliance with standards and maintenance requirements	Yes	Except in (b) under certain conditions (§§60.675(c)), Method 9 (40 CFR part 60, Appendix A–4) observation is reduced from 3 hours to 30 minutes for fugitive emissions.
60.18, General control device	No	Flares will not be used to comply with the emission limits.

Table 2 to Subpart 000—Stack Emission Limits for Affected Facilities With Capture Systems

Table 2 to Subpart 000—Stack Emission Limits for Affected Facilities With Capture Systems

For * * *	The owner or operator must meet a PM limit of * * *	And the owner or operator must meet an opacity limit of * * *	The owner or operator must demonstrate compliance with these limits by conducting * * *
Affected facilities (as defined in §§60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	0.05 g/dscm (0.022 gr/dscf) ^a	7 percent for dry control devices ^b	An initial performance test according to §60.8 of this part and §60.675 of this subpart; and Monitoring of wet scrubber parameters according to §60.674(a) and §60.676(c), (d), and (e).
Affected facilities (as defined in §§60.670 and 60.671) that commence construction, modification, or reconstruction on or after April 22, 2008	0.032 g/dscm (0.014 gr/dscf) ^a	Not applicable (except for individual enclosed storage bins) 7 percent for dry control devices on individual enclosed storage bins	An initial performance test according to §60.8 of this part and §60.675 of this subpart; and Monitoring of wet scrubber parameters according to §60.674(a) and §60.676(c), (d), and (e); and
			Monitoring of baghouses according to §60.674(c), (d), or (e) and §60.676(b).

^aExceptions to the PM limit apply for individual enclosed storage bins and other equipment. See §60.672(d) through (f).

^bThe stack opacity limit and associated opacity testing requirements do not apply for affected facilities using wet scrubbers.

Table 3 to Subpart OOO—Fugitive Emission Limits

Table 3 to Subpart OOO—Fugitive Emission Limits

For * * *	The owner or operator must meet the following fugitive emissions limit for grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affected facility (as defined in §§60.670 and 60.671) * * *	The owner or operator must meet the following fugitive emissions limit for crushers at which a capture system is not used * * *	The owner or operator must demonstrate compliance with these limits by conducting * * *
Affected facilities (as defined in §§60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	10 percent opacity	15 percent opacity	An initial performance test according to §60.11 of this part and §60.675 of this subpart.
Affected facilities (as defined in §§60.670 and 60.671) that commence construction, modification, or reconstruction on or after April 22, 2008	7 percent opacity	12 percent opacity	An initial performance test according to §60.11 of this part and §60.675 of this subpart; and Periodic inspections of water sprays according to §60.674(b) and §60.676(b); and
			A repeat performance test according to §60.11 of this part and §60.675 of this subpart within 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays. Affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in §60.674(b) and §60.676(b) are exempt from this 5-year repeat testing requirement.

Attachment B
to Part 70 Operating Permit Renewal No. T109-29661-00002

General Shale Brick, Inc.
148 Sycamore Lane, Mooresville, IN 46158

Subpart JJJJ—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Source: 73 FR 3591, Jan. 18, 2008, unless otherwise noted.

What This Subpart Covers

§ 60.4230 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (6) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary SI ICE with a maximum engine power less than or equal to 19 kilowatt (KW) (25 horsepower (HP)) that are manufactured on or after July 1, 2008.

(2) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are gasoline fueled or that are rich burn engines fueled by liquefied petroleum gas (LPG), where the date of manufacture is:

(i) On or after July 1, 2008; or

(ii) On or after January 1, 2009, for emergency engines.

(3) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are not gasoline fueled and are not rich burn engines fueled by LPG, where the manufacturer participates in the voluntary manufacturer certification program described in this subpart and where the date of manufacture is:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) On or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

(iii) On or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) On or after January 1, 2009, for emergency engines.

(4) Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) on or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

(iii) on or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).

(5) Owners and operators of stationary SI ICE that are modified or reconstructed after June 12, 2006, and any person that modifies or reconstructs any stationary SI ICE after June 12, 2006.

(6) The provisions of §60.4236 of this subpart are applicable to all owners and operators of stationary SI ICE that commence construction after June 12, 2006.

- (b) The provisions of this subpart are not applicable to stationary SI ICE being tested at an engine test cell/stand.
- (c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.
- (d) For the purposes of this subpart, stationary SI ICE using alcohol-based fuels are considered gasoline engines.
- (e) Stationary SI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR parts 90 and 1048, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.
- (f) Owners and operators of facilities with internal combustion engines that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

[73 FR 3591, Jan. 18, 2008, as amended at 76 FR 37972, June 28, 2011]

Emission Standards for Manufacturers

§ 60.4231 What emission standards must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing such engines?

(a) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008 to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as follows:

If engine displacement is * * *	and manufacturing dates are * * *	the engine must meet emission standards and related requirements for nonhandheld engines under * * *
(1) below 225 cc	July 1, 2008 to December 31, 2011	40 CFR part 90.
(2) below 225 cc	January 1, 2012 or later	40 CFR part 1054.
(3) at or above 225 cc	July 1, 2008 to December 31, 2010	40 CFR part 90.
(4) at or above 225 cc	January 1, 2011 or later	40 CFR part 1054.

(b) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) that use gasoline and that are manufactured on or after the applicable date in § 60.4230(a)(2), or manufactured on or after the applicable date in § 60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE with a maximum engine power greater than 25 HP and less than 130 HP that use gasoline and that are manufactured on or after the applicable date in § 60.4230(a)(4) to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cubic centimeters (cc) that use gasoline to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate.

(c) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater

than 25 HP and less than 130 HP) that are rich burn engines that use LPG and that are manufactured on or after the applicable date in § 60.4230(a)(2), or manufactured on or after the applicable date in § 60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE greater than 25 HP and less than 130 HP that are rich burn engines that use LPG and that are manufactured on or after the applicable date in § 60.4230(a)(4) to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc that are rich burn engines that use LPG to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate.

(d) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG and emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) under the voluntary manufacturer certification program described in this subpart must certify those engines to the certification emission standards for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers who choose to certify their emergency stationary SI ICE greater than 25 HP and less than 130 HP (except gasoline and rich burn engines that use LPG), must certify those engines to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc (except gasoline and rich burn engines that use LPG) to the certification emission standards for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate. For stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG and emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) manufactured prior to January 1, 2011, manufacturers may choose to certify these engines to the standards in Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP.

(e) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) under the voluntary manufacturer certification program described in this subpart must certify those engines to the emission standards in Table 1 to this subpart. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) that are lean burn engines that use LPG to the certification emission standards for new nonroad SI engines in 40 CFR part 1048. For stationary SI ICE with a maximum engine power greater than or equal to 100 HP (75 KW) and less than 500 HP (373 KW) manufactured prior to January 1, 2011, and for stationary SI ICE with a maximum engine power greater than or equal to 500 HP (373 KW) manufactured prior to July 1, 2010, manufacturers may choose to certify these engines to the certification emission standards for new nonroad SI engines in 40 CFR part 1048 applicable to engines that are not severe duty engines.

(f) Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, to the extent they apply to equipment manufacturers.

(g) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary SI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (e) of this section that are applicable to the model year, maximum engine power and displacement of the reconstructed stationary SI ICE.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59175, Oct. 8, 2008; 76 FR 37973, June 28, 2011; 78 FR 6696 January 30, 2013]

§ 60.4232 How long must my engines meet the emission standards if I am a manufacturer of stationary SI internal combustion engines?

Engines manufactured by stationary SI internal combustion engine manufacturers must meet the emission standards as required in §60.4231 during the certified emissions life of the engines.

Emission Standards for Owners and Operators

§ 60.4233 What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?

- (a) Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008, must comply with the emission standards in §60.4231(a) for their stationary SI ICE.
- (b) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in §60.4230(a)(4) that use gasoline must comply with the emission standards in §60.4231(b) for their stationary SI ICE.
- (c) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in §60.4230(a)(4) that are rich burn engines that use LPG must comply with the emission standards in §60.4231(c) for their stationary SI ICE.
- (d) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards for field testing in 40 CFR 1048.101(c) for their non-emergency stationary SI ICE and with the emission standards in Table 1 to this subpart for their emergency stationary SI ICE. Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) manufactured prior to January 1, 2011, that were certified to the certification emission standards in Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP, may optionally choose to meet those standards.
- (e) Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 to this subpart, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified.
- (f) Owners and operators of any modified or reconstructed stationary SI ICE subject to this subpart must meet the requirements as specified in paragraphs (f)(1) through (5) of this section.
- (1) Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with emission standards in §60.4231(a) for their stationary SI ICE. Engines with a date of manufacture prior to July 1, 2008 must comply with the emission standards specified in §60.4231(a) applicable to engines manufactured on July 1, 2008.
- (2) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are gasoline engines and are modified or reconstructed after June 12, 2006, must comply with the emission standards in §60.4231(b) for their stationary SI ICE. Engines with a date of manufacture prior to July 1, 2008 (or January 1, 2009 for emergency engines) must comply with the emission standards specified in §60.4231(b) applicable to engines manufactured on July 1, 2008 (or January 1, 2009 for emergency engines).
- (3) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are rich burn engines that use LPG, that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in §60.4231(c). Engines with a date of manufacture prior to July 1, 2008 (or January 1, 2009 for emergency engines) must comply with the emission standards specified in §60.4231(c) applicable to engines manufactured on July 1, 2008 (or January 1, 2009 for emergency engines).
- (4) Owners and operators of stationary SI natural gas and lean burn LPG engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (d) or (e) of this section, except that such owners and operators of non-emergency engines and emergency engines greater than or equal to 130 HP must meet a nitrogen oxides (NO_x) emission standard of 3.0 grams per HP-hour (g/HP-hr), a CO emission standard of 4.0 g/HP-hr (5.0 g/HP-hr for non-emergency engines less than 100 HP), and a volatile organic compounds (VOC) emission standard of 1.0 g/HP-hr, or a NO_x emission standard of 250 ppmvd at 15 percent oxygen (O₂), a CO emission standard 540 ppmvd at

15 percent O₂ (675 ppmvd at 15 percent O₂ for non-emergency engines less than 100 HP), and a VOC emission standard of 86 ppmvd at 15 percent O₂, where the date of manufacture of the engine is:

(i) Prior to July 1, 2007, for non-emergency engines with a maximum engine power greater than or equal to 500 HP (except lean burn natural gas engines and LPG engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) Prior to July 1, 2008, for non-emergency engines with a maximum engine power less than 500 HP;

(iii) Prior to January 1, 2009, for emergency engines;

(iv) Prior to January 1, 2008, for non-emergency lean burn natural gas engines and LPG engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP.

(5) Owners and operators of stationary SI landfill/digester gas ICE engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (e) of this section for stationary landfill/digester gas engines. Engines with maximum engine power less than 500 HP and a date of manufacture prior to July 1, 2008 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE with a maximum engine power less than 500 HP manufactured on July 1, 2008. Engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines greater than or equal to 500 HP and less than 1,350 HP) and a date of manufacture prior to July 1, 2007 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE with a maximum engine power greater than or equal to 500 HP (except lean burn engines greater than or equal to 500 HP and less than 1,350 HP) manufactured on July 1, 2007. Lean burn engines greater than or equal to 500 HP and less than 1,350 HP with a date of manufacture prior to January 1, 2008 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE that are lean burn engines greater than or equal to 500 HP and less than 1,350 HP and manufactured on January 1, 2008.

(g) Owners and operators of stationary SI wellhead gas ICE engines may petition the Administrator for approval on a case-by-case basis to meet emission standards no less stringent than the emission standards that apply to stationary emergency SI engines greater than 25 HP and less than 130 HP due to the presence of high sulfur levels in the fuel, as specified in Table 1 to this subpart. The request must, at a minimum, demonstrate that the fuel has high sulfur levels that prevent the use of aftertreatment controls and also that the owner has reasonably made all attempts possible to obtain an engine that will meet the standards without the use of aftertreatment controls. The petition must request the most stringent standards reasonably applicable to the engine using the fuel.

(h) Owners and operators of stationary SI ICE that are required to meet standards that reference 40 CFR 1048.101 must, if testing their engines in use, meet the standards in that section applicable to field testing, except as indicated in paragraph (e) of this section.

[73 FR 3591, Jan. 18, 2008, as amended at 76 FR 37973, June 28, 2011]

§ 60.4234 How long must I meet the emission standards if I am an owner or operator of a stationary SI internal combustion engine?

Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine.

Other Requirements for Owners and Operators

§ 60.4235 What fuel requirements must I meet if I am an owner or operator of a stationary SI gasoline fired internal combustion engine subject to this subpart?

Owners and operators of stationary SI ICE subject to this subpart that use gasoline must use gasoline that meets the per gallon sulfur limit in 40 CFR 80.195.

§ 60.4236 What is the deadline for importing or installing stationary SI ICE produced in previous model years?

(a) After July 1, 2010, owners and operators may not install stationary SI ICE with a maximum engine power of less than 500 HP that do not meet the applicable requirements in §60.4233.

(b) After July 1, 2009, owners and operators may not install stationary SI ICE with a maximum engine power of greater than or equal to 500 HP that do not meet the applicable requirements in §60.4233, except that lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP that do not meet the applicable requirements in §60.4233 may not be installed after January 1, 2010.

(c) For emergency stationary SI ICE with a maximum engine power of greater than 19 KW (25 HP), owners and operators may not install engines that do not meet the applicable requirements in §60.4233 after January 1, 2011.

(d) In addition to the requirements specified in §§60.4231 and 60.4233, it is prohibited to import stationary SI ICE less than or equal to 19 KW (25 HP), stationary rich burn LPG SI ICE, and stationary gasoline SI ICE that do not meet the applicable requirements specified in paragraphs (a), (b), and (c) of this section, after the date specified in paragraph (a), (b), and (c) of this section.

(e) The requirements of this section do not apply to owners and operators of stationary SI ICE that have been modified or reconstructed, and they do not apply to engines that were removed from one existing location and reinstalled at a new location.

§ 60.4237 What are the monitoring requirements if I am an owner or operator of an emergency stationary SI internal combustion engine?

(a) Starting on July 1, 2010, if the emergency stationary SI internal combustion engine that is greater than or equal to 500 HP that was built on or after July 1, 2010, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

(b) Starting on January 1, 2011, if the emergency stationary SI internal combustion engine that is greater than or equal to 130 HP and less than 500 HP that was built on or after January 1, 2011, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

(c) If you are an owner or operator of an emergency stationary SI internal combustion engine that is less than 130 HP, was built on or after July 1, 2008, and does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter upon startup of your emergency engine.

Compliance Requirements for Manufacturers

§ 60.4238 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines ≤19 KW (25 HP) or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(a) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

§ 60.4239 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines >19 KW (25 HP) that use gasoline or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(b) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must test their engines as specified in that part. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054, and manufacturers of stationary SI emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

§ 60.4240 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines >19 KW (25 HP) that are rich burn engines that use LPG or a manufacturer of equipment containing such engines?

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(c) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must test their engines as specified in that part. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054, and manufacturers of stationary SI emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

§ 60.4241 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines participating in the voluntary certification program or a manufacturer of equipment containing such engines?

(a) Manufacturers of stationary SI internal combustion engines with a maximum engine power greater than 19 KW (25 HP) that do not use gasoline and are not rich burn engines that use LPG can choose to certify their engines to the emission standards in §60.4231(d) or (e), as applicable, under the voluntary certification program described in this subpart. Manufacturers who certify their engines under the voluntary certification program must meet the requirements as specified in paragraphs (b) through (g) of this section. In addition, manufacturers of stationary SI internal combustion engines who choose to certify their engines under the voluntary certification program, must also meet the requirements as specified in §60.4247.

(b) Manufacturers of engines other than those certified to standards in 40 CFR part 90 or 40 CFR part 1054 must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must follow the same test procedures that apply to large SI nonroad engines under 40 CFR part 1048, but must use the D-1 cycle of International Organization of Standardization 8178-4: 1996(E) (incorporated by reference, see 40 CFR 60.17) or the test cycle requirements specified in Table 3 to 40 CFR 1048.505, except that Table 3 of 40 CFR 1048.505 applies to high load engines only. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054, and manufacturers of emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

(c) Certification of stationary SI ICE to the emission standards specified in §60.4231(d) or (e), as applicable, is voluntary, but manufacturers who decide to certify are subject to all of the requirements indicated in this subpart with regard to the engines included in their certification. Manufacturers must clearly label their stationary SI engines as certified or non-certified engines.

(d) Manufacturers of natural gas fired stationary SI ICE who conduct voluntary certification of stationary SI ICE to the emission standards specified in §60.4231(d) or (e), as applicable, must certify their engines for operation using fuel that meets the definition of pipeline-quality natural gas. The fuel used for certifying stationary SI natural gas engines must meet the definition of pipeline-quality natural gas as described in §60.4248. In addition, the manufacturer must provide information to the owner and operator of the certified stationary SI engine including the specifications of the pipeline-quality natural gas to which the engine is certified and what adjustments the owner or operator must make to the engine when installed in the field to ensure compliance with the emission standards.

(e) Manufacturers of stationary SI ICE that are lean burn engines fueled by LPG who conduct voluntary certification of stationary SI ICE to the emission standards specified in §60.4231(d) or (e), as applicable, must certify their engines for operation using fuel that meets the specifications in 40 CFR 1065.720.

(f) Manufacturers may certify their engines for operation using gaseous fuels in addition to pipeline-quality natural gas; however, the manufacturer must specify the properties of that fuel and provide testing information showing that the engine will meet the emission standards specified in §60.4231(d) or (e), as applicable, when operating on that fuel. The manufacturer must also provide instructions for configuring the stationary engine to meet the emission standards on fuels that do not meet the pipeline-quality natural gas definition. The manufacturer must also provide information to the owner and operator of the certified stationary SI engine regarding the configuration that is most conducive to reduced emissions where the engine will be operated on gaseous fuels with different quality than the fuel that it was certified to.

(g) A stationary SI engine manufacturer may certify an engine family solely to the standards applicable to landfill/digester gas engines as specified in §60.4231(d) or (e), as applicable, but must certify their engines for operation using landfill/digester gas and must add a permanent label stating that the engine is for use only in landfill/digester gas applications. The label must be added according to the labeling requirements specified in 40 CFR 1048.135(b).

(h) For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

(i) For engines being certified to the voluntary certification standards in Table 1 of this subpart, the VOC measurement shall be made by following the procedures in 40 CFR 1065.260 and 1065.265 in order to determine the total NMHC emissions by using a flame-ionization detector and non-methane cutter. As an alternative to the nonmethane cutter, manufacturers may use a gas chromatograph as allowed under 40 CFR 1065.267 and may measure ethane, as well as methane, for excluding such levels from the total VOC measurement.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59176, Oct. 8, 2008; 76 FR 37974, June 28, 2011]

§ 60.4242 What other requirements must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing stationary SI internal combustion engines or a manufacturer of equipment containing such engines?

(a) Stationary SI internal combustion engine manufacturers must meet the provisions of 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054, as applicable, as well as 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1048 or 1054, except that engines certified pursuant to the voluntary certification procedures in §60.4241 are subject only to the provisions indicated in §60.4247 and are permitted to provide instructions to owners and operators allowing for deviations from certified configurations, if such deviations are consistent with the provisions of paragraphs §60.4241(c) through (f). Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, as applicable. Labels on engines certified to 40 CFR part 1048 must refer to stationary engines, rather than or in addition to nonroad engines, as appropriate.

(b) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054 for that model year may certify any such family that contains both nonroad and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts. This provision also applies to equipment or component manufacturers certifying to standards under 40 CFR part 1060.

(c) Manufacturers of engine families certified to 40 CFR part 1048 may meet the labeling requirements referred to in paragraph (a) of this section for stationary SI ICE by either adding a separate label containing the information required in paragraph (a) of this section or by adding the words "and stationary" after the word "nonroad" to the label.

(d) For all engines manufactured on or after January 1, 2011, and for all engines with a maximum engine power greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, a stationary SI engine manufacturer that certifies an engine family solely to the standards applicable to emergency engines must add a permanent label stating that the engines in that family are for emergency use only. The label must be added according to the labeling requirements specified in 40 CFR 1048.135(b).

(e) All stationary SI engines subject to mandatory certification that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230. Stationary SI engines subject to standards in 40 CFR part 90 may use the provisions in 40 CFR 90.909. Manufacturers of stationary engines with a maximum engine power greater than 25 HP that are not certified to standards and other requirements under 40 CFR part 1048 are subject to the labeling provisions of 40 CFR 1048.20 pertaining to excluded stationary engines.

(f) For manufacturers of gaseous-fueled stationary engines required to meet the warranty provisions in 40 CFR 90.1103 or 1054.120, we may establish an hour-based warranty period equal to at least the certified emissions life of the engines (in engine operating hours) if we determine that these engines are likely to operate for a number of hours greater than the applicable useful life within 24 months. We will not approve an alternate warranty under this paragraph (f) for nonroad engines. An alternate warranty period approved under this paragraph (f) will be the specified number of engine operating hours or two years, whichever comes first. The engine manufacturer shall request this alternate warranty period in its application for certification or in an earlier submission. We may approve an alternate warranty period for an engine family subject to the following conditions:

- (1) The engines must be equipped with non-resettable hour meters.
- (2) The engines must be designed to operate for a number of hours substantially greater than the applicable certified emissions life.
- (3) The emission-related warranty for the engines may not be shorter than any published warranty offered by the manufacturer without charge for the engines. Similarly, the emission-related warranty for any component shall not be shorter than any published warranty offered by the manufacturer without charge for that component.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59177, Oct. 8, 2008]

Compliance Requirements for Owners and Operators

§ 60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?

(a) If you are an owner or operator of a stationary SI internal combustion engine that is manufactured after July 1, 2008, and must comply with the emission standards specified in §60.4233(a) through (c), you must comply by purchasing an engine certified to the emission standards in §60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. In addition, you must meet one of the requirements specified in (a)(1) and (2) of this section.

(1) If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator. You must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance.

(2) If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be considered a non-certified engine, and you must demonstrate compliance according to (a)(2)(i) through (iii) of this section, as appropriate.

(i) If you are an owner or operator of a stationary SI internal combustion engine less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions, but no performance testing is required if you are an owner or operator.

(ii) If you are an owner or operator of a stationary SI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup to demonstrate compliance.

(iii) If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate

the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(b) If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section.

(1) Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in paragraph (a) of this section.

(2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(d) or (e) and according to the requirements specified in §60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section.

(i) If you are an owner or operator of a stationary SI internal combustion engine greater than 25 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance.

(ii) If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(c) If you are an owner or operator of a stationary SI internal combustion engine that must comply with the emission standards specified in §60.4233(f), you must demonstrate compliance according paragraph (b)(2)(i) or (ii) of this section, except that if you comply according to paragraph (b)(2)(i) of this section, you demonstrate that your non-certified engine complies with the emission standards specified in §60.4233(f).

(d) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (d)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (d)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (d)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (d)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (d)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (d)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see § 60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (d)(2) of this section. Except as provided in paragraph (d)(3)(i) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

(ii) [Reserved]

(e) Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of §60.4233.

(f) If you are an owner or operator of a stationary SI internal combustion engine that is less than or equal to 500 HP and you purchase a non-certified engine or you do not operate and maintain your certified stationary SI internal combustion engine and control device according to the manufacturer's written emission-related instructions, you are required to perform initial performance testing as indicated in this section, but you are not required to conduct subsequent performance testing unless the stationary engine is rebuilt or undergoes major repair or maintenance. A rebuilt stationary SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(g) It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

(h) If you are an owner/operator of an stationary SI internal combustion engine with maximum engine power greater than or equal to 500 HP that is manufactured after July 1, 2007 and before July 1, 2008, and must comply with the emission standards specified in sections 60.4233(b) or (c), you must comply by one of the methods specified in paragraphs (h)(1) through (h)(4) of this section.

(1) Purchasing an engine certified according to 40 CFR part 1048. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

(i) If you are an owner or operator of a modified or reconstructed stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(f), you must demonstrate compliance according to one of the methods specified in paragraphs (i)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in §60.4233(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in §60.4244. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

[73 FR 3591, Jan. 18, 2008, as amended at 76 FR 37974, June 28, 2011; 78 FR 6697, January 30, 2013]

Testing Requirements for Owners and Operators

§ 60.4244 What test methods and other procedures must I use if I am an owner or operator of a stationary SI internal combustion engine?

Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to this subpart.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

(d) To determine compliance with the NO_x mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \quad (Eq. 1)$$

Where:

ER = Emission rate of NO_x in g/HP-hr.

C_d = Measured NO_x concentration in parts per million by volume (ppmv).

1.912×10⁻³ = Conversion constant for ppm NO_x to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

(e) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \quad (Eq. 2)$$

Where:

ER = Emission rate of CO in g/HP-hr.

C_d = Measured CO concentration in ppmv.

1.164×10^{-3} = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(f) For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 3})$$

Where:

ER = Emission rate of VOC in g/HP-hr.

C_d = VOC concentration measured as propane in ppmv.

1.833×10^{-3} = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(g) If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = \frac{C_{Mi}}{C_{Ai}} \quad (\text{Eq. 4})$$

Where:

RF_i = Response factor of compound i when measured with EPA Method 25A.

C_{Mi} = Measured concentration of compound i in ppmv as carbon.

C_{Ai} = True concentration of compound i in ppmv as carbon.

$$C_{i, \text{corr}} = RF_i \times C_{i, \text{meas}} \quad (\text{Eq. 5})$$

Where:

C_{i, corr} = Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

C_{i, meas} = Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{P, eq} = 0.6098 \times C_{i, \text{corr}} \quad (\text{Eq. 6})$$

Where:

C_{P, eq} = Concentration of compound i in mg of propane equivalent per DSCM.

Notification, Reports, and Records for Owners and Operators

§ 60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?

Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements.

(a) Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.

(1) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(2) Maintenance conducted on the engine.

(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

(4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.

(b) For all stationary SI emergency ICE greater than or equal to 500 HP manufactured on or after July 1, 2010, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.

(c) Owners and operators of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in §60.4231 must submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (c)(1) through (5) of this section.

(1) Name and address of the owner or operator;

(2) The address of the affected source;

(3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(4) Emission control equipment; and

(5) Fuel used.

(d) Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed.

(e) If you own or operate an emergency stationary SI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in § 60.4243(d)(2)(ii) and (iii) or that operates for the purposes specified in § 60.4243(d)(3)(i), you must submit an annual report according to the requirements in paragraphs (e)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

- (ii) Date of the report and beginning and ending dates of the reporting period.
 - (iii) Engine site rating and model year.
 - (iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
 - (v) Hours operated for the purposes specified in § 60.4243(d)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in § 60.4243(d)(2)(ii) and (iii).
 - (vi) Number of hours the engine is contractually obligated to be available for the purposes specified in § 60.4243(d)(2)(ii) and (iii).
 - (vii) Hours spent for operation for the purposes specified in § 60.4243(d)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in § 60.4243(d)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.
- (2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.
- (3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in § 60.4.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59177, Oct. 8, 2008; 78 FR 6697, January 30, 2013]

General Provisions

§ 60.4246 What parts of the General Provisions apply to me?

Table 3 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

Mobile Source Provisions

§ 60.4247 What parts of the mobile source provisions apply to me if I am a manufacturer of stationary SI internal combustion engines or a manufacturer of equipment containing such engines?

(a) Manufacturers certifying to emission standards in 40 CFR part 90, including manufacturers certifying emergency engines below 130 HP, must meet the provisions of 40 CFR part 90. Manufacturers certifying to emission standards in 40 CFR part 1054 must meet the provisions of 40 CFR part 1054. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060 to the extent they apply to equipment manufacturers.

(b) Manufacturers required to certify to emission standards in 40 CFR part 1048 must meet the provisions of 40 CFR part 1048. Manufacturers certifying to emission standards in 40 CFR part 1048 pursuant to the voluntary certification program must meet the requirements in Table 4 to this subpart as well as the standards in 40 CFR 1048.101.

(c) For manufacturers of stationary SI internal combustion engines participating in the voluntary certification program and certifying engines to Table 1 to this subpart, Table 4 to this subpart shows which parts of the mobile source provisions in 40 CFR parts 1048, 1065, and 1068 apply to you. Compliance with the deterioration factor provisions under 40 CFR 1048.205(n) and 1048.240 will be required for engines built new on and after January 1, 2010. Prior to January 1, 2010, manufacturers of stationary internal combustion engines participating in the voluntary certification program have the option to develop their own deterioration factors based on an engineering analysis.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59177, Oct. 8, 2008]

Definitions

§ 60.4248 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the CAA and in subpart A of this part.

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) are given in 40 CFR 90.105, 40 CFR 1054.107, and 40 CFR 1060.101, as appropriate. The values for certified emissions life for stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) certified to 40 CFR part 1048 are given in 40 CFR 1048.101(g). The certified emissions life for stationary SI ICE with a maximum engine power greater than 75 KW (100 HP) certified under the voluntary manufacturer certification program of this subpart is 5,000 hours or 7 years, whichever comes first. You may request in your application for certification that we approve a shorter certified emissions life for an engine family. We may approve a shorter certified emissions life, in hours of engine operation but not in years, if we determine that these engines will rarely operate longer than the shorter certified emissions life. If engines identical to those in the engine family have already been produced and are in use, your demonstration must include documentation from such in-use engines. In other cases, your demonstration must include an engineering analysis of information equivalent to such in-use data, such as data from research engines or similar engine models that are already in production. Your demonstration must also include any overhaul interval that you recommend, any mechanical warranty that you offer for the engine or its components, and any relevant customer design specifications. Your demonstration may include any other relevant information. The certified emissions life value may not be shorter than any of the following:

- (i) 1,000 hours of operation.
- (ii) Your recommended overhaul interval.
- (iii) Your mechanical warranty for the engine.

Certified stationary internal combustion engine means an engine that belongs to an engine family that has a certificate of conformity that complies with the emission standards and requirements in this part, or of 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054, as appropriate.

Combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion

turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Date of manufacture means one of the following things:

(1) For freshly manufactured engines and modified engines, date of manufacture means the date the engine is originally produced.

(2) For reconstructed engines, date of manufacture means the date the engine was originally produced, except as specified in paragraph (3) of this definition.

(3) Reconstructed engines are assigned a new date of manufacture if the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable entirely new facility. An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine is produced using all new components except for the engine block. In these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and carbon dioxide (CO₂).

Emergency stationary internal combustion engine means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary ICE must comply with the requirements specified in § 60.4243(d) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in § 60.4243(d), then it is not considered to be an emergency stationary ICE under this subpart.

(1) The stationary ICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc.

(2) The stationary ICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in § 60.4243(d).

(3) The stationary ICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in § 60.4243(d)(2)(ii) or (iii) and § 60.4243(d)(3)(i).

Engine manufacturer means the manufacturer of the engine. See the definition of "manufacturer" in this section.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Freshly manufactured engine means an engine that has not been placed into service. An engine becomes freshly manufactured when it is originally produced.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Installed means the engine is placed and secured at the location where it is intended to be operated.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO₂.

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining or natural gas production.

Manufacturer has the meaning given in section 216(1) of the Clean Air Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for resale.

Maximum engine power means maximum engine power as defined in 40 CFR 1048.801.

Model year means the calendar year in which an engine is manufactured (see "date of manufacture"), except as follows:

(1) Model year means the annual new model production period of the engine manufacturer in which an engine is manufactured (see "date of manufacture"), if the annual new model production period is different than the calendar year and includes January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year.

(2) For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was manufactured (see "date of manufacture").

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Other internal combustion engine means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

Pipeline-quality natural gas means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions, and which is provided by a supplier through a pipeline. Pipeline-quality natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1,100 British thermal units per standard cubic foot.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to June 12, 2006, with passive emission control technology for NO_x (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Rotary internal combustion engine means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

Spark ignition means relating to either: a gasoline-fueled engine; or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle, aircraft, or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

Stationary internal combustion engine test cell/stand means an engine test cell/stand, as defined in 40 CFR part 63, subpart P, that tests stationary ICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Subpart means 40 CFR part 60, subpart JJJJ.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

Volatile organic compounds means volatile organic compounds as defined in 40 CFR 51.100(s).

Voluntary certification program means an optional engine certification program that manufacturers of stationary SI internal combustion engines with a maximum engine power greater than 19 KW (25 HP) that do not use gasoline and are not rich burn engines that use LPG can choose to participate in to certify their engines to the emission standards in §60.4231(d) or (e), as applicable.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59177, Oct. 8, 2008; 76 FR 37974, June 28, 2011; 78 FR 6698, January 30, 2013]

Table 1 to Subpart JJJJ of Part 60—NO_x, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines ≥100 HP (Except Gasoline and Rich Burn LPG), Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines >25 HP

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards ^a					
			g/HP-hr			ppmvd at 15% O ₂		
			NO _x	CO	VOC ^d	NO _x	CO	VOC ^d
Non-Emergency SI Natural Gas ^b and Non-Emergency SI Lean Burn LPG ^b	100≤HP<500	7/1/2008	2.0	4.0	1.0	160	540	86
		1/1/2011	1.0	2.0	0.7	82	270	60
Non-Emergency SI Lean Burn Natural Gas and LPG	500≤HP<1,350	1/1/2008	2.0	4.0	1.0	160	540	86
		7/1/2010	1.0	2.0	0.7	82	270	60
Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500≤HP<1,350)	HP≥500	7/1/2007	2.0	4.0	1.0	160	540	86
	HP≥500	7/1/2010	1.0	2.0	0.7	82	270	60
Landfill/Digester Gas (except lean burn 500≤HP<1,350)	HP<500	7/1/2008	3.0	5.0	1.0	220	610	80
		1/1/2011	2.0	5.0	1.0	150	610	80
	HP≥500	7/1/2007	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80
Landfill/Digester Gas Lean Burn	500≤HP<1,350	1/1/2008	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80
Emergency	25<HP<130	1/1/2009	^c 10	387	N/A	N/A	N/A	N/A
	HP≥130		2.0	4.0	1.0	160	540	86

^aOwners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O₂.

^bOwners and operators of new or reconstructed non-emergency lean burn SI stationary engines with a site rating of greater than or equal to 250 brake HP located at a major source that are meeting the requirements of 40 CFR part 63, subpart ZZZZ, Table 2a do not have to comply with the CO emission standards of Table 1 of this subpart.

^cThe emission standards applicable to emergency engines between 25 HP and 130 HP are in terms of NO_x + HC.

^dFor purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

[76 FR 37975, June 28, 2011]

Table 2 to Subpart JJJJ of Part 60—Requirements for Performance Tests

As stated in § 60.4244, you must comply with the following requirements for performance tests within 10 percent of 100 percent peak (or the highest achievable) load:

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary SI internal combustion engine demonstrating compliance according to §60.4244.	a. limit the concentration of NOX in the stationary SI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, Appendix A or ASTM Method D6522-00 (Reapproved 2005).a e	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B \b\ of 40 CFR part 60, appendix A or ASTM Method D6522-00 (Reapproved 2005). a e	(b) Measurements to determine O2 concentration must be made at the same time as the measurements for NOX concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60, appendix A.	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03. \e\	(c) Measurements to determine moisture must be made at the same time as the measurement for NOX concentration.
		v. Measure NOX at the exhaust of the stationary internal combustion engine.	(5) Method 7E of 40 CFR part 60, appendix A, Method D6522-00 (Reapproved 2005) a e, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03. \e\	(d) Results of this test consist of the average of the three 1-hour or longer runs.
	b. limit the concentration of CO in the stationary SI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A (a) If using a of 40 CFR part 60, appendix A or ASTM Method D6522-00 (Reapproved 2005). a e	(a) If using a control device, the sampling site must be located at the outlet of the control device.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B \b\ of 40 CFR part 60, appendix A or ASTM Method D6522-00 (Reapproved 2005). a e	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for CO concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60, appendix A.	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03. \e\	(c) Measurements to determine moisture must be made at the same time as the measurement for CO concentration.
		v. Measure CO at the exhaust of the stationary internal combustion engine.	(5) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522-00 (Reapproved 2005) a e, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03. \e\	(d) Results of this test consist of the average of the three 1-hour or longer runs.
	c. limit the concentration of VOC in the stationary SI internal combustion engine exhaust	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A.	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B \b\ of 40 CFR part 60, appendix A or ASTM Method D6522-00 (Reapproved 2005). a e	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for VOC concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60, appendix A.	

For each	Complying with the requirement to	You must	Using	According to the following requirements
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03.\e\	(c) Measurements to determine moisture must be made at the same time as the measurement for VOC concentration.
		v. Measure VOC at the exhaust of the stationary internal combustion engine.	(5) Methods 25A and 18 of 40 CFR part 60, appendix A, Method 25A with the use of a methane cutter as described in 40 CFR 1065.265, Method 18 of 40 CFR part 60, appendix A, c d Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03.\e\	(d) Results of this test consist of the average of the three 1-hour or longer runs.

\a\ You may petition the Administrator for approval to use alternative methods for portable analyzer.

\b\ You may use ASME PTC 19.10-1981, Flue and Exhaust Gas Analyses, for measuring the O₂ content of the exhaust gas as an alternative to EPA Method 3B.

\c\ You may use EPA Method 18 of 40 CFR part 60, appendix, provided that you conduct an adequate presurvey test prior to the emissions test, such as the one described in OTM 11 on EPA's Web site (<http://www.epa.gov/ttn/emc/prelim/otm11.pdf>).

\d\ You may use ASTM D6420-99 (2004), Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography/Mass Spectrometry as an alternative to EPA Method 18 for measuring total nonmethane organic.

\e\ Incorporated by reference, see 40 CFR 60.17.

[76 FR 37975, June 28, 2011 as amended in January 30, 2013, 78 FR 66978]

Table 3 to Subpart JJJJ of Part 60—Applicability of General Provisions to Subpart JJJJ

[As stated in §60.4246, you must comply with the following applicable General Provisions]

General provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4248.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4245.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§60.8	Performance tests	Yes	Except that §60.8 only applies to owners and operators who are subject to performance testing in subpart JJJJ.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	Yes	Requirements are specified in subpart JJJJ.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	No	
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

Table 4 to Subpart JJJJ of Part 60—Applicability of Mobile Source Provisions for Manufacturers Participating in the Voluntary Certification Program and Certifying Stationary SI ICE to Emission Standards in Table 1 of Subpart JJJJ

[As stated in §60.4247, you must comply with the following applicable mobile source provisions if you are a manufacturer participating in the voluntary certification program and certifying stationary SI ICE to emission standards in Table 1 of subpart JJJJ]

Mobile source provisions citation	Subject of citation	Applies to subpart	Explanation
1048 subpart A	Overview and Applicability	Yes	
1048 subpart B	Emission Standards and Related Requirements	Yes	Except for the specific sections below.
1048.101	Exhaust Emission Standards	No	
1048.105	Evaporative Emission Standards	No	
1048.110	Diagnosing Malfunctions	No	
1048.140	Certifying Blue Sky Series Engines	No	
1048.145	Interim Provisions	No	
1048 subpart C	Certifying Engine Families	Yes	Except for the specific sections below.
1048.205(b)	AECD reporting	Yes	
1048.205(c)	OBD Requirements	No	

Mobile source provisions citation	Subject of citation	Applies to subpart	Explanation
1048.205(n)	Deterioration Factors	Yes	Except as indicated in 60.4247(c).
1048.205(p)(1)	Deterioration Factor Discussion	Yes	
1048.205(p)(2)	Liquid Fuels as they require	No	
1048.240(b)(c)(d)	Deterioration Factors	Yes	
1048 subpart D	Testing Production-Line Engines	Yes	
1048 subpart E	Testing In-Use Engines	No	
1048 subpart F	Test Procedures	Yes	
1065.5(a)(4)	Raw sampling (refers reader back to the specific emissions regulation for guidance)	Yes	
1048 subpart G	Compliance Provisions	Yes	
1048 subpart H	Reserved		
1048 subpart I	Definitions and Other Reference Information	Yes	
1048 appendix I and II	Yes		
1065 (all subparts)	Engine Testing Procedures	Yes	Except for the specific section below.
1065.715	Test Fuel Specifications for Natural Gas	No	
1068 (all subparts)	General Compliance Provisions for Nonroad Programs	Yes	Except for the specific sections below.
1068.245	Hardship Provisions for Unusual Circumstances	No	
1068.250	Hardship Provisions for Small-Volume Manufacturers	No	
1068.255	Hardship Provisions for Equipment Manufacturers and Secondary Engine Manufacturers	No	

Downloaded from the ECFR on March 25, 2013 and updated with January 30, 2013 amendments. The amendments are effective on April 1, 2013.

Attachment C
to Part 70 Operating Permit Renewal No. T109-29661-00002

Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Source: 69 FR 33506, June 15, 2004, unless otherwise noted.

What This Subpart Covers

§ 63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

§ 63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in Sec. 63.6675, which includes operating according to the provisions specified in Sec. 63.6640(f).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for

the purposes specified in Sec. 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in Sec. 63.6640(f)(4)(ii).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in Sec. 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in Sec. 63.6640(f)(4)(ii).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in Sec. 63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in Sec. 63.6640(f)(4)(ii).

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008]

§ 63.6590 What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(a) *Affected source.* An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) Existing stationary RICE.

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) *New stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) *Reconstructed stationary RICE.* (i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in § 63.2 and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in § 63.2 and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in § 63.2 and reconstruction is commenced on or after June 12, 2006.

(b) *Stationary RICE subject to limited requirements.* (1) An affected source which meets either of the criteria in paragraphs (b)(1)(i) through (ii) of this section does not have to meet the requirements of this subpart and of subpart A of this part except for the initial notification requirements of § 63.6645(f).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in Sec. 63.6640(f)(2)(ii) and (iii).

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of § 63.6645(f) and the requirements of §§ 63.6625(c), 63.6650(g), and 63.6655(c). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in Sec. 63.6640(f)(2)(ii) and (iii).

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;

(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;

(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010]

§ 63.6595 When do I have to comply with this subpart?

(a) *Affected sources.* (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations and other requirements no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in § 63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

Emission and Operating Limitations

§ 63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

§ 63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

§ 63.6602 What emission limitations and other requirements must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations and other requirements in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in Sec. 63.6620 and Table 4 to this subpart.

[75 FR 51589, Aug. 20, 2010]

§ 63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in § 63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meets either paragraph (b)(1) or (2) of this section, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. Existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meet either paragraph (b)(1) or (2) of this section must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart.

(1) The area source is located in an area of Alaska that is not accessible by the Federal Aid Highway System (FAHS).

(2) The stationary RICE is located at an area source that meets paragraphs (b)(2)(i), (ii), and (iii) of this section.

(i) The only connection to the FAHS is through the Alaska Marine Highway System (AMHS), or the stationary RICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary RICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the area source is less than 12 megawatts, or the stationary RICE is used exclusively for backup power for renewable energy.

(c) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located on an offshore vessel that is an area source of HAP and is a nonroad vehicle that is an Outer Continental Shelf (OCS) source as defined in 40 CFR 55.2, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. You must meet all of the following management practices:

(1) Change oil every 1,000 hours of operation or annually, whichever comes first. Sources have the option to utilize an oil analysis program as described in Sec. 63.6625(i) in order to extend the specified oil change requirement.

(2) Inspect and clean air filters every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(3) Inspect fuel filters and belts, if installed, every 750 hours of operation or annually, whichever comes first, and replace as necessary.

(4) Inspect all flexible hoses every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.

(d) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and that is subject to an enforceable state or local standard that requires the engine to be replaced no later than June 1, 2018, you may until January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018, choose to comply with the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart instead of the applicable emission limitations in Table 2d, operating limitations in Table 2b, and crankcase ventilation system requirements in Sec. 63.6625(g). You must comply with the emission limitations in Table 2d and operating limitations in Table 2b that apply for non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018. You must also comply with the crankcase ventilation system requirements in Sec. 63.6625(g) by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018.

(e) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of 40 CFR 89.112, you may comply with the requirements under this part by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in 40 CFR part 60 subpart IIII instead of the emission limitations and other requirements that would otherwise apply under this part for existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions.

(f) An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in Sec. 63.6675 on the initial compliance date for the engine, October 19, 2013, in order to be considered a remote stationary RICE under this subpart. Owners and operators of existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that meet the definition of remote stationary RICE in Sec. 63.6675 of this subpart as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in Sec. 63.6675 of this subpart, the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011]

§ 63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?

(a) If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel.

(b) Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in Sec. 63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in Sec. 63.6640(f)(4)(ii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(c) Beginning January 1, 2015, if you own or operate a new emergency CI stationary RICE with a site rating of more than 500 brake HP and a displacement of less than 30 liters per cylinder located at a major source of HAP that uses diesel fuel and operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in Sec. 63.6640(f)(2)(ii) and (iii), you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(d) Existing CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at area sources in areas of Alaska that meet either Sec. 63.6603(b)(1) or Sec. 63.6603(b)(2), or are on offshore vessels that meet Sec. 63.6603(c) are exempt from the requirements of this section.

[75 FR 51589, Aug. 20, 2010]

General Compliance Requirements

§ 63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on

information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[75 FR 9675, Mar. 3, 2010]

Testing and Initial Compliance Requirements

§ 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions in § 63.7(a)(2).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

§ 63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 51589, Aug. 20, 2010]

§ 63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in § 63.6595 and according to the provisions in § 63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[75 FR 9676, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010]

§ 63.6615 When must I conduct subsequent performance tests?

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

§ 63.6620 What performance tests and other procedures must I use?

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.

(1) Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(2) New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.

(3) New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(4) New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(c) [Reserved]

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

(e)(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. 1})$$

Where:

C_i = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

C_o = concentration of CO, THC, or formaldehyde at the control device outlet, and

R = percent reduction of CO, THC, or formaldehyde emissions.

(2) You must normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO₂). If pollutant concentrations are to be corrected to 15 percent oxygen and CO₂ concentration is measured in lieu of oxygen concentration measurement, a CO₂ correction factor is needed. Calculate the CO₂ correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209 F_d}{F_c} \quad (\text{Eq. 2})$$

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dm^3/J ($dscf/10^6$ Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dm^3/J ($dscf/10^6$ Btu).

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent oxygen, as follows:

$$X_{co_2} = \frac{5.9}{F_o} \quad (\text{Eq. 3})$$

Where:

X_{co_2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2 - 15 percent O_2 , the defined O_2 correction value, percent.

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:
follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \quad (\text{Eq. 4})$$

Where:

C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O_2 .

C_d = Measured concentration of CO, THC, or formaldehyde, uncorrected.

X_{CO_2} = CO_2 correction factor, percent.

$\%CO_2$ = Measured CO_2 concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (e.g., operator adjustment, automatic controller adjustment, etc.) or unintentionally (e.g., wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

§ 63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either O₂ or CO₂ according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in § 63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in § 63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in § 63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO₂ concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in § 63.8(d). As specified in § 63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in Sec. 63.8(c)(1)(ii) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in § 63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also § 63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;

(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

(3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;

(4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;

(5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;

(6) An existing non-emergency, non-black start stationary RICE located at an area source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.

(7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and

(10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either Sec. 63.6603(b)(1) or Sec. 63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet Sec. 63.6603(c) do not have to meet the requirements of this paragraph (g).

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or

percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011]

§ 63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.6645.

(d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.

(e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least three test runs.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O₂ using one of the O₂ measurement methods specified in Table 4 of this subpart. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O₂ emissions simultaneously at the inlet and outlet of the control device.

Continuous Compliance Requirements

§ 63.6635 How do I monitor and collect data to demonstrate continuous compliance?

- (a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.
- (b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
- (c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

§ 63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?

- (a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.
- (b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in § 63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.
- (c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:
- (1) The compliance demonstration must consist of at least one test run.
 - (2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.
 - (3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O₂ using one of the O₂ measurement methods specified in Table 4 of this subpart. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O₂ emissions simultaneously at the inlet and outlet of the control device.

(7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any

operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see Sec. 63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010]

Notifications, Reports, and Records

§ 63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in §§ 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

(b) As specified in § 63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in § 63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with § 63.6590(b), your notification should include the information in § 63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and

explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

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

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart 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 day following the completion of the performance test according to § 63.10(d)(2).

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and subject to an enforceable state or local standard requiring engine replacement and you intend to meet management practices rather than emission limits, as specified in Sec. 63.6603(d), you must submit a notification by March 3, 2013, stating that you intend to use the provision in Sec. 63.6603(d) and identifying the state or local regulation that the engine is subject to.

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010]

§ 63.6650 What reports must I submit and when?

(a) You must submit each report in Table 7 of 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 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in § 63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in § 63.6595.

(3) For semiannual Compliance reports, 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) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and 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 (b)(4) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in § 63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

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

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

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

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

(3) The date, time, and duration that each CMS was out-of-control, including the information in § 63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) 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.

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

(7) 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 operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

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

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 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 an affected source submits a Compliance report pursuant to Table 7 of 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 or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in Sec. 63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in Sec. 63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (h)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

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

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in Sec. 63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in Sec. 63.6640(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in Sec. 63.6640(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purpose specified in Sec. 63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in Sec. 63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in Sec. 63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in Sec. 63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in Sec. 63.13.

§ 63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) 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 requirement in § 63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in § 63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in § 63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.*, superseded) versions of the performance evaluation plan as required in § 63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in § 63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) through (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation,

including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in Sec. 63.6640(f)(2)(ii) or (iii) or Sec. 63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010]

§ 63.6660 In what form and 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 readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1).

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

Other Requirements and Information

§ 63.6665 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

§ 63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by 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 (as well as 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 whether 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 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 will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in § 63.6600 under § 63.6(g).

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

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

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

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in § 63.6610(b).

§ 63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

Alaska Railbelt Grid means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

Backup power for renewable energy means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see Sec. 63.14).

Black start engine means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.*, as amended by Public Law 101-549, 104 Stat. 2399).

Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

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 or operating limitation;
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or
- (3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless of whether or not such failure is permitted by this subpart.
- (4) Fails to satisfy the general duty to minimize emissions established by § 63.6(e)(1)(i).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (e.g. biodiesel) that is suitable for use in compression ignition engines.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO₂ .

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in Sec. 63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in Sec. 63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

- (1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal

power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.

(2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in Sec. 63.6640(f).

(3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in Sec. 63.6640(f)(2)(ii) or (iii) and Sec. 63.6640(f)(4)(i) or (ii).

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes "rich" glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The "lean" glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

Institutional emergency stationary RICE means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO₂.

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in § 63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in § 63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in § 63.1271 of subpart HHH of this part, shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_x) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_x, CO, and volatile organic compounds (VOC) into CO₂, nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (i.e., remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in § 63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to § 63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to § 63.1270(a)(2).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8 .

Remote stationary RICE means stationary RICE meeting any of the following criteria:

(1) Stationary RICE located in an offshore area that is beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

(2) Stationary RICE located on a pipeline segment that meets both of the criteria in paragraphs (2)(i) and (ii) of this definition.

(i) A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(ii) The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

(iii) For purposes of this paragraph (2), the term pipeline segment means all parts of those physical facilities through which gas moves in transportation, including but not limited to pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies. Stationary RICE located within 50 yards (46 meters) of the pipeline segment providing power for equipment on a pipeline segment are part of the pipeline segment. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

(3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

Residential emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

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

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO_x (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

Spark ignition means relating to either: A gasoline-fueled engine; or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary reciprocating internal combustion engine (RICE) means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart P of this part, that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011]

Table 1 a to Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE > 500 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. ¹
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂	

¹Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

Table 1 b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂ and using NSCR;.	a. Maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and b. Maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.
2. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions	Comply with any operating limitations approved by the Administrator.

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂ and not using NSCR.	

\1\ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[76 FR 12867, Mar. 9, 2011]

Table 2 a to Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O ₂ . If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O ₂ until June 15, 2007	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. ¹
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O ₂	
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O ₂	

¹ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

Table 2 b to Subpart ZZZZ of Part 63— Operating Limitations for New and Reconstructed 2SLB and CI Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing CI Stationary RICE >500 HP

As stated in §§ 63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; existing CI stationary RICE >500 HP:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst; and New and reconstructed 2SLB and CI stationary RICE >500HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F. ¹
2. Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 [deg]F and less than or equal to 1350°F.\1\
3. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE >=250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and not using an oxidation catalyst; and New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE >=250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; and existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst.	Comply with any operating limitations approved by the Administrator.

¹ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[75 FR 51593, Aug. 20, 2010, as amended at 76 FR 12867, Mar. 9, 2011]

Table 2 c to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤ 500 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤ 500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following requirement, during periods of startup . . .	During periods of except startup you must . . .
1. Emergency stationary CI RICE and black start stationary CI RICE \1\.	a. Change oil and filter every 500 hours of operation or annually, whichever comes first.\2\ b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;. c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.\3\	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.\3\
2. Non-Emergency, non-black start stationary CI RICE <100 HP.	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first.\2\ b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;. c. Inspect all hoses and belts every 500	

For each . . .	You must meet the following requirement, during periods of startup . . .	During periods of except startup you must . . .
3. Non-Emergency, non-black start CI stationary RICE 100<=HP<=300 HP.	hours of operation or annually, whichever comes first, and replace as necessary.\3\. Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O2.	
4. Non-Emergency, non-black start CI stationary RICE 300>HP<=500.	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O2; or b. Reduce CO emissions by 70 percent or more..	
5. Non-Emergency, non-black start stationary CI RICE >500 HP.	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O2; or b. Reduce CO emissions by 70 percent or more..	
6. Emergency stationary SI RICE and black start stationary SI RICE.\1\	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;\2\ b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary;. c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes	

first, and replace

For each . . .	You must meet the following requirement, during periods of startup . . .	During periods of except startup you must . . .
7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE.	as necessary.\3\ a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;\2\ b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary;. c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.\3\	
8. Non-Emergency, non-black start 2SLB stationary SI RICE <100 HP.	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;\2\ b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary;. c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.\3\	
9. Non-emergency, non-black start 2SLB stationary RICE 100<=HP<=500.	Limit concentration of CO in the stationary RICE exhaust to 225	

ppmvd or less at 15

For each . . .	You must meet the following requirement, during periods of startup . . .	During periods of except startup you must . . .
10. Non-emergency, non-black start 4SLB stationary RICE 100<=HP<=500.	percent O2. Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O2.	
11. Non-emergency, non-black start 4SRB stationary RICE 100<=HP<=500.	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O2.	
12. Non-emergency, non-black start stationary RICE 100<=HP<=500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O2.	

\1\ If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

\2\ Sources have the option to utilize an oil analysis program as described in Sec. 63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2c of this subpart.

\3\ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 51593, Aug. 20, 2010]

Table 2 d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

As stated in §§ 63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

For each . . .	You must meet the following requirement, during periods of startup . . .	During periods of except startup you must . . .
1. Non-Emergency, non-black start CI stationary RICE <=300 HP.	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;\1\ b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary..	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
2. Non-Emergency, non-black start CI stationary RICE 300<HP<=500.	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O ₂ ; or b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI stationary RICE >500 HP.	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O ₂ ; or b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE.\2\	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;\1\ b. Inspect air cleaner every 1,000	

hours of operation

For each . . .	You must meet the following requirement, during periods of startup . . .	During periods of except startup you must . . .
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year.\2\	or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. a. Change oil and filter every 500 hours of operation or annually, whichever comes first;\1\; b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and. c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary..	
6. Non-emergency, non-black start 2SLB stationary RICE.	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;\1\ b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 4,320 hours of	

operation or

For each . . .	You must meet the following requirement, during periods of startup . . .	During periods of except startup you must . . .
7. Non-emergency, non-black start 4SLB stationary RICE <=500 HP.	<p>annually, whichever comes first, and replace as necessary.</p> <p>a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;\1\</p> <p>b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and</p> <p>c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.</p>	
8. Non-emergency, non-black start 4SLB remote stationary RICE >500 HP.	<p>a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;\1\</p> <p>b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and</p> <p>c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.</p>	
9. Non-emergency, non-black	Install an oxidation	

start 4SLB stationary RICE catalyst to reduce

For each . . .	You must meet the following requirement, during periods of startup . . .	During periods of except startup you must . . .
<p>>500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year.</p> <p>10. Non-emergency, non-black start 4SRB stationary RICE <=500 HP.</p>	<p>HAP emissions from the stationary RICE.</p> <p>a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;\1\</p> <p>b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and</p> <p>c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.</p>	
<p>11. Non-emergency, non-black start 4SRB remote stationary RICE >500 HP.</p>	<p>a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;\1\</p> <p>b. Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and</p> <p>c. Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.</p>	
<p>12. Non-emergency, non-black</p>	<p>Install NSCR to</p>	

start 4SRB stationary RICE reduce HAP

For each . . .	You must meet the following requirement, during periods of startup . . .	During periods of except startup you must . . .
>500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year.	emissions from the stationary RICE.	
13. Non-emergency, non-black start stationary RICE which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.	<p>a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;\1\</p> <p>b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and.</p> <p>c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.</p>	

\1\ Sources have the option to utilize an oil analysis program as described in Sec. 63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart.

\2\ If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[75 FR 51595, Aug. 20, 2010]

Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests

As stated in §§ 63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

For each . . .	Complying with the requirement to . . .	You must . . .
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For each . . .	Complying with the requirement to . . .	You must . . .
1. New or reconstructed 2SLB stationary RICE >500 HP located at major sources; new or reconstructed 4SLB stationary RICE \geq 250 HP located at major sources; and new or reconstructed CI stationary RICE >500 HP located at major sources.	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually. ¹
2. 4SRB stationary RICE \geq 5,000 HP located at major sources	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually. ¹
3. Stationary RICE > 500 HP located at major sources and new or reconstructed 4SLB stationary RICE with a brake horsepower $250 \leq \text{HP} \leq 500$ located at major sources	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually. ¹
4. Existing non-emergency, non-black start CI stationary RICE > 500 HP that are not limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hrs. or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE > 500 HP that are limited use stationary RICE	Limit or reduce CO emissions and no using a CEMS	Conduct subsequent performance tests every 8,760 hrs. or 5 years, whichever comes first.

1 After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[75 FR 51596, Aug. 20, 2010]

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

As stated in §§ 63.6610, 63.6611, 63.6612, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. Reduce CO emissions	i. Measure the O ₂ at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (Reapproved 2005).a c	(a) Measurements to determine O ₂ must be made at the same time as the measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of the control device	(1) ASTM D6522–00 (Reapproved 2005) a b c or Method 10 of 40 CFR part 60, appendix A.	(a) The CO concentration must be at 15 percent O ₂ , dry basis.
2. 4SRB	a. Reduce	i. Select the sampling	(1) Method 1 or 1A of 40	(a) Sampling sites must

For each ...	Complying with the requirement to ...	You must . . .	Using . . .	According to the following requirements . . .
stationary RICE	formaldehyde emissions	port location and the number of traverse points; and	CFR part 60, appendix A § 63.7(d)(1)(i).	be located at the inlet and outlet of the control device.
		ii. Measure O ₂ at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005). ^a	(a) Measurements to determine O ₂ concentration must be made at the same time as the measurements for formaldehyde or THC concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration.
		iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formaldehyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348- 03, ^a provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1- hour or longer runs.
		v. If demonstrating compliance with the THC percent reduction requirement, measure THC at the inlet and the outlet of the control device.	(1) Method 25A, reported as propane, of 40 CFR part 60, appendix A.	(a) THC concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1- hour or longer runs.
3. Stationary RICE	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i)	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O ₂ concentration of the stationary RICE exhaust at the sampling port location;	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (Reapproved 2005) ^a	(a) Measurements to determine O ₂ concentration must be made at the same time and location as the

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		and		measurements for formaldehyde or CO concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 ^a	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03, ^a provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. Measure CO at the exhaust of the stationary RICE	(1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522-00 (2005), ^{a,c} Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03. ^a	(a) CO Concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour longer runs.

a Incorporated by reference, see 40 CFR 63.14. You may also obtain copies from University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

b You may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03.

c ASTM-D6522-00 (2005) may be used to test both CI and SI stationary RICE. [75 FR 51597, Aug. 20, 2010]

Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations, Operating Limitations, and Other Requirements

As stated in §§ 63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. New or reconstructed non-emergency 2SLB stationary	a. Reduce CO emissions and using	i. The average reduction of

RICE >500 HP located at a oxidation catalyst, emissions of CO

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥ 250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP.	and using a CPMS.	determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in Sec. 63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP.	a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS.	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in Sec. 63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or	a. Reduce CO emissions and not using oxidation catalyst.	i. The average reduction of emissions of CO determined from the

reconstructed non-emergency

initial performance

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
4SLB stationary RICE ≥ 250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP.		test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in Sec. 63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP.	a. Limit the concentration of CO, and not using oxidation catalyst.	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in Sec. 63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or	a. Reduce CO emissions, and using a CEMS.	i. You have installed a CEMS to continuously monitor CO and

reconstructed non-emergency

either O₂ or CO₂ at

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
4SLB stationary RICE ≥ 250 HP located at a major source of HAP, non-emergency stationary CI RICE > 500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE > 500 HP located at an area source of HAP.		both the inlet and outlet of the oxidation catalyst according to the requirements in Sec. 63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and iii. The average reduction of CO calculated using Sec. 63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
6. Non-emergency stationary CI RICE > 500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE > 500 HP located at an area source of HAP.	a. Limit the concentration of CO, and using a CEMS.	i. You have installed a CEMS to continuously monitor CO and either O ₂ or CO ₂ at the outlet of the oxidation catalyst according to the requirements in Sec. 63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part

60, appendix B; and

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP.	a. Reduce formaldehyde emissions and using NSCR.	<p>iii. The average concentration of CO calculated using Sec. 63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.</p> <p>i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction, or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and</p> <p>ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in Sec. 63.6625(b); and</p> <p>iii. You have recorded the catalyst pressure</p>

drop and catalyst

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP.	a. Reduce formaldehyde emissions and not using NSCR.	<p>inlet temperature during the initial performance test.</p> <p>i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and</p> <p>ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in Sec. 63.6625(b); and</p> <p>iii. You have recorded the approved operating parameters (if any) during the initial performance test.</p>
9. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR.	i. The average formaldehyde concentration, corrected to 15 percent O ₂ , dry basis, from the three test runs is less than or equal to the formaldehyde emission

located at a major source

limitation; and

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
of HAP.		<p>ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in Sec. 63.6625(b); and</p> <p>iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.</p>
10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP.	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR.	<p>i. The average formaldehyde concentration, corrected to 15 percent O₂, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and</p> <p>ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in Sec. 63.6625(b); and</p> <p>iii. You have recorded the approved operating parameters (if any) during the initial performance test.</p>
11. Existing non-emergency stationary RICE $100 \leq \text{HP} \leq 500$ located at a major source of HAP, and existing non-emergency	a. Reduce CO emissions.	<p>i. The average reduction of emissions of CO or formaldehyde, as applicable</p>

stationary CI RICE

determined from the

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
300<HP≤500 HP located at an area source of HAP. .		initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction. i. The average formaldehyde or CO concentration, as applicable corrected to 15 percent O ₂ , dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.
12. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 HP located at an area source of HAP.	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust.	i. You have to conduct initial compliance demonstration as specified in 63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O ₂ ;
13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source Of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year.	a. Install an oxidation catalyst.	i. You have conducted an initial compliance demonstration as specified in Sec. 63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O ₂ , or the average reduction of emissions of THC is 30 percent or more;
14. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year.	a. Install NSCR.....	ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in Sec. 63.6625(b),

or you have

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 [deg]F.

[76 FR 12867, Mar. 9, 2011]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, Operating Limitations, Work Practices, and Management Practices

As stated in § 63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved; ^a and ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved; ^a and ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and iii. Reducing these data to 4-hour

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
major source of HAP		rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP, existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS	i. Collecting the monitoring data according to § 63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to § 63.6620; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		limitations for the operating parameters established during the performance test.
6. Non-emergency 4SRB stationary RICE with a brake HP $\geq 5,000$ located at a major source of HAP	a. Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved. ^a
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit; ^a and ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit; ^a and ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
9. Existing emergency and black start stationary RICE ≤ 500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP,	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency landfill or digester gas stationary SI RICE located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate 24 hours or less per calendar year		ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE, and existing 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year and are not limited use stationary RICE	a. Reduce CO or formaldehyde emissions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE, and existing 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year and are not limited use stationary RICE	a. Reduce CO or formaldehyde emissions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and not using oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
12. Existing limited use CI stationary RICE >500 HP and existing limited use 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year	a. Reduce CO or formaldehyde emissions or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using an oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
13. Existing limited use CI stationary RICE >500 HP and existing limited use 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year	a. Reduce CO or formaldehyde emissions or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and not using an oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		§ 63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

a After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[76 FR 12870, Mar. 9, 2011]

Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports

As stated in § 63.6650, you must comply with the following requirements for reports:

For each ...	You must submit a ...	The report must contain ...	You must submit the report ...
1. Existing non-emergency, non-black start stationary RICE $100 \leq \text{HP} \leq 500$ located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE > 500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE > 500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE > 300 HP located at an area source of HAP; existing non-emergency, non-black start 4SLB and 4SRB stationary RICE > 500 HP located at an area source of HAP and operated more than 24 hours per calendar year; new or reconstructed non-emergency stationary RICE > 500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP	Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in § 63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), the information in § 63.6650(e); or c. If you had a malfunction during the reporting period, the information in § 63.6650(c)(4)	i. Semiannually according to the requirements in § 63.6650(b)(1)-(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to the requirements in § 63.6650(b)(6)-(9) for engines that are limited use stationary RICE subject to numerical emission limitations. i. Semiannually according to the requirements in § 63.6650(b). i. Semiannually according to the requirements in § 63.6650(b).

For each ...	You must submit a ...	The report must contain ...	You must submit the report ...
2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Report	a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and	i. Annually, according to the requirements in § 63.6650.
		b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and	i. See item 2.a.i.
		c. Any problems or errors suspected with the meters.	i. See item 2.a.i.

[75 FR 51603, Aug. 20, 2010]

Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.

As stated in § 63.6665, you must comply with the following applicable general provisions.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.1	General applicability of the General Provisions	Yes.	
§ 63.2	Definitions	Yes	Additional terms defined in § 63.6675.
§ 63.3	Units and abbreviations	Yes.	
§ 63.4	Prohibited activities and circumvention	Yes.	
§ 63.5	Construction and reconstruction	Yes.	
§ 63.6(a)	Applicability	Yes.	
§ 63.6(b)(1)-(4)	Compliance dates for new and reconstructed sources	Yes.	
§ 63.6(b)(5)	Notification	Yes.	
§ 63.6(b)(6)	[Reserved]		
§ 63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes.	
§ 63.6(c)(1)-(2)	Compliance dates for existing sources	Yes.	
§ 63.6(c)(3)-(4)	[Reserved]		

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes.	
§ 63.6(d)	[Reserved]		
§ 63.6(e)	Operation and maintenance	No.	
§ 63.6(f)(1)	Applicability of standards	No.	
§ 63.6(f)(2)	Methods for determining compliance	Yes.	
§ 63.6(f)(3)	Finding of compliance	Yes.	
§ 63.6(g)(1)-(3)	Use of alternate standard	Yes.	
§ 63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§ 63.6(i)	Compliance extension procedures and criteria	Yes.	
§ 63.6(j)	Presidential compliance exemption	Yes.	
§ 63.7(a)(1)-(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§ 63.6610, 63.6611, and 63.6612.
§ 63.7(a)(3)	CAA section 114 authority	Yes.	
§ 63.7(b)(1)	Notification of performance test	Yes	Except that § 63.7(b)(1) only applies as specified in § 63.6645.
§ 63.7(b)(2)	Notification of rescheduling	Yes	Except that § 63.7(b)(2) only applies as specified in § 63.6645.
§ 63.7(c)	Quality assurance/test plan	Yes	Except that § 63.7(c) only applies as specified in § 63.6645.
§ 63.7(d)	Testing facilities	Yes.	
§ 63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at § 63.6620.
§ 63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at § 63.6620.
§ 63.7(e)(3)	Test run duration	Yes.	
§ 63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.7(f)	Alternative test method provisions	Yes.	
§ 63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§ 63.7(h)	Waiver of tests	Yes.	
§ 63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at § 63.6625.
§ 63.8(a)(2)	Performance specifications	Yes.	
§ 63.8(a)(3)	[Reserved]		
§ 63.8(a)(4)	Monitoring for control devices	No.	
§ 63.8(b)(1)	Monitoring	Yes.	
§ 63.8(b)(2)-(3)	Multiple effluents and multiple monitoring systems	Yes.	
§ 63.8(c)(1)	Monitoring system operation and maintenance	Yes.	
§ 63.8(c)(1)(i)	Routine and predictable SSM	No.	
§ 63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§ 63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	No.	
§ 63.8(c)(2)-(3)	Monitoring system installation	Yes.	
§ 63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§ 63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§ 63.8(c)(6)-(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§ 63.8(d)	CMS quality control	Yes.	
§ 63.8(e)	CMS performance evaluation	Yes	Except for § 63.8(e)(5)(ii), which applies to COMS.
		Except that § 63.8(e) only applies as specified in § 63.6645.	
§ 63.8(f)(1)-(5)	Alternative monitoring method	Yes	Except that § 63.8(f)(4) only

General provisions citation	Subject of citation	Applies to subpart	Explanation
			applies as specified in § 63.6645.
§ 63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that § 63.8(f)(6) only applies as specified in § 63.6645.
§ 63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§ 63.6635 and 63.6640.
§ 63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§ 63.9(b)(1)-(5)	Initial notifications	Yes	Except that § 63.9(b)(3) is reserved.
		Except that § 63.9(b) only applies as specified in § 63.6645.	
§ 63.9(c)	Request for compliance extension	Yes	Except that § 63.9(c) only applies as specified in § 63.6645.
§ 63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that § 63.9(d) only applies as specified in § 63.6645.
§ 63.9(e)	Notification of performance test	Yes	Except that § 63.9(e) only applies as specified in § 63.6645.
§ 63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.9(g)(1)	Notification of performance evaluation	Yes	Except that § 63.9(g) only applies as specified in § 63.6645.
§ 63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that § 63.9(g) only applies as specified in § 63.6645.	
§ 63.9(h)(1)-(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations.

General provisions citation	Subject of citation	Applies to subpart	Explanation
			§ 63.9(h)(4) is reserved.
			Except that § 63.9(h) only applies as specified in § 63.6645.
§ 63.9(i)	Adjustment of submittal deadlines	Yes.	
§ 63.9(j)	Change in previous information	Yes.	
§ 63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§ 63.10(b)(1)	Record retention	Yes.	Except that the most recent 2 years of data do not have to be retained on site.
§ 63.10(b)(2)(i)-(v)	Records related to SSM	No.	
§ 63.10(b)(2)(vi)-(xi)	Records	Yes.	
§ 63.10(b)(2)(xii)	Record when under waiver	Yes.	
§ 63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§ 63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§ 63.10(b)(3)	Records of applicability determination	Yes.	
§ 63.10(c)	Additional records for sources using CEMS	Yes	Except that § 63.10(c)(2)-(4) and (9) are reserved.
§ 63.10(d)(1)	General reporting requirements	Yes.	
§ 63.10(d)(2)	Report of performance test results	Yes.	
§ 63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.10(d)(4)	Progress reports	Yes.	
§ 63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§ 63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§ 63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§ 63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that § 63.10(e)(3)(i) (C) is reserved.
§ 63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require

General provisions citation	Subject of citation	Applies to subpart	Explanation
			COMS.
§ 63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§ 63.11	Flares	No.	
§ 63.12	State authority and delegations	Yes.	
§ 63.13	Addresses	Yes.	
§ 63.14	Incorporation by reference	Yes.	
§ 63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010]

Downloaded from the ECFR on March 25, 2013 and updated with January 30, 2013 amendments. The amendments are effective on April 1, 2013.

Attachment D
to Part 70 Operating Permit Renewal No. T109-29661-00002

General Shale Brick, Inc.
148 Sycamore Lane, Mooresville, IN 46158

Subpart CCCCCC—National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

Source: 73 FR 1945, Jan. 10, 2008, unless otherwise noted.

What This Subpart Covers

§ 63.11110 What is the purpose of this subpart?

This subpart establishes national emission limitations and management practices for hazardous air pollutants (HAP) emitted from the loading of gasoline storage tanks at gasoline dispensing facilities (GDF). This subpart also establishes requirements to demonstrate compliance with the emission limitations and management practices.

§ 63.11111 Am I subject to the requirements in this subpart?

(a) The affected source to which this subpart applies is each GDF that is located at an area source. The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank.

(b) If your GDF has a monthly throughput of less than 10,000 gallons of gasoline, you must comply with the requirements in §63.11116.

(c) If your GDF has a monthly throughput of 10,000 gallons of gasoline or more, you must comply with the requirements in §63.11117.

(d) If your GDF has a monthly throughput of 100,000 gallons of gasoline or more, you must comply with the requirements in §63.11118.

(e) An affected source shall, upon request by the Administrator, demonstrate that their monthly throughput is less than the 10,000-gallon or the 100,000-gallon threshold level, as applicable. For new or reconstructed affected sources, as specified in §63.11112(b) and (c), recordkeeping to document monthly throughput must begin upon startup of the affected source. For existing sources, as specified in §63.11112(d), recordkeeping to document monthly throughput must begin on January 10, 2008. For existing sources that are subject to this subpart only because they load gasoline into fuel tanks other than those in motor vehicles, as defined in §63.11132, recordkeeping to document monthly throughput must begin on January 24, 2011. Records required under this paragraph shall be kept for a period of 5 years.

(f) If you are an owner or operator of affected sources, as defined in paragraph (a) of this section, you are not required to obtain a permit under 40 CFR part 70 or 40 CFR part 71 as a result of being subject to this subpart. However, you must still apply for and obtain a permit under 40 CFR part 70 or 40 CFR part 71 if you meet one or more of the applicability criteria found in 40 CFR 70.3(a) and (b) or 40 CFR 71.3(a) and (b).

(g) The loading of aviation gasoline into storage tanks at airports, and the subsequent transfer of aviation gasoline within the airport, is not subject to this subpart.

(h) Monthly throughput is the total volume of gasoline loaded into, or dispensed from, all the gasoline storage tanks located at a single affected GDF. If an area source has two or more GDF at separate locations within the area source, each GDF is treated as a separate affected source.

(i) If your affected source's throughput ever exceeds an applicable throughput threshold, the affected source will remain subject to the requirements for sources above the threshold, even if the affected source throughput later falls below the applicable throughput threshold.

(j) The dispensing of gasoline from a fixed gasoline storage tank at a GDF into a portable gasoline tank for the on-site delivery and subsequent dispensing of the gasoline into the fuel tank of a motor vehicle or other gasoline-fueled engine or equipment used within the area source is only subject to §63.11116 of this subpart.

(k) For any affected source subject to the provisions of this subpart and another Federal rule, you may elect to comply only with the more stringent provisions of the applicable subparts. You must consider all provisions of the rules, including monitoring, recordkeeping, and reporting. You must identify the affected source and provisions with which you will comply in your Notification of Compliance Status required under §63.11124. You also must demonstrate in your Notification of Compliance Status that each provision with which you will comply is at least as stringent as the otherwise applicable requirements in this subpart. You are responsible for making accurate determinations concerning the more stringent provisions, and noncompliance with this rule is not excused if it is later determined that your determination was in error, and, as a result, you are violating this subpart. Compliance with this rule is your responsibility and the Notification of Compliance Status does not alter or affect that responsibility.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4181, Jan. 24, 2011]

§ 63.11112 What parts of my affected source does this subpart cover?

(a) The emission sources to which this subpart applies are gasoline storage tanks and associated equipment components in vapor or liquid gasoline service at new, reconstructed, or existing GDF that meet the criteria specified in §63.11111. Pressure/Vacuum vents on gasoline storage tanks and the equipment necessary to unload product from cargo tanks into the storage tanks at GDF are covered emission sources. The equipment used for the refueling of motor vehicles is not covered by this subpart.

(b) An affected source is a new affected source if you commenced construction on the affected source after November 9, 2006, and you meet the applicability criteria in §63.11111 at the time you commenced operation.

(c) An affected source is reconstructed if you meet the criteria for reconstruction as defined in §63.2.

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

§ 63.11113 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, except as specified in paragraph (d) of this section.

(1) If you start up your affected source before January 10, 2008, you must comply with the standards in this subpart no later than January 10, 2008.

(2) If you start up your affected source after January 10, 2008, you must comply with the standards in this subpart upon startup of your affected source.

(b) If you have an existing affected source, you must comply with the standards in this subpart no later than January 10, 2011.

(c) If you have an existing affected source that becomes subject to the control requirements in this subpart because of an increase in the monthly throughput, as specified in §63.11111(c) or §63.11111(d), you must comply with the standards in this subpart no later than 3 years after the affected source becomes subject to the control requirements in this subpart.

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

(1) If you start up your affected source from November 9, 2006 to September 23, 2008, you must comply no later than September 23, 2008.

(2) If you start up your affected source after September 23, 2008, you must comply upon startup of your affected source.

(e) The initial compliance demonstration test required under §63.11120(a)(1) and (2) must be conducted as specified in paragraphs (e)(1) and (2) of this section.

(1) If you have a new or reconstructed affected source, you must conduct the initial compliance test upon installation of the complete vapor balance system.

(2) If you have an existing affected source, you must conduct the initial compliance test as specified in paragraphs (e)(2)(i) or (e)(2)(ii) of this section.

(i) For vapor balance systems installed on or before December 15, 2009, you must test no later than 180 days after the applicable compliance date specified in paragraphs (b) or (c) of this section.

(ii) For vapor balance systems installed after December 15, 2009, you must test upon installation of the complete vapor balance system.

(f) If your GDF is subject to the control requirements in this subpart only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in §63.11132, you must comply with the standards in this subpart as specified in paragraphs (f)(1) or (f)(2) of this section.

(1) If your GDF is an existing facility, you must comply by January 24, 2014.

(2) If your GDF is a new or reconstructed facility, you must comply by the dates specified in paragraphs (f)(2)(i) and (ii) of this section.

(i) If you start up your GDF after December 15, 2009, but before January 24, 2011, you must comply no later than January 24, 2011.

(ii) If you start up your GDF after January 24, 2011, you must comply upon startup of your GDF.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 35944, June 25, 2008; 76 FR 4181, Jan. 24, 2011]

Emission Limitations and Management Practices

§ 63.11115 What are my general duties to minimize emissions?

Each owner or operator of an affected source under this subpart must comply with the requirements of paragraphs (a) and (b) of this section.

(a) You must, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(b) You must keep applicable records and submit reports as specified in §63.11125(d) and §63.11126(b).

[76 FR 4182, Jan. 24, 2011]

§ 63.11116 Requirements for facilities with monthly throughput of less than 10,000 gallons of gasoline.

(a) You must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

(1) Minimize gasoline spills;

(2) Clean up spills as expeditiously as practicable;

(3) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;

(4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

(b) You are not required to submit notifications or reports as specified in §63.11125, §63.11126, or subpart A of this part, but you must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

(c) You must comply with the requirements of this subpart by the applicable dates specified in §63.11113.

(d) Portable gasoline containers that meet the requirements of 40 CFR part 59, subpart F, are considered acceptable for compliance with paragraph (a)(3) of this section.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4182, Jan. 24, 2011]

§ 63.11117 Requirements for facilities with monthly throughput of 10,000 gallons of gasoline or more.

(a) You must comply with the requirements in section §63.11116(a).

(b) Except as specified in paragraph (c) of this section, you must only load gasoline into storage tanks at your facility by utilizing submerged filling, as defined in §63.11132, and as specified in paragraphs (b)(1), (b)(2), or (b)(3) of this section. The applicable distances in paragraphs (b)(1) and (2) shall be measured from the point in the opening of the submerged fill pipe that is the greatest distance from the bottom of the storage tank.

(1) Submerged fill pipes installed on or before November 9, 2006, must be no more than 12 inches from the bottom of the tank.

(2) Submerged fill pipes installed after November 9, 2006, must be no more than 6 inches from the bottom of the tank.

(3) Submerged fill pipes not meeting the specifications of paragraphs (b)(1) or (b)(2) of this section are allowed if the owner or operator can demonstrate that the liquid level in the tank is always above the entire opening of the fill pipe. Documentation providing such demonstration must be made available for inspection by the Administrator's delegated representative during the course of a site visit.

(c) Gasoline storage tanks with a capacity of less than 250 gallons are not required to comply with the submerged fill requirements in paragraph (b) of this section, but must comply only with all of the requirements in §63.11116.

(d) You must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

(e) You must submit the applicable notifications as required under §63.11124(a).

(f) You must comply with the requirements of this subpart by the applicable dates contained in §63.11113.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008; 76 FR 4182, Jan. 24, 2011]

§ 63.11118 Requirements for facilities with monthly throughput of 100,000 gallons of gasoline or more.

(a) You must comply with the requirements in §§63.11116(a) and 63.11117(b).

(b) Except as provided in paragraph (c) of this section, you must meet the requirements in either paragraph (b)(1) or paragraph (b)(2) of this section.

(1) Each management practice in Table 1 to this subpart that applies to your GDF.

(2) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(2)(i) and (ii) of this section, you will be deemed in compliance with this subsection.

(i) You operate a vapor balance system at your GDF that meets the requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 1 to this subpart.

(ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.

(c) The emission sources listed in paragraphs (c)(1) through (3) of this section are not required to comply with the control requirements in paragraph (b) of this section, but must comply with the requirements in §63.11117.

(1) Gasoline storage tanks with a capacity of less than 250 gallons that are constructed after January 10, 2008.

(2) Gasoline storage tanks with a capacity of less than 2,000 gallons that were constructed before January 10, 2008.

(3) Gasoline storage tanks equipped with floating roofs, or the equivalent.

(d) Cargo tanks unloading at GDF must comply with the management practices in Table 2 to this subpart.

(e) You must comply with the applicable testing requirements contained in §63.11120.

(f) You must submit the applicable notifications as required under §63.11124.

(g) You must keep records and submit reports as specified in §§63.11125 and 63.11126.

(h) You must comply with the requirements of this subpart by the applicable dates contained in §63.11113.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008]

Testing and Monitoring Requirements

§ 63.11120 What testing and monitoring requirements must I meet?

(a) Each owner or operator, at the time of installation, as specified in §63.11113(e), of a vapor balance system required under §63.11118(b)(1), and every 3 years thereafter, must comply with the requirements in paragraphs (a)(1) and (2) of this section.

(1) You must demonstrate compliance with the leak rate and cracking pressure requirements, specified in item 1(g) of Table 1 to this subpart, for pressure-vacuum vent valves installed on your gasoline storage tanks using the test methods identified in paragraph (a)(1)(i) or paragraph (a)(1)(ii) of this section.

(i) California Air Resources Board Vapor Recovery Test Procedure TP-201.1E,—Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves, adopted October 8, 2003 (incorporated by reference, see §63.14).

(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in §63.7(f).

(2) You must demonstrate compliance with the static pressure performance requirement specified in item 1(h) of Table 1 to this subpart for your vapor balance system by conducting a static pressure test on your gasoline storage tanks using the test methods identified in paragraphs (a)(2)(i), (a)(2)(ii), or (a)(2)(iii) of this section.

(i) California Air Resources Board Vapor Recovery Test Procedure TP-201.3,—Determination of 2-Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities, adopted April 12, 1996, and amended March 17, 1999 (incorporated by reference, see §63.14).

(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in §63.7(f).

(iii) Bay Area Air Quality Management District Source Test Procedure ST-30—Static Pressure Integrity Test—Underground Storage Tanks, adopted November 30, 1983, and amended December 21, 1994 (incorporated by reference, see §63.14).

(b) Each owner or operator choosing, under the provisions of §63.6(g), to use a vapor balance system other than that described in Table 1 to this subpart must demonstrate to the Administrator or delegated authority under paragraph §63.11131(a) of this subpart, the equivalency of their vapor balance system to that described in Table 1 to this subpart using the procedures specified in paragraphs (b)(1) through (3) of this section.

(1) You must demonstrate initial compliance by conducting an initial performance test on the vapor balance system to demonstrate that the vapor balance system achieves 95 percent reduction using the California Air Resources Board Vapor Recovery Test Procedure TP-201.1,—Volumetric Efficiency for Phase I Vapor Recovery Systems, adopted April 12, 1996, and amended February 1, 2001, and October 8, 2003, (incorporated by reference, see §63.14).

(2) You must, during the initial performance test required under paragraph (b)(1) of this section, determine and document alternative acceptable values for the leak rate and cracking pressure requirements specified in item 1(g) of Table 1 to this subpart and for the static pressure performance requirement in item 1(h) of Table 1 to this subpart.

(3) You must comply with the testing requirements specified in paragraph (a) of this section.

(c) Conduct of performance tests. Performance tests conducted for this subpart shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance (*i.e.*, performance based on normal operating conditions) of the affected source. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(d) Owners and operators of gasoline cargo tanks subject to the provisions of Table 2 to this subpart must conduct annual certification testing according to the vapor tightness testing requirements found in §63.11092(f).

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4182, Jan. 24, 2011]

Notifications, Records, and Reports

§ 63.11124 What notifications must I submit and when?

(a) Each owner or operator subject to the control requirements in §63.11117 must comply with paragraphs (a)(1) through (3) of this section.

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in §63.11117, unless you meet the requirements in paragraph (a)(3) of this section. If your affected source is subject to the control requirements in §63.11117 only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in §63.11132, you must submit the Initial Notification by May 24, 2011. The Initial Notification must contain the information specified in paragraphs (a)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in §63.13.

(i) The name and address of the owner and the operator.

(ii) The address (*i.e.*, physical location) of the GDF.

(iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of §63.11117 that apply to you.

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in §63.13, within 60 days of the applicable compliance date specified in §63.11113, unless you meet the requirements in paragraph (a)(3) of this section. The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of this subpart, and must indicate whether the facilities' monthly throughput is calculated based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (a)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (a)(1) of this section.

(3) If, prior to January 10, 2008, you are operating in compliance with an enforceable State, local, or tribal rule or permit that requires submerged fill as specified in §63.11117(b), you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (a)(1) or paragraph (a)(2) of this section.

(b) Each owner or operator subject to the control requirements in §63.11118 must comply with paragraphs (b)(1) through (5) of this section.

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in §63.11118. If your affected source is subject to the control requirements in §63.11118 only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in §63.11132, you must submit the Initial Notification by May 24, 2011. The Initial Notification must contain the information specified in paragraphs (b)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in §63.13.

(i) The name and address of the owner and the operator.

(ii) The address (i.e., physical location) of the GDF.

(iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of §63.11118 that apply to you.

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in §63.13, in accordance with the schedule specified in §63.9(h). The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of this subpart, and must indicate whether the facility's throughput is determined based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (b)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (b)(1) of this section.

(3) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(3)(i) and (ii) of this section, you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (b)(1) or paragraph (b)(2) of this subsection.

(i) You operate a vapor balance system at your gasoline dispensing facility that meets the requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 1 to this subpart.

(ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(4) You must submit a Notification of Performance Test, as specified in §63.9(e), prior to initiating testing required by §63.11120(a) and (b).

(5) You must submit additional notifications specified in §63.9, as applicable.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008; 76 FR 4182, Jan. 24, 2011]

§ 63.11125 What are my recordkeeping requirements?

(a) Each owner or operator subject to the management practices in §63.11118 must keep records of all tests performed under §63.11120(a) and (b).

(b) Records required under paragraph (a) of this section shall be kept for a period of 5 years and shall be made available for inspection by the Administrator's delegated representatives during the course of a site visit.

(c) Each owner or operator of a gasoline cargo tank subject to the management practices in Table 2 to this subpart must keep records documenting vapor tightness testing for a period of 5 years. Documentation must include each of the items specified in §63.11094(b)(2)(i) through (viii). Records of vapor tightness testing must be retained as specified in either paragraph (c)(1) or paragraph (c)(2) of this section.

(1) The owner or operator must keep all vapor tightness testing records with the cargo tank.

(2) As an alternative to keeping all records with the cargo tank, the owner or operator may comply with the requirements of paragraphs (c)(2)(i) and (ii) of this section.

(i) The owner or operator may keep records of only the most recent vapor tightness test with the cargo tank, and keep records for the previous 4 years at their office or another central location.

(ii) Vapor tightness testing records that are kept at a location other than with the cargo tank must be instantly available (e.g., via e-mail or facsimile) to the Administrator's delegated representative during the course of a site visit or within a mutually agreeable time frame. Such records must be an exact duplicate image of the original paper copy record with certifying signatures.

(d) Each owner or operator of an affected source under this subpart shall keep records as specified in paragraphs (d)(1) and (2) of this section.

(1) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.

(2) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.11115(a), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4183, Jan. 24, 2011]

§ 63.11126 What are my reporting requirements?

(a) Each owner or operator subject to the management practices in §63.11118 shall report to the Administrator the results of all volumetric efficiency tests required under §63.11120(b). Reports submitted under this paragraph must be submitted within 180 days of the completion of the performance testing.

(b) Each owner or operator of an affected source under this subpart shall report, by March 15 of each year, the number, duration, and a brief description of each type of malfunction which occurred during the previous calendar year and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.11115(a), including actions taken to correct a malfunction. No report is necessary for a calendar year in which no malfunctions occurred.

[76 FR 4183, Jan. 24, 2011]

Other Requirements and Information

§ 63.11130 What parts of the General Provisions apply to me?

Table 3 to this subpart shows which parts of the General Provisions apply to you.

§ 63.11131 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority such as the applicable State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be 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 (3) of this section.

(1) Approval of alternatives to the requirements in §§63.11116 through 63.11118 and 63.11120.

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.

(3) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.

§ 63.11132 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act (CAA), or in subparts A and BBBBBB of this part. For purposes of this subpart, definitions in this section supersede definitions in other parts or subparts.

Dual-point vapor balance system means a type of vapor balance system in which the storage tank is equipped with an entry port for a gasoline fill pipe and a separate exit port for a vapor connection.

Gasoline means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater, which is used as a fuel for internal combustion engines.

Gasoline cargo tank means a delivery tank truck or railcar which is loading or unloading gasoline, or which has loaded or unloaded gasoline on the immediately previous load.

Gasoline dispensing facility (GDF) means any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine used solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on- and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline-fueled engines and equipment.

Monthly throughput means the total volume of gasoline that is loaded into, or dispensed from, all gasoline storage tanks at each GDF during a month. Monthly throughput is calculated by summing the volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the current day, plus the total volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the previous 364 days, and then dividing that sum by 12.

Motor vehicle means any self-propelled vehicle designed for transporting persons or property on a street or highway.

Nonroad engine means an internal combustion engine (including the fuel system) that is not used in a motor vehicle or a vehicle used solely for competition, or that is not subject to standards promulgated under section 7411 of this title or section 7521 of this title.

Nonroad vehicle means a vehicle that is powered by a nonroad engine, and that is not a motor vehicle or a vehicle used solely for competition.

Submerged filling means, for the purposes of this subpart, the filling of a gasoline storage tank through a submerged fill pipe whose discharge is no more than the applicable distance specified in §63.11117(b) from the bottom of the tank. Bottom filling of gasoline storage tanks is included in this definition.

Vapor balance system means a combination of pipes and hoses that create a closed system between the vapor spaces of an unloading gasoline cargo tank and a receiving storage tank such that vapors displaced from the storage tank are transferred to the gasoline cargo tank being unloaded.

Vapor-tight means equipment that allows no loss of vapors. Compliance with vapor-tight requirements can be determined by checking to ensure that the concentration at a potential leak source is not equal to or greater than 100 percent of the Lower Explosive Limit when measured with a combustible gas detector, calibrated with propane, at a distance of 1 inch from the source.

Vapor-tight gasoline cargo tank means a gasoline cargo tank which has demonstrated within the 12 preceding months that it meets the annual certification test requirements in §63.11092(f) of this part.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4183, Jan. 24, 2011]

Table 1 to Subpart CCCCCC of Part 63—Applicability Criteria and Management Practices for Gasoline Dispensing Facilities With Monthly Throughput of 100,000 Gallons of Gasoline or More¹

If you own or operate	Then you must
1. A new, reconstructed, or existing GDF subject to §63.11118	Install and operate a vapor balance system on your gasoline storage tanks that meets the design criteria in paragraphs (a) through (h).
	(a) All vapor connections and lines on the storage tank shall be equipped with closures that seal upon disconnect.
	(b) The vapor line from the gasoline storage tank to the gasoline cargo tank shall be vapor-tight, as defined in §63.11132.
	(c) The vapor balance system shall be designed such that the pressure in the tank truck does not exceed 18 inches water pressure or 5.9 inches water vacuum during product transfer.
	(d) The vapor recovery and product adaptors, and the method of connection with the delivery elbow, shall be designed so as to prevent the over-tightening or loosening of fittings during normal delivery operations.
	(e) If a gauge well separate from the fill tube is used, it shall be provided with a submerged drop tube that extends the same distance from the bottom of the storage tank as specified in §63.11117(b).
	(f) Liquid fill connections for all systems shall be equipped with vapor-tight caps.
	(g) Pressure/vacuum (PV) vent valves shall be installed on the storage tank vent pipes. The pressure specifications for PV vent valves shall be: a positive pressure setting of 2.5 to 6.0 inches of water and a negative pressure setting of 6.0 to 10.0 inches of water. The total leak rate of all PV vent valves at an affected facility, including connections, shall not exceed 0.17 cubic foot per hour at a pressure of 2.0 inches of water and 0.63 cubic foot per hour at a vacuum of 4 inches of water.
	(h) The vapor balance system shall be capable of meeting the static pressure performance requirement of the following equation:
	$P_f = 2e^{-500.887/v}$
	Where:
	P_f = Minimum allowable final pressure, inches of water.
	v = Total ullage affected by the test, gallons.
If you own or operate	Then you must
	e = Dimensionless constant equal to approximately 2.718.
	2 = The initial pressure, inches water.
2. A new or reconstructed GDF, or any storage tank(s) constructed after November 9, 2006, at an existing affected facility subject to §63.11118	Equip your gasoline storage tanks with a dual-point vapor balance system, as defined in §63.11132, and comply with the requirements of item 1 in this Table.

¹The management practices specified in this Table are not applicable if you are complying with the requirements in §63.11118(b)(2), except that if you are complying with the requirements in §63.11118(b)(2)(i)(B), you must operate using management practices at least as stringent as those listed in this Table.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 35944, June 25, 2008; 76 FR 4184, Jan. 24, 2011]

Table 2 to Subpart CCCCCC of Part 63—Applicability Criteria and Management Practices for Gasoline Cargo Tanks Unloading at Gasoline Dispensing Facilities With Monthly Throughput of 100,000 Gallons of Gasoline or More

If you own or operate	Then you must
A gasoline cargo tank	Not unload gasoline into a storage tank at a GDF subject to the control requirements in this subpart unless the following conditions are met:
	(i) All hoses in the vapor balance system are properly connected,
	(ii) The adapters or couplers that attach to the vapor line on the storage tank have closures that seal upon disconnect,
	(iii) All vapor return hoses, couplers, and adapters used in the gasoline delivery are vapor-tight,
	(iv) All tank truck vapor return equipment is compatible in size and forms a vapor-tight connection with the vapor balance equipment on the GDF storage tank, and
	(v) All hatches on the tank truck are closed and securely fastened.
	(vi) The filling of storage tanks at GDF shall be limited to unloading from vapor-tight gasoline cargo tanks. Documentation that the cargo tank has met the specifications of EPA Method 27 shall be carried with the cargo tank, as specified in §63.11125(c).

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4184, Jan. 24, 2011]

Table 3 to Subpart CCCCCC of Part 63—Applicability of General Provisions

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.1	Applicability	Initial applicability determination; applicability after standard established; permit requirements; extensions, notifications	Yes, specific requirements given in §63.11111.
§63.1(c)(2)	Title V Permit	Requirements for obtaining a title V permit from the applicable permitting authority	Yes, §63.11111(f) of subpart CCCCCC exempts identified area sources from the obligation to obtain title V operating permits.
§63.2	Definitions	Definitions for part 63 standards	Yes, additional definitions in §63.11132.
§63.3	Units and Abbreviations	Units and abbreviations for part 63 standards	Yes.
§63.4	Prohibited Activities and Circumvention	Prohibited activities; Circumvention, severability	Yes.
§63.5	Construction/Reconstruction	Applicability; applications; approvals	Yes, except that these notifications are not required for facilities subject to §63.11116.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.6(a)	Compliance with Standards/Operation & Maintenance—Applicability	General Provisions apply unless compliance extension; General Provisions apply to area sources that become major	Yes.
§63.6(b)(1)–(4)	Compliance Dates for New and Reconstructed Sources	Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for CAA section 112(f)	Yes.
§63.6(b)(5)	Notification	Must notify if commenced construction or reconstruction after proposal	Yes.
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major	Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source	No.
§63.6(c)(1)–(2)	Compliance Dates for Existing Sources	Comply according to date in this subpart, which must be no later than 3 years after effective date; for CAA section 112(f) standards, comply within 90 days of effective date unless compliance extension	No, §63.11113 specifies the compliance dates.
§63.6(c)(3)–(4)	[Reserved]		
§63.6(c)(5)	Compliance Dates for Existing Area Sources That Become Major	Area sources That become major must comply with major source standards by date indicated in this subpart or by equivalent time period (e.g., 3 years)	No.
§63.6(d)	[Reserved]		
63.6(e)(1)(i)	General duty to minimize emissions	Operate to minimize emissions at all times; information Administrator will use to determine if operation and maintenance requirements were met.	No. See §63.11115 for general duty requirement.
63.6(e)(1)(ii)	Requirement to correct malfunctions ASAP	Owner or operator must correct malfunctions as soon as possible.	No.
§63.6(e)(2)	[Reserved]		
§63.6(e)(3)	Startup, Shutdown, and Malfunction (SSM) Plan	Requirement for SSM plan; content of SSM plan; actions during SSM	No.
§63.6(f)(1)	Compliance Except During SSM	You must comply with emission standards at all times except during SSM	No.
§63.6(f)(2)–(3)	Methods for Determining Compliance	Compliance based on performance test, operation and maintenance plans, records, inspection	Yes.
§63.6(g)(1)–(3)	Alternative Standard	Procedures for getting an alternative standard	Yes.
§63.6(h)(1)	Compliance with Opacity/Visible Emission (VE) Standards	You must comply with opacity/VE standards at all times except during SSM	No.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.6(h)(2)(i)	Determining Compliance with Opacity/VE Standards	If standard does not State test method, use EPA Method 9 for opacity in appendix A of part 60 of this chapter and EPA Method 22 for VE in appendix A of part 60 of this chapter	No.
§63.6(h)(2)(ii)	[Reserved]		
§63.6(h)(2)(iii)	Using Previous Tests To Demonstrate Compliance With Opacity/VE Standards	Criteria for when previous opacity/VE testing can be used to show compliance with this subpart	No.
§63.6(h)(3)	[Reserved]		
§63.6(h)(4)	Notification of Opacity/VE Observation Date	Must notify Administrator of anticipated date of observation	No.
§63.6(h)(5)(i), (iii)–(v)	Conducting Opacity/VE Observations	Dates and schedule for conducting opacity/VE observations	No.
§63.6(h)(5)(ii)	Opacity Test Duration and Averaging Times	Must have at least 3 hours of observation with 30 6-minute averages	No.
§63.6(h)(6)	Records of Conditions During Opacity/VE Observations	Must keep records available and allow Administrator to inspect	No.
§63.6(h)(7)(i)	Report Continuous Opacity Monitoring System (COMS) Monitoring Data From Performance Test	Must submit COMS data with other performance test data	No.
§63.6(h)(7)(ii)	Using COMS Instead of EPA Method 9	Can submit COMS data instead of EPA Method 9 results even if rule requires EPA Method 9 in appendix A of part 60 of this chapter, but must notify Administrator before performance test	No.
§63.6(h)(7)(iii)	Averaging Time for COMS During Performance Test	To determine compliance, must reduce COMS data to 6-minute averages	No.
§63.6(h)(7)(iv)	COMS Requirements	Owner/operator must demonstrate that COMS performance evaluations are conducted according to §63.8(e); COMS are properly maintained and operated according to §63.8(c) and data quality as §63.8(d)	No.
§63.6(h)(7)(v)	Determining Compliance with Opacity/VE Standards	COMS is probable but not conclusive evidence of compliance with opacity standard, even if EPA Method 9 observation shows otherwise. Requirements for COMS to be probable evidence-proper maintenance, meeting Performance Specification 1 in appendix B of part 60 of this chapter, and data have not been altered	No.
§63.6(h)(8)	Determining Compliance with Opacity/VE Standards	Administrator will use all COMS, EPA Method 9 (in appendix A of part 60 of this chapter), and EPA Method 22 (in appendix A of part 60 of this chapter) results, as well as information about operation and maintenance to determine compliance	No.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.6(h)(9)	Adjusted Opacity Standard	Procedures for Administrator to adjust an opacity standard	No.
§63.6(i)(1)–(14)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension	Yes.
§63.6(j)	Presidential Compliance Exemption	President may exempt any source from requirement to comply with this subpart	Yes.
§63.7(a)(2)	Performance Test Dates	Dates for conducting initial performance testing; must conduct 180 days after compliance date	Yes.
§63.7(a)(3)	CAA Section 114 Authority	Administrator may require a performance test under CAA section 114 at any time	Yes.
§63.7(b)(1)	Notification of Performance Test	Must notify Administrator 60 days before the test	Yes.
§63.7(b)(2)	Notification of Re-scheduling	If have to reschedule performance test, must notify Administrator of rescheduled date as soon as practicable and without delay	Yes.
§63.7(c)	Quality Assurance (QA)/Test Plan	Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with; test plan approval procedures; performance audit requirements; internal and external QA procedures for testing	Yes.
§63.7(d)	Testing Facilities	Requirements for testing facilities	Yes.
63.7(e)(1)	Conditions for Conducting Performance Tests	Performance test must be conducted under representative conditions	No, §63.11120(c) specifies conditions for conducting performance tests.
§63.7(e)(2)	Conditions for Conducting Performance Tests	Must conduct according to this subpart and EPA test methods unless Administrator approves alternative	Yes.
§63.7(e)(3)	Test Run Duration	Must have three test runs of at least 1 hour each; compliance is based on arithmetic mean of three runs; conditions when data from an additional test run can be used	Yes.
	Alternative Test Method	Procedures by which Administrator can grant approval to use an intermediate or major change, or alternative to a test method	Yes.
§63.7(g)	Performance Test Data Analysis	Must include raw data in performance test report; must submit performance test data 60 days after end of test with the Notification of Compliance Status; keep data for 5 years	Yes.
§63.7(h)	Waiver of Tests	Procedures for Administrator to waive performance test	Yes.
§63.8(a)(1)	Applicability of Monitoring Requirements	Subject to all monitoring requirements in standard	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.8(a)(2)	Performance Specifications	Performance Specifications in appendix B of 40 CFR part 60 apply	Yes.
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring of Flares	Monitoring requirements for flares in §63.11 apply	Yes.
§63.8(b)(1)	Monitoring	Must conduct monitoring according to standard unless Administrator approves alternative	Yes.
§63.8(b)(2)–(3)	Multiple Effluents and Multiple Monitoring Systems	Specific requirements for installing monitoring systems; must install on each affected source or after combined with another affected source before it is released to the atmosphere provided the monitoring is sufficient to demonstrate compliance with the standard; if more than one monitoring system on an emission point, must report all monitoring system results, unless one monitoring system is a backup	No.
§63.8(c)(1)	Monitoring System Operation and Maintenance	Maintain monitoring system in a manner consistent with good air pollution control practices	No.
§63.8(c)(1)(i)–(iii)	Operation and Maintenance of Continuous Monitoring Systems (CMS)	Must maintain and operate each CMS as specified in §63.6(e)(1); must keep parts for routine repairs readily available; must develop a written SSM plan for CMS, as specified in §63.6(e)(3)	No.
§63.8(c)(2)–(8)	CMS Requirements	Must install to get representative emission or parameter measurements; must verify operational status before or at performance test	No.
§63.8(d)	CMS Quality Control	Requirements for CMS quality control, including calibration, etc.; must keep quality control plan on record for 5 years; keep old versions for 5 years after revisions	No.
§63.8(e)	CMS Performance Evaluation	Notification, performance evaluation test plan, reports	No.
§63.8(f)(1)–(5)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring	No.
§63.8(f)(6)	Alternative to Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for continuous emissions monitoring system (CEMS)	No.
§63.8(g)	Data Reduction	CEMS 6-minute averages calculated over at least 36 evenly spaced data points; CEMS 1 hour averages computed over at least 4 equally spaced data points; data that cannot be used in average	No.
§63.9(a)	Notification Requirements	Applicability and State delegation	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.9(b)(1)–(2), (4)–(5)	Initial Notifications	Submit notification within 120 days after effective date; notification of intent to construct/reconstruct, notification of commencement of construction/reconstruction, notification of startup; contents of each	Yes.
§63.9(c)	Request for Compliance Extension	Can request if cannot comply by date or if installed best available control technology or lowest achievable emission rate	Yes.
§63.9(d)	Notification of Special Compliance Requirements for New Sources	For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date	Yes.
§63.9(e)	Notification of Performance Test	Notify Administrator 60 days prior	Yes.
§63.9(f)	Notification of VE/Opacity Test	Notify Administrator 30 days prior	No.
§63.9(g)	Additional Notifications when Using CMS	Notification of performance evaluation; notification about use of COMS data; notification that exceeded criterion for relative accuracy alternative	Yes, however, there are no opacity standards.
§63.9(h)(1)–(6)	Notification of Compliance Status	Contents due 60 days after end of performance test or other compliance demonstration, except for opacity/VE, which are due 30 days after; when to submit to Federal vs. State authority	Yes, however, there are no opacity standards.
§63.9(i)	Adjustment of Submittal Deadlines	Procedures for Administrator to approve change when notifications must be submitted	Yes.
§63.9(j)	Change in Previous Information	Must submit within 15 days after the change	Yes.
§63.10(a)	Recordkeeping/Reporting	Applies to all, unless compliance extension; when to submit to Federal vs. State authority; procedures for owners of more than one source	Yes.
§63.10(b)(1)	Recordkeeping/Reporting	General requirements; keep all records readily available; keep for 5 years	Yes.
§63.10(b)(2)(i)	Records related to SSM	Recordkeeping of occurrence and duration of startups and shutdowns	No.
§63.10(b)(2)(ii)	Records related to SSM	Recordkeeping of malfunctions	No. See §63.11125(d) for recordkeeping of (1) occurrence and duration and (2) actions taken during malfunction.
§63.10(b)(2)(iii)	Maintenance records	Recordkeeping of maintenance on air pollution control and monitoring equipment	Yes.
§63.10(b)(2)(iv)	Records Related to SSM	Actions taken to minimize emissions during SSM	No.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.10(b)(2)(v)	Records Related to SSM	Actions taken to minimize emissions during SSM	No.
§63.10(b)(2)(vi)–(xi)	CMS Records	Malfunctions, inoperative, out-of-control periods	No.
§63.10(b)(2)(xii)	Records	Records when under waiver	Yes.
§63.10(b)(2)(xiii)	Records	Records when using alternative to relative accuracy test	Yes.
§63.10(b)(2)(xiv)	Records	All documentation supporting Initial Notification and Notification of Compliance Status	Yes.
§63.10(b)(3)	Records	Applicability determinations	Yes.
§63.10(c)	Records	Additional records for CMS	No.
§63.10(d)(1)	General Reporting Requirements	Requirement to report	Yes.
§63.10(d)(2)	Report of Performance Test Results	When to submit to Federal or State authority	Yes.
§63.10(d)(3)	Reporting Opacity or VE Observations	What to report and when	No.
§63.10(d)(4)	Progress Reports	Must submit progress reports on schedule if under compliance extension	Yes.
§63.10(d)(5)	SSM Reports	Contents and submission	No. See §63.11126(b) for malfunction reporting requirements.
§63.10(e)(1)–(2)	Additional CMS Reports	Must report results for each CEMS on a unit; written copy of CMS performance evaluation; two-three copies of COMS performance evaluation	No.
§63.10(e)(3)(i)–(iii)	Reports	Schedule for reporting excess emissions	No.
§63.10(e)(3)(iv)–(v)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in §§63.8(c)(7)–(8) and 63.10(c)(5)–(13)	No.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.10(e)(3)(iv)–(v)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in §§63.8(c)(7)–(8) and 63.10(c)(5)–(13)	No, §63.11130(K) specifies excess emission events for this subpart.
§63.10(e)(3)(vi)–(viii)	Excess Emissions Report and Summary Report	Requirements for reporting excess emissions for CMS; requires all of the information in §§63.10(c)(5)–(13) and 63.8(c)(7)–(8)	No.
§63.10(e)(4)	Reporting COMS Data	Must submit COMS data with performance test data	No.
§63.10(f)	Waiver for Recordkeeping/Reporting	Procedures for Administrator to waive	Yes.
§63.11(b)	Flares	Requirements for flares	No.
§63.12	Delegation	State authority to enforce standards	Yes.
§63.13	Addresses	Addresses where reports, notifications, and requests are sent	Yes.
§63.14	Incorporations by Reference	Test methods incorporated by reference	Yes.
§63.15	Availability of Information	Public and confidential information	Yes.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4184, Jan. 24, 2011]

**Indiana Department of Environmental Management
Office of Air Quality**

**Addendum to the
Technical Support Document for a Part 70 Operating Permit**

Source Description and Location
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Source Name:	General Shale Brick, Inc.
Source Location:	148 Sycamore Lane, Mooresville, IN 46158
County:	Morgan
SIC Code:	3251
Permit Renewal No.:	T109-29661-00002
Permit Reviewer:	Julie Alexander

On May 14, 2013, the Office of Air Quality (OAQ) had a notice published in the Times, Mooresville, Indiana, stating that General Shale Brick, Inc. had applied for a Part 70 Operating Permit to operate stationary brick and structural clay products manufacturing source. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit 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 this permit should be issued as proposed.

On June 13, 2013, General Shale Brick, Inc. submitted comments on the proposed Part 70 permit. The summary of the comments is as follows:

Comment #1

The quarry remains indentified as part of the brick plant and is regulated under the terms of the brick plant permit. General Shale's view is that the quarry is not part of the permitted "major source," nor is it a "support facility" for the plant, because it is not "contiguous or adjacent" to the plant per 326 IAC 2-7-1(22). Therefore, the quarry and the Mooresville brick plant are separate sources for air permitting purposes.

Response #1

As stated in the source description, IDEM finds that the brick plant and the quarry are located on adjacent properties. The term "major source" is defined at 326 IAC 2-7-1(22). In order for the brick plant and the quarry to be considered one major source, they must meet all three of the following criteria:

- (1) the operations must be under common ownership or common control;
- (2) the operations must have the same two-digit Standard Industrial Classification (SIC) Code or one must serve as a support facility for the other; and,
- (3) the operations must be located on contiguous or adjacent properties.

The brick plant and the quarry have the same owner, so they are under common ownership and common control. This meets the first element of the definition of major source.

The SIC Code Manual of 1987 sets out how to determine the proper SIC Code for each type of business. More information about SIC Codes is available at http://www.osha.gov/pls/imis/sic_manual.html on the internet. The brick plant has the two-digit SIC Code 32 for the Major Group Stone, Clay, Glass, and Concrete Products. The quarry has the two-digit SIC Code 14 for the Major Group Mining and Quarrying of Nonmetallic Minerals, Except Fuels. The brick plant and the quarry do not have the same two-digit SIC Code.

A plant is a support facility to another plant if it dedicates 50% or more of its output to the other plant. The quarry sends 100% of its output to the brick plant. Therefore the quarry is a support facility to the brick plant. Even though the brick plant and the quarry have different two-digit SIC Codes, they meet the second part of the major source definition because the quarry is a support facility to the brick plant.

The last criterion of the definition is whether the plants are on contiguous or adjacent properties. The brick plant and the quarry are located on separate properties that are one mile apart. Since they are not on contiguous properties IDEM examined whether the brick plant and the quarry are on adjacent properties. The term "adjacent" is not defined in Indiana's rules. IDEM's Nonrule Policy Document, NPD Air-005, adds the following guidance:

- properties that actually abut at any point would satisfy the requirement of contiguous or adjacent property.
- properties that are separated by a public road or public property would satisfy this requirement, absent special circumstances.
- other scenarios would be examined on an individual basis with the focus on the distance between the activities and the relationship between the activities.

IDEM, OAQ has located a May 21, 1988 letter from U.S. EPA Region VIII to the Utah Division of Air Quality regarding the term "adjacent". This letter is in no way binding on IDEM, OAQ, but it is persuasive. Region VIII stated that any evaluation of what is "adjacent" must relate the guiding principal of a common sense notion of "source". The evaluation should look at whether the distance between the plants is sufficiently small that it enables them to operate as a single source. Some sample questions are:

1. Are materials routinely transferred between the plants?
2. Do managers or other workers frequently shuttle back and forth to be involved actively in the plants?
3. Is the production process itself split in any way between the plants?

All of the material mined at the quarry is sent to the brick plant and used in the production of brick. The brick plant gets 95% of its raw materials from the quarry. The brick plant and the quarry have the same manager. The manager shuttles back and forth between the two operations. The mining of the material is the first step in the brick production process. The brick plant is dependent on the quarry for raw material. The brick plant and the quarry are about 5,000 feet apart, close enough to enable them to operate as one source, as illustrated by their common manager. The two are therefore adjacent. Since the brick plant and the quarry have the same owner, have a support relationship and are on adjacent properties, IDEM, OAQ found that they are part of the same major source.

A relatively recent ruling by the Sixth Circuit of the U. S. Court of Appeals on August 7, 2012, Summit Petroleum Corporation vs. U.S. EPA, et al., Nos. 09-4348; 10-4572, (full opinion available at <http://www.ca6.uscourts.gov/opinions.pdf/12a0248p-06.pdf> on the Internet) regarding the term "adjacent" in federal air permit regulations, does not affect IDEM's conclusion because the court decision is not legally binding on IDEM. Indiana is located in the Seventh Circuit of the U.S. Court of Appeals. In a memo dated December 21, 2012, from Stephen Page, Director of U.S. EPA's Office of Air Quality Planning and Standards (complete memo available at <http://www.epa.gov/region07/air/nsr/nsrmemos/inter2012.pdf> on the Internet), U.S. EPA stated that outside of the 6th Circuit U.S. EPA would not change its longstanding interpretation of the term "adjacent".

In Summit, the Court rejected the U.S. EPA's long standing guidance that examined the functional relationship between two plants to determine if they are on adjacent properties. Instead, the Court held

that U.S. EPA must look only at the physical proximity between the two plant properties to determine if they are adjacent. The Court noted that the Merriam-Webster Dictionary definition of “adjacent” is “not distant: nearby <the city and adjacent suburbs>; having a common endpoint of border <adjacent lots>” and similar dictionary definitions.

The Court also noted with approval prior court cases that found that “adjacency is a purely physical and geographical, even if case-by-case, determination.” The Court noted “adjacent” might be “more extended when used with reference to a large object than with reference to a comparatively small one.” However, this contextual comparison must be limited to the purely physical dimensions. The Court stated that two plants must be located on “physically proximate” properties in meet the adjacency requirement.

The Court’s opinion does not define a physical distance between two plants that determines whether or not they are adjacent. The Court instead relies on the term “physically proximate” as the standard that must be met in determining adjacency. This determination may rely, to some extent, on the context of the two properties, though this context must use only physical dimensions.

Although the Summit decision is not the law in Indiana, IDEM will discuss its standards as set out in the decision. The brick plant property is about 800 feet long by 800 feet wide. The quarry property is much larger, about 5,000 feet long and about 3,000 feet wide. The two plant properties are about 5,000 feet apart at their closest point. The distance between the two plant properties is relatively small when compared to the size of the quarry property. In examining only the physical distance between the two properties and considering the size of the quarry property, the brick plant and the quarry are located on physically proximate properties that are adjacent, under the standards set by the Summit decision.

No change was made to the permit as a result of this comment.

Comment #2

The draft permit establishes PM permit limits for the silos associated with the DIFF pollution control device. However, the silos should not be listed in the permit as separate emission sources, but rather should be listed as part of the control device. The PM permit limits for the silos should be removed from the Permit.

Response #2

IDEM, OAQ has evaluated the justifications and determined that particulate emissions from silos are controlled by the dry injection fabric filter identified as DIFF-02. . The permit does not establish individual limitations for the silos, rather an single emission limitation is established for all units with venting to DIFF-02.

No change will be made to the original TSD.

The OAQ prefers that the TSD reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

**Indiana Department of Environmental Management
Office of Air Quality**

Technical Support Document (TSD) for a Part 70 Operating Permit Renewal

Source Background and Description
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Source Name:	General Shale Brick, Inc.
Source Location:	148 Sycamore Lane, Mooresville, IN 46158
County:	Morgan
SIC Code:	3251
Permit Renewal No.:	T109-29661-00002
Permit Reviewer:	John Haney

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from General Shale Brick, Inc. relating to the operation of a stationary brick and structural clay products manufacturing source. On September 10, 2010, General Shale Brick, Inc. submitted an application to the OAQ requesting to renew its operating permit. General Shale Brick, Inc. was issued its first Part 70 Operating Permit Renewal T109-16617-00002 on June 12, 2006.

Source Definition

- (a) The following conclusion was initially determined under Part 70 Operating Permit Renewal T109-16617-00002 on June 12, 2006, and was modified under Significant Source Modification 109-22854-00002 on November 22, 2006:

"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."

However, according to Significant Permit Modification 109-29219-00002 issued on August 19, 2010, the source has permanently shut down the brick manufacturing line, identified as Line 1, located at Plant No. 20. Furthermore, the "New Plant" has been renamed Plant No. 43.

- (b) IDEM, OAQ has also made the following determination regarding the definition of "source" for the brick crushing operations:

This brick and structural clay products manufacturing source consists of these plants:

- (1) General Shale Brick, Inc. is located at 148 Sycamore Lane, Mooresville, Indiana; and

(2) Power Screens is located at 148 Sycamore Lane, Mooreville, Indiana.

In order to consider the plants as one major source, all three of the following criteria must be met:

- The plants must have common ownership or common control;
- The plants must have the same two digit SIC code or a support relationship; and
- The plants must be located on contiguous or adjacent properties.

IDEM has determined that these plants are not one major source based on the facts that are given below. Both plants are located on the same property. However, both plants do not have the same owner or the same two-digit SIC code, so we have to consider the questions of "common control" and "support facility".

IDEM's Nonrule Policy Document Air-005 sets out two independent tests to determine if common control exists. These two tests guide the determination of whether the brick plant and the portable crusher plant are under common control. The first test, the auxiliary activity test, determines whether one plant performs an auxiliary activity which directly serves the purpose of a primary activity and whether the owner or operator of the primary activity has a major role in the day-to-day operations of the auxiliary activity. An auxiliary activity directly serves the purpose of a primary activity by supplying a necessary raw material to the primary activity or performing an integral part of the production process for the primary activity. Day-to-day control of the auxiliary activity by the primary activity may be evidenced by several factors including the auxiliary providing a majority of its output to the primary, the auxiliary unable to provide products or services to a third party without the primary's consent, a contract that gives the primary the ability to assume control of the auxiliary or a requirement that the auxiliary submit periodic reports to the primary.

Powers Screens will provide a service by crushing unsalable brick for the brick plant. However, General Shale Brick, Inc. will not have a role in the day-to-day operations of the crusher plant. The crusher plant will operate at the brick plant for less than two months in one year, after the brick plant accumulates material to be crushed. Once the accumulated brick is crushed, the crusher plant will not return for two to three years. The crushed brick pieces are used as gravel, and the resulting fine brick dust is sold as a separate product. Nothing from the crusher operation is used as a raw material in the brick making process. Brick crushing is not an integral part of the brick production process since all the crushing can be done in less than two months every two to three years, even though brick production is carried out during the entire time. Therefore, the first common control test is not met.

The second common control test in the non-rule policy is the "but/for" test. This test focuses on whether the auxiliary activity would exist absent the needs of the primary activity. If all or a majority of the output of the auxiliary activity is consumed by the primary activity, the "but/for" test is satisfied. The crusher plant is located at the brick plant for about one month every two to three years. Less than 20% of the crushing plants' annual output is used at the brick plant. Powers Screens moves the crusher plant to other customer locations when not at use at the brick plant. If General Shale Brick, Inc. were to close its brick plant, Powers Screens could continue to use the crusher plant at other customer locations; therefore, the second common control test is also not met. Since neither control test is met, there is no common control, and the first part of the source definition is not met as between brick plant and the crusher plant.

A plant is a support facility to another plant if it dedicates 50% or more of its output to the other plant. The crusher plant will not be dedicating 50% or more of its output to the brick

plant. The crusher plant will be a portable source that will move to other customer locations during the course of the year. Therefore, the crusher plant is not a support facility to the brick plant. The brick plant and the crusher plant do not meet the second part of the major source definition.

Therefore, based on this evaluation these plants are not considered one (1) major source, as defined by 326 IAC 2-7-1(22).

- (c) IDEM, OAQ has also made the following determination regarding the definition of "source" for the quarry operation:

This brick and structural clay products manufacturing source consists of these plants:

- (1) General Shale Brick, Inc. ("the brick plant") is located at 148 Sycamore Lane, Mooreville, Indiana; and
- (2) General Shale Brick, Inc. ("the quarry") is located west of the intersection of Merriman Road and North Bethel Road (North County Road 200E), Mooreville, Indiana.

In order to consider the plants as one major source, all three of the following criteria must be met:

- The plants must have common ownership or common control;
- The plants must have the same two digit SIC code or a support relationship; and
- The plants must be located on contiguous or adjacent properties.

The brick plant and the quarry have the same owner, so common ownership and common control exists as to them.

The SIC Code Manual of 1987 sets out how to determine the proper SIC Code for each type of business. More information about SIC Codes is available at http://www.osha.gov/pls/imis/sic_manual.html on the internet. The brick plant has the two-digit SIC Code 32 for the Major Group Stone, Clay, Glass, and Concrete Products. The quarry has the two-digit SIC Code 14 for the Major Group Mining and Quarrying of Nonmetallic Minerals, Except Fuels. Therefore, the quarry and the brick plant do not have the same two-digit SIC code. However, a plant is a support facility to another plant if it dedicates 50% or more of its output to the other plant. The quarry sends 100% of its output to the brick plant; for that reason, the quarry is a support facility to the brick plant. Therefore, the brick plant and the quarry meet the second part of the major source definition.

The last criterion of the definition is whether the plants are on contiguous or adjacent properties. The brick plant and the quarry are located on separate properties that are one mile apart. Since they are not on contiguous properties, IDEM examined whether the brick plant and the quarry are on adjacent properties.

The term "adjacent" is not defined in Indiana's air permitting rules. IDEM, OAQ has located a May 21, 1988 letter from U.S. EPA Region VIII to the Utah Division of Air Quality regarding the term "adjacent". This letter is in no way binding on IDEM, OAQ, but it is persuasive. Region VIII stated that any evaluation of what is "adjacent" must relate the guiding principal of a common sense notion of "source". The evaluation should look at whether the distance between the plants is sufficiently small that it enables them to operate as a single source. Some sample questions are:

1. Are materials routinely transferred between the plants?

2. Do managers or other workers frequently shuttle back and forth to be involved actively in the plants?
3. Is the production process itself split in any way between the plants?

All of the material mined at the quarry is sent to the brick plant and used in the production of brick. The brick plant gets 95% of its raw materials from the quarry. The brick plant and the quarry have the same manager. The manager shuttles back and forth between the two operations. The mining of the material is the first step in the brick production process. The brick plant is dependent on the quarry for raw material. The brick plant and the quarry are close enough to enable them to operate as one source, as illustrated by their common manager. The two are therefore adjacent. Since the brick plant and the quarry have the same owner, have a support relationship, and are on adjacent properties, IDEM, OAQ finds that they are part of the same major source.

- (d) Therefore, the Source Definition was incorporated into this permit as follows:

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

- (a) Plant No. 32 is located at 148 Sycamore Lane, Mooreville, Indiana;
- (b) Plant No. 43 is located at 148 Sycamore Lane, Mooreville, Indiana; and
- (c) The quarry is located west of the intersection of Merriman Road and North Bethel Road (North County Road 200E), Mooreville, Indiana.

However, these plants are located on one or more contiguous or adjacent properties, have the same two digit SIC code or have a support relationship, and are still under common ownership or common control; therefore, they are considered one (1) major source, as defined by 326 IAC 2-7-1(22).

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

- (b) One (1) clay/shale processing operation, identified as EU-001, with a maximum throughput of 100 tons of raw material per hour, using baghouse CD-001 (installed in 1993) as particulate control, exhausting to Stack EP-001, consisting of the following equipment:
 - (1) One (1) primary crusher, installed in 1970 and replaced in 1999, with a maximum capacity of 100 tons of raw material per hour. Under NSPS Subpart OOO, the primary crusher is an affected facility vented through a stack and is subject to the provisions listed in 40 CFR 60.670(d)(1).
 - (2) Two (2) Deister screens, approved in 2011 for construction, with a maximum capacity of 200 tons of raw material per hour. Under NSPS Subpart OOO, the screens are affected facilities vented through a stack.
 - (3) One (1) secondary crusher, approved in 2011 for construction, with a maximum capacity of 200 tons of raw material per hour. Under NSPS Subpart OOO, the secondary crusher is an affected facility vented through a stack.
 - (4) Raw material conveyance equipment, installed in 1970.

- (c) One (1) sand processing system, installed in 1985, consisting of the following equipment:
 - (1) Two (2) sand storage silos, identified as EU-SS1 and EU-SS2, each with a maximum capacity of 50 tons and a maximum throughput of 25 tons per hour, using baghouse CD-SS as particulate control, exhausting internally to Plant No. 32 Mill Room.
 - (2) One (1) dynamic air system, for conveyance of sand to Plant No. 32 and Plant No. 43, with a maximum capacity of 2.73 tons per hour, using baghouses CD-P32-MR and CD-P43-MR as particulate control, exhausting to Stacks EP-P32-MR and EP-P32-MR, respectively.
- (d) One (1) coal processing system, installed in 1979, with a maximum capacity of 1.5 tons per hour, consisting of one (1) coal crusher, identified as EU-CP, using baghouse CD-CP as particulate control, exhausting to Stack EP-CP.
- (e) One (1) brick manufacturing line, identified as Plant No. 32, installed in 1989 and modified in 2006 with the addition of dry injection fabric filter DIFF-02, consisting of the following equipment:
 - (1) One (1) brick making room and sand system (mill room), identified as EU-P32-MR, with a maximum capacity of 70 tons of green brick per hour, consisting of one (1) extrusion operation using baghouse CD-P32-MR as particulate control exhausting to Stack EP-P32-MR, and the Plant Room 32 pugmill, material storage and conveyance equipment.
 - (2) One (1) tunnel pre-dryer and one (1) tunnel dryer, identified as EU-P32-BD1, using waste heat from Plant No. 32 Kiln, with a maximum capacity of 13.7 tons of green brick per hour, using dry injection fabric filter DIFF-02 as particulate, SO₂, and HAP control, exhausting to Stack 32KE.
 - (3) One (1) coal and natural gas-fired kiln, identified as EU-P32-K, rated at 25 million British thermal units per hour, with a maximum capacity of 13.7 tons of brick per hour, using dry injection fabric filter DIFF-02 as particulate, SO₂, and HAP control, exhausting to Stack 32KE.
 - (4) One (1) lime/sodium bicarbonate storage silo, identified as EU-LS2, with a maximum capacity of 50 tons and a maximum throughput of 25 tons per hour, using dry injection fabric filter DIFF-02 as particulate control, exhausting to Stack 32KE.
- (f) One (1) brick manufacturing line, identified as Plant No. 43, permitted in 2006, consisting of the following equipment:
 - (1) One (1) brick making room and sand system (mill room), identified as EU-P43-MR, with a maximum capacity of 72.5 tons of green brick per hour, consisting of one (1) extrusion operation using baghouse CD-P43-MR as particulate control exhausting to Stack EP-P43-MR, and the Plant Room 43 pugmill, material storage and conveyance equipment.
 - (2) One (1) natural gas/propane brick dryer, identified as EU-P43-BD1, rated at 13.29 million British thermal units per hour, with a maximum capacity of 20.55 tons of green brick per hour, exhausting to Stack 43BD1.

- (3) One (1) coal/natural gas fired brick kiln, identified as EU-P43-K, rated at 25 million British thermal units per hour, with a maximum capacity of 20.55 tons of brick per hour, using dry injection fabric filter DIFF-03 as particulate, SO₂, and HAP control, exhausting to Stack EP-P43-K.
- (4) One (1) lime/sodium bicarbonate storage silo, identified as EU-LS3, with a maximum capacity of 50 tons and a maximum throughput of 25 tons per hour, using dry injection fabric filter DIFF-03 as particulate control, exhausting to Stack 43KE.

Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit
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The source also consists of the following emission units that were constructed and/or are operating without a permit:

- (a) One (1) quarry, constructed in 1970, with a capacity of 100 tons of raw material per hour.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour:
 - Two (2) process water heaters, identified as EU-PWH1 and EU-PWH2, with a combined maximum heat input capacity of 2.50 MMBtu per hour.
- (b) Combustion source flame safety purging on start-up.
- (c) Gasoline fuel transfer dispensing operations handling less than or equal to 1,300 gallons per day and filling storage tanks having a capacity equal to or less than 10,500 gallons:
 - One (1) storage tank, installed in 1991, identified as Gasoline, for storage of gasoline, with a maximum volume of 250 gallons. Under NESHAP Subpart CCCCCC, this is an existing affected facility. [326 IAC 8-4-6] [326 IAC 8-4-9] [40 CFR 64, Subpart CCCCCC]
- (d) Petroleum fuel (other than gasoline) dispensing facilities, having a storage tank capacity less than or equal to 10,500 gallons, and dispensing 3,500 gallons per day or less:
 - (1) One (1) storage tank, installed before 1985, identified as On-Road Fuel, for storage of diesel fuel, with a maximum volume of 250 gallons.
 - (2) One (1) storage tank, installed before 1985, identified as Off-Road Fuel, for storage of diesel fuel, with a maximum volume of 250 gallons.
 - (3) One (1) storage tank, installed before 1985, identified as Off-Road Fuel, for storage of diesel fuel, with a maximum volume of 1,000 gallons.
- (e) VOC and HAP storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
- (f) Refractory storage not requiring air pollution control equipment.
- (g) Degreasing operations that do not exceed one hundred forty-five (145) gallons per twelve (12) months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2]

- (h) Welding equipment related to manufacturing activities not resulting in the emission of HAPs.
- (i) Replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.
- (j) Paved and unpaved roads. [326 IAC 6-4]
- (k) Covered coal or coke conveying of less than or equal to three hundred sixty (360) tons per day, including the following equipment:
 - (1) One (1) dynamic air system, for conveyance of crushed coal to Plant No. 32. [326 IAC 6-3-2]
 - (2) One (1) dynamic air system, for conveyance of crushed coal to Plant No. 43. [326 IAC 6-3-2]
- (l) Uncovered coal or coke conveying of less than or equal to one hundred twenty (120) tons per day.
- (m) Emergency generators, including one (1) natural gas-fired emergency generator, located in Plant 43, installed in 2007, with a maximum generating rate of 25 hp. [40 CFR 60, Subpart JJJJ] [40 CFR 63, Subpart ZZZZ]
- (n) Farm operations, except concentrated animal feeding operations as defined in 40 CFR 122.23.
- (o) A laboratory as defined in 326 IAC 2-7-1(21)(H).
- (p) Activities with potential emissions within any of the following thresholds: equal to or less than 5 pounds per hour or 25 pounds per day PM_{10} , SO_2 , or NO_x ; equal to or less than 3 pounds per hour or 15 pounds per day VOC; equal to or less than 25 pounds per day CO; equal to or less than 0.6 tons per year or 3.29 pounds per day Pb; or greater than 1 pound per day but less than 5 pounds per day or 1 ton per year single HAP (and not regulated by a NESHAP):
 - (1) One (1) outdoor raw material storage pile, identified as EU-RMS, with a capacity of 100 tons of shale per hour.
 - (2) One (1) raw material feed hopper, installed in 1970, with emissions uncontrolled.
 - (3) One (1) ground material transfer conveyor, identified as F-GMC, installed in 1970, with emissions uncontrolled.
 - (4) One (1) ground material transfer conveyor to Plant No. 32, identified as F-C32-1, installed in 1987, with emissions uncontrolled. Under NSPS Subpart OOO, this is an affected facility enclosed in a building.
 - (5) Plant No. 32 ground material storage pile, identified as EU-P32-GMS, located indoors, with emissions uncontrolled.
 - (6) One (1) ground material transfer conveyor to Former Plant No. 20, identified as F-C20-1, installed in 1970, with emissions uncontrolled.

- (7) One (1) ground material transfer conveyor to Plant No. 43, identified as F-C43-1, permitted in 2006, with emissions uncontrolled. Under NSPS Subpart OOO, this is an affected facility enclosed in a building.
- (8) Plant No. 43 ground material storage pile, identified as EU-P43-GMS, located indoors, with emissions uncontrolled.
- (9) One (1) ground material transfer conveyor to Plant No. 43, identified as F-C43-2, permitted in 2006, with emissions uncontrolled.
- (10) One (1) coal storage area, installed in 1979, with a maximum capacity of 1.5 tons per hour, with emissions uncontrolled, consisting of one (1) outdoor coal stockpile (EU-CPILE) and one (1) coal storage hopper (EU-CH).
- (11) One (1) Plant No. 32 kiln car vacuum cleaning system, identified as EU-P32VS. [326 IAC 6-3-2]
- (12) One (1) Plant No. 43 kiln car vacuum cleaning system, identified as EU-P43VS. [326 IAC 6-3-2]
- (13) Nine (9) flame cutting stations, using oxyacetylene, each with a maximum capacity of 1 inch cutting thickness at 8 inches per minute.
- (14) Outdoor waste brick crushing operations, identified as EU-BC, with a maximum capacity of 7 tons of waste brick per hour, with emissions uncontrolled, consisting of one (1) waste brick storage pile, one (1) crushed brick storage pile, and one (1) brick dust storage pile.

Existing Approvals

Since the issuance of the Part 70 Operating Permit Renewal T109-16617-00002 on June 12, 2006, the source has constructed or has been operating under the following additional approvals:

- (a) Significant Source Modification No. 109-22854-00002, issued on September 11, 2006;
- (b) Significant Permit Modification No. 109-22865-00002, issued on November 22, 2006;
- (c) Significant Permit Modification No. 109-24454-00002, issued on January 22, 2008;
- (d) Significant Permit Modification No. 109-29219-00002, issued on August 19, 2010; and
- (e) Significant Permit Modification No. 109-30813-00002, issued on December 2, 2011.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

Air Pollution Control Justification as an Integral Part of the Process

The applicant has submitted the following justification such that the internal filters/baghouses be considered as an integral part of the two (2) kiln car vacuum cleaning systems, identified as EU-P32VS and EU-P43VS:

The vacuum systems cannot be operated without the operation of the filters.

IDEM, OAQ has evaluated the justifications and determined that the internal filters will not be considered as an integral part of the kiln car vacuum cleaning systems. Therefore, the permitting level will be determined using the potential to emit before the internal filters.

Enforcement Issue

IDEM is aware that equipment may have been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this Technical Support Document under the condition entitled "Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit".

- (a) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Morgan County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective October 19, 2007, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Basic nonattainment designation effective federally April 5, 2005, for PM _{2.5} .	

- (a) Ozone Standards
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 ozone. Morgan County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) PM_{2.5}
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 lawsuit 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 New Source Review Rule for PM_{2.5} promulgated on May 8, 2008. These rules became effective on July 15, 2008. Therefore, direct PM_{2.5} and SO₂ emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.

- (c) **Other Criteria Pollutants**
 Morgan County has been classified as attainment or unclassifiable in Indiana for all other regulated pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Unrestricted Potential Emissions

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM₁₀, PM_{2.5}, SO₂, NO_x, and CO is equal to or greater than 100 tons per year, each. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit Renewal
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

- (a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.
- (b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Potential to Emit After Issuance

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

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)										
	PM	PM ₁₀ *	PM _{2.5} *	SO ₂	NO _x	VOC	CO	GHGs	Total Fluorides	Total HAPs	Worst Single HAP ⁽¹⁾
Clay/Shale Processing Operation	13.53	3.59	3.59	-	-	-	-	-	-	-	-
Sand Silos 1 & 2	26.19	16.86	16.86	-	-	-	-	-	-	-	-

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)										
	PM	PM ₁₀ *	PM _{2.5} *	SO ₂	NO _x	VOC	CO	GHGs	Total Fluorides	Total HAPs	Worst Single HAP ⁽¹⁾
Coal Crusher	7.23	7.23	7.23	-	-	-	-	-	-	-	-
No. 32 Mill Room	11.04	11.04	11.04	-	-	-	-	-	-	-	-
No. 32 Brick Dryer	4.62	11.22	20.16	150.02	48.78	1.80	72.01	24,169	3.89	19.80	9.90
No. 32 Kiln	108.01	84.01				1.44					
No. 32 Injection Silo	5.78	2.02		-	-	-	-	809	-	-	-
No. 43 Mill Room	11.43	11.43	11.43	-	-	-	-	-	-	-	-
No. 43 Brick Dryer	6.93	16.83	16.83	0.03	8.82	2.70	27.90	6,890	-	0.11	-
No. 43 Kiln	162.02	126.01	30.24	234.02	73.18	2.16	108.01	36,254	53.11		-
No. 43 Injection Silo	5.78	2.02		-	-	-	-	-	-	-	-
Insignificant Activities	23.47	19.15	19.10	0.01	1.26	2.06	0.92	11,985	-	0.06	-
Total PTE of Entire Source	386.02	311.42	136.48	384.08	132.05	10.17	208.84	80,918	57.00	19.97	9.90
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO ₂ e	100	25	10
PSD Major Source Thresholds	250	250	NA	250	250	250	250	100,000 CO ₂ e	250	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	100	100	100	NA	NA	NA	NA	NA	NA
negl. = negligible * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM ₁₀), not particulate matter (PM), is considered as a "regulated air pollutant". ** PM _{2.5} listed is direct PM _{2.5} . (1) Worst Single HAP is hydrogen fluoride.											

- (a) This existing stationary source is major for PSD because the emissions of at least one attainment pollutant are greater than two hundred fifty (>250) tons per year, and it is not in one of the twenty-eight (28) listed source categories.
- (b) This existing stationary source is major for Emission Offset and Nonattainment NSR because the emissions of the nonattainment pollutant, PM_{2.5}, are greater than one hundred (>100) tons per year and the emissions of the nonattainment pollutant precursors, SO₂ and NO_x, are greater than one hundred (>100) tons per year each.

Federal Rule Applicability

CAM:

- (a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each existing pollutant-specific emission unit that meets the following criteria:

- (1) has a potential to emit before 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 criteria, under 40 CFR 64.1, to each existing emission unit and specified pollutant subject to CAM:

Emission Unit / Pollutant	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)
Primary Crusher (EU-001): PM	Baghouse CD-001	Y*	---	---	250	N	---
Deister Screens (EU-001): PM	Baghouse CD-001	Y*	---	---	250	N	---
Secondary Crusher (EU-001): PM	Baghouse CD-001	Y*	---	---	250	N	---
Sand Silo (EU-SS1): PM	Baghouse CD-SS	Y*	---	---	250	N	---
Sand Silo (EU-SS2): PM	Baghouse CD-SS	Y*	---	---	250	N	---
Sand Conveying System: PM	Baghouses	Y*	---	---	250	N	---
Coal Crusher (EU-CP): PM	Baghouse CD-CP	Y*	---	---	250	N	---
Pugmill (EU-P32-MR): PM	Baghouse CD-P32-MR	Y*	---	---	250	N	---
Extrusion (EU-P32-MR): PM	Baghouse CD-P32-MR	Y*	---	---	250	N	---
Brick Dryer (EU-P32-BD1): PM	Dry Injection Fabric Filter DIFF-02	Y*	---	---	250	N	---
Brick Dryer (EU-P32-BD1): PM ₁₀	Dry Injection Fabric Filter DIFF-02	Y	< 100	---	100	N	---
Kiln (EU-P32-K): PM	Dry Injection Fabric Filter DIFF-02	Y	< 250	---	250	N	---
Kiln (EU-P32-K): PM ₁₀	Dry Injection Fabric Filter DIFF-02	Y	< 100	---	100	N	---
Kiln (EU-P32-K): SO ₂	Dry Injection Fabric Filter DIFF-02	Y	> 100	< 100	100	Y	N
Kiln (EU-P32-K): HF	Dry Injection Fabric Filter DIFF-02	Y	> 10	< 10	10	Y	N
Kiln (EU-P32-K): HCl	Dry Injection Fabric Filter DIFF-02	Y	> 10	< 10	10	Y	N

Emission Unit / Pollutant	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)
Vacuum System (EU-P32VS): PM	Bag Filters	Y	< 100	---	100	N	---
Injection Silo (EU-LS2): PM	Dry Injection Fabric Filter DIFF-02	Y*	---	---	250	N	---
Injection Silo (EU-LS2): PM ₁₀	Dry Injection Fabric Filter DIFF-02	Y	< 100	---	100	N	---
Plant No. 32 Injection Conveying System: PM	Dry Injection Fabric Filter DIFF-02	Y*	---	---	250	N	---
Plant No. 32 Injection Conveying System: PM ₁₀	Dry Injection Fabric Filter DIFF-02	Y	< 100	---	100	N	---
Pugmill (EU-P43-MR): PM	Baghouse CD-P43-MR	Y*	---	---	250	N	---
Extrusion (EU-P43-MR): PM	Baghouse CD-P43-MR	Y*	---	---	250	N	---
Kiln (EU-P43-K): PM	Dry Injection Fabric Filter DIFF-03	Y	< 250	---	250	N	---
Kiln (EU-P43-K): PM ₁₀	Dry Injection Fabric Filter DIFF-03	Y	> 100	< 100	100	Y	N
Kiln (EU-P43-K): SO ₂	Dry Injection Fabric Filter DIFF-03	Y	> 100	> 100	100	Y	Y
Kiln (EU-P43-K): HF	Dry Injection Fabric Filter DIFF-03	Y	> 10	< 10	10	Y	N
Kiln (EU-P43-K): HCl	Dry Injection Fabric Filter DIFF-03	Y	> 10	< 10	10	Y	N
Vacuum System (EU-P43VS): PM	Bag Filters	Y	< 100	---	100	N	---
Injection Silo (EU-LS3): PM	Dry Injection Fabric Filter DIFF-03	Y*	---	---	250	N	---
Injection Silo (EU-LS3): PM ₁₀	Dry Injection Fabric Filter DIFF-03	Y	< 100	---	100	N	---
Plant No. 43 Injection Conveying System: PM	Dry Injection Fabric Filter DIFF-03	Y*	---	---	250	N	---
Plant No. 43 Injection Conveying System: PM ₁₀	Dry Injection Fabric Filter DIFF-03	Y	< 100	---	100	N	---

* Although a control device is present, it is not necessary in order for the emission unit to comply with the applicable emission limitations. Therefore, CAM is not applicable to this emission unit for this pollutant.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to the two brick kilns (EU-P32-K and EU-P43-K) for SO₂. CAM plans were submitted as part of Significant Source Modification No. 109-22854-00002, and the Compliance Determination and Monitoring Requirements section includes a detailed description of the CAM requirements.

As part of Significant Source Modification No. 109-22854-00002, pursuant to 40 CFR 64.2(b)(1)(i), the two brick kilns (EU-P32-K and EU-P43-K) were exempt from the requirements of 40 CFR 64 (CAM) for PM, PM₁₀, HCl, and HF because emission limitations or standards in NESHAP, Subpart JJJJJ to which the kilns were subject were proposed by the Administrator after November 15, 1990, under Section 112 of the Clean Air Act. However, on March 13, 2007, the United States Court of Appeals for District of Columbia Circuit (in *Sierra Club vs EPA*, 2007 U.S. App Lexis 5749, No. 03-1202), vacated 40 CFR 63, Subpart JJJJJ in its entirety. Therefore, based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to the two brick kilns (EU-P32-K and EU-P43-K) for HF and HCl, and the Plant No. 43 brick kiln (EU-P43-K) for PM₁₀ upon issuance of the Title V Renewal. CAM plans have been incorporated into this Part 70 permit renewal.

NSPS:

- (b) General Shale Brick, Inc. is not subject to the requirements of the NSPS for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, 40 CFR 60.110b, Subpart Kb, because each of the storage tanks has an individual volume less than the Subpart Kb applicability threshold of 75 cubic meters (19,800 gallons). Therefore, the requirements of the NSPS are not included in the permit.
- (c) General Shale Brick, Inc. is not subject to the requirements of the Standards of Performance for Coal Preparation and Processing Plants, 40 CFR 60.250, Subpart Y, because the source processes less than the Subpart Y applicability threshold of 200 tons of coal per day, pursuant to 40 CFR 60.250(a). Therefore, the requirements of the NSPS are not included in the permit.
- (d) General Shale Brick, Inc. is not subject to the requirements of the Standards of Performance for Metallic Mineral Processing Plants, 40 CFR 60.380, Subpart LL, because the source does not produce metallic mineral concentrates from ore. Therefore, the requirements of the NSPS are not included in the permit.
- (e) The clay/shale processing operation (EU-001) is subject to the Standards of Performance for Nonmetallic Mineral Processing Plants, 40 CFR 60.670, Subpart OOO, which is incorporated by reference as 326 IAC 12, and has been included as follows:
 - (1) The following facilities are not subject to the requirements of the Standards of Performance for Nonmetallic Mineral Processing Plants, 40 CFR 60.670, Subpart OOO, because, pursuant to 40 CFR 60.670(a)(1), the provisions of Subpart OOO are only applicable to each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, and enclosed truck or railcar loading station:
 - (a) One (1) quarry, constructed in 1970, with a capacity of 100 tons of raw material per hour.

Insignificant Activities

- (p) Activities with potential emissions within any of the following thresholds: equal to or less than 5 pounds per hour or 25 pounds per day PM_{10} , SO_2 , or NO_x ; equal to or less than 3 pounds per hour or 15 pounds per day VOC; equal to or less than 25 pounds per day CO; equal to or less than 0.6 tons per year or 3.29 pounds per day Pb; or greater than 1 pound per day but less than 5 pounds per day or 1 ton per year single HAP (and not regulated by a NESHAP):
 - (1) One (1) outdoor raw material storage pile, identified as EU-RMS, with a capacity of 100 tons of shale per hour.
 - (5) Plant No. 32 ground material storage pile, identified as EU-P32-GMS, located indoors, with emissions uncontrolled.
 - (8) Plant No. 43 ground material storage pile, identified as EU-P43-GMS, located indoors, with emissions uncontrolled.

The only equipment utilized at the quarry are front end loaders which excavate the raw material out of the ground and then dump the material into trucks for transporting the raw material to the brick plant.

- (2) The following facilities are not subject to the requirements of the Standards of Performance for Nonmetallic Mineral Processing Plants, 40 CFR 60.670, Subpart OOO, because, pursuant to 40 CFR 60.670(e), the date of construction predates the applicability date of August 31, 1983:
 - (p) Activities with potential emissions within any of the following thresholds: equal to or less than 5 pounds per hour or 25 pounds per day PM_{10} , SO_2 , or NO_x ; equal to or less than 3 pounds per hour or 15 pounds per day VOC; equal to or less than 25 pounds per day CO; equal to or less than 0.6 tons per year or 3.29 pounds per day Pb; or greater than 1 pound per day but less than 5 pounds per day or 1 ton per year single HAP (and not regulated by a NESHAP):
 - (2) One (1) raw material feed hopper, installed in 1970, with emissions uncontrolled.
 - (3) One (1) ground material transfer conveyor, identified as F-GMC, installed in 1970, with emissions uncontrolled.
 - (6) One (1) ground material transfer conveyor to Former Plant No. 20, identified as F-C20-1, installed in 1970, with emissions uncontrolled.
- (3) Truck dumping (with the use of front end loaders) into the feed hopper of the clay/shale processing operation (EU-001) is not subject to the requirements of the Standards of Performance for Nonmetallic Mineral Processing Plants, 40 CFR 60.670, Subpart OOO, because, pursuant to 40 CFR 60.672(d), the process is exempt from the requirements of this section.
- (4) The following facilities are not subject to the requirements of the Standards of Performance for Nonmetallic Mineral Processing Plants, 40 CFR 60.670, Subpart OOO:

- (d) One (1) brick manufacturing line, identified as Plant No. 32, installed in 1989 and modified in 2006 with the addition of dry injection fabric filter DIFF-02.
- (e) One (1) brick manufacturing line, identified as Plant No. 43, permitted in 2006.

Insignificant Activities

- (p) Activities with potential emissions within any of the following thresholds: equal to or less than 5 pounds per hour or 25 pounds per day PM₁₀, SO₂, or NO_x; equal to or less than 3 pounds per hour or 15 pounds per day VOC; equal to or less than 25 pounds per day CO; equal to or less than 0.6 tons per year or 3.29 pounds per day Pb; or greater than 1 pound per day but less than 5 pounds per day or 1 ton per year single HAP (and not regulated by a NESHAP):
 - (9) One (1) ground material transfer conveyor to Plant No. 43, identified as F-C43-2, permitted in 2006, with emissions uncontrolled.

Pursuant to EPA's Applicability Determination Index (ADI) database (<http://www.epa.gov/compliance/monitoring/programs/caa/adi.html>) posting dated August 15, 2002 (Control Number: 0200088), since the aggregate coming from the crushed material storage piles is used in the manufacture of brick rather than being crushed or ground, all emission units following the storage locations are not affected facilities in a production line at a nonmetallic mineral processing plant. Therefore, the facilities listed above are not subject to the requirements of the Standards of Performance for Nonmetallic Mineral Processing Plants, 40 CFR 60.670, Subpart OOO.

- (5) Pursuant to 40 CFR 60.670(d)(1), if an existing facility is replaced by a piece of equipment of equal or smaller size, has the same function as the existing facility, and is not the replacement of all facilities on a production line, the new facility is exempt from the requirements of 40 CFR 60.672, 40 CFR 60.674, and 40 CFR 60.675. Therefore, pursuant to 40 CFR 60.670(d)(2), the Permittee was required in Part 70 Operating Permit Renewal No. 109-16617-00002 to submit information required in 40 CFR 60.676(a) for the following emission unit:
 - (a) One (1) clay/shale processing operation, identified as EU-001, with a maximum throughput of 100 tons of raw material per hour, using baghouse CD-001 (installed in 1993) as particulate control, exhausting to Stack EP-001, consisting of the following equipment:
 - (1) One (1) primary crusher, installed in 1970 and replaced in 1999, with a maximum capacity of 100 tons of raw material per hour. Under NSPS Subpart OOO, the primary crusher is an affected facility vented through a stack and is subject to the provisions listed in 40 CFR 60.670(d)(1).

The Permittee was required to submit to IDEM, OAQ the following information:

- (A) The rated capacity in megagrams or tons per hour of the grinder that was constructed in 1970, and
- (B) The rated capacity in tons per hour of the grinder constructed in 1999.

The source submitted the above information to IDEM, OAQ on July 19, 1999 in the application for AAT 109-11162-00002, issued on August 27, 1999. IDEM, OAQ verified that the source complied with the requirements of 40 CFR 676(a)(1), which made the replacement grinder exempt from the requirements of 40 CFR 60.672, 40 CFR 60.674, and 40 CFR 60.675.

The entire rule has been included as Attachment A to the permit. The primary crusher is subject to the following portions of 40 CFR 60, Subpart OOO:

- (A) 40 CFR 60.670(a), (d), (e), (f);
 - (B) 40 CFR 60.671;
 - (C) 40 CFR 60.673;
 - (D) 40 CFR 60.676(a)(1), (h), (i)(1), (j), (k); and
 - (E) Table 1 to 40 CFR 63, Subpart OOO.
- (6) Pursuant to 40 CFR 60.670(a)(1), the provisions of Subpart OOO 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 specific facilities include the following:
- (a) One (1) clay/shale processing operation, identified as EU-001, consisting of the following equipment:
 - (2) Two (2) Deister screens, approved in 2011 for construction, with a maximum capacity of 200 tons of raw material per hour, using baghouse CD-001 as particulate control, exhausting to Stack EP-001. Under NSPS Subpart OOO, this is an affected facility vented through a stack.
 - (3) One (1) secondary crusher, approved in 2011 for construction, with a maximum capacity of 200 tons of raw material per hour, using baghouse CD-001 as particulate control, exhausting to Stack EP-001. Under NSPS Subpart OOO, this is an affected facility vented through a stack.

Insignificant Activities

- (p) Activities with potential emissions within any of the following thresholds: equal to or less than 5 pounds per hour or 25 pounds per day PM_{10} , SO_2 , or NO_x ; equal to or less than 3 pounds per hour or 15 pounds per day VOC; equal to or less than 25 pounds per day CO; equal to or less than 0.6 tons per year or 3.29 pounds per day Pb; or greater than 1 pound per day but less than 5 pounds per day or 1 ton per year single HAP (and not regulated by a NESHAP):
 - (4) One (1) ground material transfer conveyor to Plant No. 32, identified as F-C32-1, installed in 1987, with emissions uncontrolled. Under NSPS Subpart OOO, this is an affected facility enclosed in a building.
 - (7) One (1) ground material transfer conveyor to Plant No. 43, identified as F-C43-1, permitted in 2006, with emissions uncontrolled. Under NSPS Subpart OOO, this is an affected facility enclosed in a building.

Upon the issuance of this permit, General Shale Brick, Inc. will be subject to Subpart OOO, making the transfer conveyors newly-permitted existing affected sources. Pursuant to 40 CFR 60.676(i)(1), a notification of start-up must be submitted no later than 15 calendar days after the issuance of this permit.

Pursuant to 40 CFR 60.670(e), the Permittee shall comply with the requirements of 40 CFR 60, Subpart OOO upon the issuance of this permit.

The entire rule has been included as Attachment A to the permit. The facilities listed above are subject to the following portions of 40 CFR 60, Subpart OOO:

- (A) 40 CFR 60.670(a), (d), (e), (f);
 - (B) 40 CFR 60.671;
 - (C) 40 CFR 60.672(a), (b), (d), (e);
 - (D) 40 CFR 60.673;
 - (E) 40 CFR 60.674(c), (d);
 - (F) 40 CFR 60.675(a), (b), (c)(1)(i), (c)(1)(ii), (c)(3), (d), (e), (g), (i);
 - (G) 40 CFR 60.676(a)(1), (b), (f), (h), (i)(1), (j), (k);
 - (H) Table 1 to 40 CFR 63, Subpart OOO;
 - (I) Table 2 to 40 CFR 63, Subpart OOO; and
 - (J) Table 3 to 40 CFR 63, Subpart OOO.
- (f) General Shale Brick, Inc. is not subject to the requirements of the Standards of Performance for Calciners and Dryers in Mineral Industries, 40 CFR 60.730, Subpart UUU, because only the calcining and drying of raw materials prior to firing of the brick are covered under this subpart. The brick dryer and kiln operations are for drying bricks and not drying raw materials. Therefore, the requirements of the NSPS are not included in the permit.
- (g) General Shale Brick, Inc. is not subject to the requirements of the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60.4200, Subpart IIII, because the emergency generator utilizes a spark ignition internal combustion engine. Therefore, the requirements of the NSPS are not included in the permit.
- (h) The emergency generator is subject to the requirements of the Standards of Performance for Stationary Spark Ignition Internal Combustion Engines, 40 CFR 63.4230, Subpart JJJJ, which is incorporated by reference as 326 IAC 12. The specific insignificant activity includes the following:
- (m) Emergency generators, including one (1) natural gas-fired emergency generator, located in Plant 43, installed in 2007, with a maximum generating rate of 25 hp. [40 CFR 60, Subpart JJJJ] [40 CFR 63, Subpart ZZZZ]

Pursuant to 40 CFR 60.4230(a), the date that construction commences is the date the engine is ordered by the owner or operator. This engine was ordered after June 12, 2006, and it was manufactured in 2007.

The entire rule has been included as Attachment B to the permit. This unit is subject to the following portions of 40 CFR 60, Subpart JJJJ:

- (1) 40 CFR 63.4230(a)(6);
- (2) 40 CFR 63.4236; and
- (3) 40 CFR 63.4248.

NESHAP:

- (i) General Shale Brick, Inc. is not subject to the National Emission Standards for Halogenated Solvent Cleaning, 40 CFR Part 63.460, Subpart T, because the degreasers do not use halogenated solvents. Therefore, the requirements of the NESHAP are not included in the permit.
- (j) The emergency generator is subject to the requirements of the National Emissions Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63.6580, Subpart ZZZZ, which is incorporated by reference as 326 IAC 20-82. This unit is considered a new emergency stationary RICE. The specific insignificant activity includes the following:
 - (m) Emergency generators, including one (1) natural gas-fired emergency generator, located in Plant 43, installed in 2007, with a maximum generating rate of 25 hp. [40 CFR 60, Subpart JJJJ] [40 CFR 63, Subpart ZZZZ]

The entire rule has been included as Attachment C to the permit. This unit is subject to the following portions of 40 CFR 63, Subpart ZZZZ:

- (1) 40 CFR 63.6580;
- (2) 40 CFR 63.6585(a), (c); and
- (3) 40 CFR 63.6590(a)(2)(iii), (c)(1).

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 ZZZZ.

- (k) General Shale Brick, Inc. has the potential to emit greater than 10 tons per year of a single HAP and 25 tons per year of a combination of HAPs. Therefore, the NESHAP for Brick and Structural Clay Products Manufacturing (40 CFR 63.8380, Subpart JJJJJ) would have applied to the source. However, on March 13, 2007, the United States Court of Appeals for District of Columbia Circuit (in Sierra Club vs EPA, 2007 U.S. App Lexis 5749, No. 03-1202), vacated 40 CFR 63, Subpart JJJJJ in its entirety. Therefore, General Shale Brick, Inc. was no longer subject to the requirements of 40 CFR 63, Subpart JJJJJ. In the event EPA should promulgate the requirements of 40 CFR 63, Subpart JJJJJ a second time, the source has decided to limit their HAP emissions below the major source threshold as follows:
 - (1) The HF emissions from the brick kilns EU-P32-K and EU-P43-K shall not exceed 0.057 lb/ton, each.
 - (2) The HCl emissions from the brick kilns EU-P32-K and EU-P43-K shall not exceed 0.056 lb/ton, each.
 - (3) The production of bricks from Plant No. 32 shall not exceed 120,012 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

- (4) The production of bricks from Plant No. 43 shall not exceed 180,018 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the above limits, combined with the potential to emit HAPs from other emission units at the source, shall limit single HAP emissions from the entire source to less than ten (10) tons per twelve (12) consecutive month period and combined HAP emissions from the entire source to less than 25 tons per twelve (12) consecutive month period. This shall render the requirements of 40 CFR 63, Subpart JJJJJ not applicable.

Therefore, the requirements of the NESHAP are not included in the permit.

- (l) The requirements of the following NESHAPs under 40 CFR Part 63 are not included in the permit:
- NESHAP for Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR 63.7480, Subpart DDDDD);
 - NESHAP for Clay Ceramics Manufacturing (40 CFR 63.8530, Subpart KKKKK); and
 - NESHAP for Refractory Products Manufacturing (40 CFR 63.9780, Subpart SSSSS).

These NESHAPs apply only to major sources of hazardous air pollutants. Since the limited potential to emit of any single HAP is less than 10 tons per year and the limited potential to emit of all combined HAPs is less than 25 tons per year, General Shale Brick, Inc. is an area source of HAPs; therefore, General Shale Brick, Inc. is not subject to these NESHAPs. Additionally, there are no emission units at the source which meet the applicability criteria for these regulations, even if the source was determined to be a major source of HAPs.

- (m) The gasoline dispensing operation is subject to the requirements of the NESHAP for Source Category: Gasoline Dispensing Facilities, 40 CFR 63.11110, Subpart CCCCCC. This unit is considered an existing affected facility.

The specific facility includes the following:

Insignificant Activities

- (c) Gasoline fuel transfer dispensing operations handling less than or equal to 1,300 gallons per day and filling storage tanks having a capacity equal to or less than 10,500 gallons:

One (1) storage tank, installed in 1991, identified as Gasoline, for storage of gasoline, with a maximum volume of 250 gallons. Under NESHAP Subpart CCCCCC, this is an existing affected facility. [326 IAC 8-4-6] [326 IAC 8-4-9] [40 CFR 64, Subpart CCCCCC]

The entire rule has been included as Attachment D to the permit. This unit is subject to the following portions of Subpart CCCCCC:

- (1) 40 CFR 63.11110;
- (2) 40 CFR 63.11111(a), (b), (e), (f), (h), (i), (j), (k);
- (3) 40 CFR 63.11112(a), (d);
- (4) 40 CFR 63.11113(b), (c), (e)(2);
- (5) 40 CFR 63.11115;
- (6) 40 CFR 63.11116;

- (7) 40 CFR 63.11125(b), (d);
- (8) 40 CFR 63.11126(b);
- (9) 40 CFR 63.11130;
- (10) 40 CFR 63.11131; and
- (11) 40 CFR 63.11132.

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 CCCCC.

- (n) General Shale Brick, Inc. is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers, 40 CFR 63.11193, Subpart JJJJJ, because the source does not utilize boilers. Therefore, the requirements of the NESHAP are not included in the permit.
- (o) General Shale Brick, Inc. is not subject to the requirements of the NESHAP for Clay Ceramics Manufacturing Area Sources, 40 CFR 63.11435, Subpart RRRRR, because the source does not meet the definition of a clay ceramics manufacturing facility, as defined in 40 CFR 63.11444. Therefore, the requirements of the NESHAP are not included in the permit.

State Rule Applicability - Entire Source

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

326 IAC 2-2 (PSD)

- (a) The potential to emit from Plant 20, constructed in 1970 and modified in 1979, was less than 250 tons per year for each regulated air pollutant. Therefore, the source was a minor source pursuant to 326 IAC 2-2 (PSD).
- (b) Pursuant to PC (55) 1634, issued April 20, 1986, Plant 32 was constructed, and the sulfur dioxide emissions from each tunnel kiln (the existing Plant 20 and the new Plant 32) were limited to less than 249 tons per twelve (12) consecutive month period. Therefore, the modification was minor for PSD. After the modification, the entire source had limited SO₂ emissions greater than 250 tons per year. Therefore, the source became a major source under PSD after the modification.
- (c) Modifications to the source in 1993 and 1999 did not require PSD modifications because the emissions increase of each modification did not exceed PSD significant levels.
- (d) Prior to the addition of Plant No. 43 permitted in 2006, the source had the potential to emit greater than 250 tons per year of SO₂. Therefore, the source would have been major for PSD. Pursuant to Significant Permit Modification No. 109-22865-00002 and Significant Permit Modification No. 109-24454-00002, the source added control devices to its existing kiln operations, limiting the SO₂ emissions from existing units to below the PSD major source threshold as follows:
 - (1) The production of bricks from Plant No. 32 shall not exceed 120,012 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

- (2) The SO₂ emissions from the following operations shall not exceed the emission limits listed in the table below:

Unit(s)	Unit ID(s)	Control Device ID	SO ₂ Emission Limit (lb/ton)
Plant No. 32 Brick Dryer & Plant No. 32 Brick Kiln	EU-P32-BD1 & EU-P32-K	DIFF-02	2.50

Compliance with these limits, combined with the potential to emit SO₂ from other emission units at the source, shall limit the SO₂ emissions to less than 250 tons per year each from the source existing prior to the addition of Plant No. 43. Therefore, the source prior to the addition of Plant No. 43 was a minor source pursuant to 326 IAC 2-2 (PSD).

- (e) Pursuant to Significant Permit Modification No. 109-22865-00002 and Significant Permit Modification No. 109-24454-00002, the source was previously determined to have potential to emit PM greater than 250 tons per year, and source-wide PM emissions were limited in order to render 326 IAC 2-2 not applicable as follows:

Emission Unit	PM Emission Limitation (lb/ton)	PM PTE (tons/yr)
Clay/Shale Processing Operation (EU-001)	n/a	10.95
Plant No. 20 and Plant No. 32 Operations (EU-002)	0.0063 (each mill room), 0.336 (each kiln)	45.8
Brick Crushing	n/a	4.44
Insignificant Activities	n/a	31.2
	TOTAL	92.4

Subsequently, pursuant to Significant Permit Modification No. 109-29219-00002, the source permanently shut down the brick manufacturing line identified as Plant No. 20. As a result, the source existing prior to the addition of Plant No. 43 had the potential to emit less than 250 tons per year of PM as follows (based upon the Technical Support Document (TSD) for Operating Permit Renewal No. T109-29661-00002):

Emission Unit	PM Emission Limitation (lb/ton)	PM PTE (tons/yr)
Clay/Shale Processing Operation (EU-001)	n/a	13.32
Sand Processing System	n/a	26.19
Coal Crusher	n/a	7.23
Plant No. 32 Mill Room	n/a	47.92
Plant No. 32 Brick Dryer	n/a	4.62
Plant No. 32 Kiln	n/a	108.01
Plant No. 32 Injection Silo	n/a	5.78
Insignificant Activities	n/a	18.43
	TOTAL	231.50

Stack tests results for the Plant No. 32 Kiln indicate actual PM emissions have never exceeded 250 tons per year. Therefore, the 326 IAC 2-2 minor limits established previously for PM for the Plant No. 32 Mill Room and the Plant No. 32 Kiln have been removed.

- (f) Pursuant to Significant Permit Modification No. 109-22865-00002 and Significant Permit Modification No. 109-24454-00002, the source was previously determined to have potential to emit PM₁₀ greater than 250 tons per year, and source-wide PM₁₀ emissions were limited in order to render 326 IAC 2-2 not applicable as follows:

Emission Unit	PM ₁₀ Emission Limitation (lb/ton)	PM ₁₀ PTE (tons/yr)
Clay/Shale Processing Operation (EU-001)	n/a	1.01
Plant No. 20 and Plant No. 32 Operations (EU-002)	0.0036 (each mill room), 0.336 (each kiln)	44.1
Brick Crushing	n/a	2.22
Insignificant Activities	n/a	31.2
TOTAL		78.6

Subsequently, pursuant to Significant Permit Modification No. 109-29219-00002, the source permanently shut down the brick manufacturing line identified as Plant No. 20. As a result, the source existing prior to the addition of Plant No. 43 had the potential to emit less than 250 tons per year of PM₁₀ as follows (based upon the Technical Support Document (TSD) for Operating Permit Renewal No. T109-29661-00002):

Emission Unit	PM ₁₀ Emission Limitation (lb/ton)	PM ₁₀ PTE (tons/yr)
Clay/Shale Processing Operation (EU-001)	n/a	2.06
Sand Processing System	n/a	16.86
Coal Crusher	n/a	7.23
Plant No. 32 Mill Room	n/a	23.33
Plant No. 32 Brick Dryer	n/a	11.22
Plant No. 32 Kiln	n/a	84.01
Plant No. 32 Injection Silo	n/a	2.02
Insignificant Activities	n/a	10.79
TOTAL		157.52

Stack tests results for the Plant No. 32 Kiln indicate actual PM₁₀ emissions have never exceeded 250 tons per year. Therefore, the 326 IAC 2-2 minor limits established previously for PM₁₀ for the Plant No. 32 Mill Room and the Plant No. 32 Kiln have been removed.

- (g) The potential to emit of SO₂ from the Plant No. 43 modification was greater than 250 tons per year each. Therefore, 326 IAC 2-2 would have applied to the Plant No. 43 modification. Pursuant to Significant Permit Modification No. 109-22865-00002 and Significant Permit Modification No. 109-30813-00002, the source limited the SO₂ emissions from the Plant No. 43 modification to below the major source threshold of 250 tons per year each as follows:

- (1) The production of bricks from Plant No. 43 shall not exceed 180,018 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (2) The SO₂ emissions from the following operations shall not exceed the emission limits listed in the table below:

Unit(s)	Unit ID(s)	Control Device ID	SO ₂ Emission Limit (lb/ton)
Plant No. 43 Brick Kiln	EU-P43-K	DIFF-03	2.60

This rendered the requirements of 326 IAC 2-2 (PSD) not applicable to the Plant No. 43 modification. After the modification, the entire source had limited SO₂ emissions greater than 250 tons per year. Therefore, the source became a major source under PSD after the Plant No. 43 modification.

- (h) Pursuant to Significant Permit Modification No. 109-22865-00002 and Significant Permit Modification No. 109-24454-00002, the Plant No. 43 modification was previously determined to have potential to emit PM greater than 250 tons per year, and PM emissions due to the Plant No. 43 modification were limited in order to render 326 IAC 2-2 not applicable as follows:

Emission Unit	PM Emission Limitation (lb/ton)	PM PTE (tons/yr)
Plant No. 43 Mill Room	0.0063	2.01
Plant No. 43 Brick Dryer	n/a	16.8
Plant No. 43 Kiln	0.336	30.3
Insignificant Activities	n/a	1.378
TOTAL		50.5

Based upon the Technical Support Document (TSD) for Operating Permit Renewal No. T109-29661-00002, revised emission calculations indicate the Plant No. 43 modification had the potential to emit less than 250 tons per year of PM as follows:

Emission Unit	PM Emission Limitation (lb/ton)	PM PTE (tons/yr)
Plant No. 43 Mill Room	n/a	49.63
Plant No. 43 Brick Dryer	n/a	6.93
Plant No. 43 Kiln	n/a	162.02
Plant No. 43 Injection Silo	n/a	5.78
Insignificant Activities	n/a	5.05
TOTAL		229.41

Stack tests results for the Plant No. 43 Kiln indicate actual PM emissions have never exceeded 250 tons per year. Therefore, the 326 IAC 2-2 minor limits established previously for PM for the Plant No. 43 Mill Room and the Plant No. 43 Kiln have been removed.

- (i) Pursuant to Significant Permit Modification No. 109-22865-00002 and Significant Permit Modification No. 109-24454-00002, the Plant No. 43 modification was previously determined to have potential to emit PM₁₀ greater than 250 tons per year, and PM₁₀

emissions due to the Plant No. 43 modification were limited in order to render 326 IAC 2-2 not applicable as follows:

Emission Unit	PM ₁₀ Emission Limitation (lb/ton)	PM ₁₀ PTE (tons/yr)
Plant No. 43 Mill Room	0.0036	1.14
Plant No. 43 Brick Dryer	n/a	16.8
Plant No. 43 Kiln	0.336	30.3
Insignificant Activities	n/a	0.984
	TOTAL	49.3

Based upon the Technical Support Document (TSD) for Operating Permit Renewal No. T109-29661-00002, revised emission calculations indicate the Plant No. 43 modification had the potential to emit less than 250 tons per year of PM₁₀ as follows:

Emission Unit	PM ₁₀ Emission Limitation (lb/ton)	PM ₁₀ PTE (tons/yr)
Plant No. 43 Mill Room	n/a	24.16
Plant No. 43 Brick Dryer	n/a	16.83
Plant No. 43 Kiln	n/a	126.01
Plant No. 43 Injection Silo	n/a	2.02
Insignificant Activities	n/a	4.57
	TOTAL	173.59

Stack tests results for the Plant No. 43 Kiln indicate actual PM₁₀ emissions have never exceeded 250 tons per year. Therefore, the 326 IAC 2-2 minor limits established previously for PM₁₀ for the Plant No. 43 Mill Room and the Plant No. 43 Kiln have been removed.

326 IAC 2-3 (Emission Offset) and 326 IAC 2-1.1-5 (Nonattainment NSR)

(a) VOC

At various times the county was nonattainment for VOC. However, this source has never had the potential to emit greater than 25 tons per year of VOC; consequently, the source has never exceeded Emission Offset major source thresholds of 100 tons per year of VOC or Emission Offset significant levels for marginal nonattainment of 100 tons per year of VOC. Therefore, the requirements of 326 IAC 2-3 (Emission Offset) have never applied to the source for VOC.

(b) NO_x

- (1) According to the TSD for Part 70 Operating Permit No. T109-7388-00002, Morgan County was designated as attainment for all regulated air pollutants. Therefore, the requirements of 326 IAC 2-3 (Emission Offset) were not applicable to the source as of January 25, 1999.
- (2) According to the TSD for Part 70 Operating Permit Renewal No. T109-16617-00002, Morgan County was re-designated as basic nonattainment for 8-hour ozone, and NO_x had been determined to be a precursor for ozone. However, the source had the potential to emit less than 100 tons per year of NO_x. Therefore, the source was a minor source pursuant to 326 IAC 2-3 (Emission Offset) and rendered the requirements of 326 IAC 2-3 not applicable to the source.

- (3) According to the TSD for Significant Permit Modification No. 109-22865-00002, prior to the addition of Plant No. 43 permitted in 2006, the source had the potential to emit greater than 100 tons per year of NO_x. At the time, Morgan County was designated as basic nonattainment for 8-hour ozone, and NO_x had been determined to be a precursor for ozone. Therefore, the source would have been a major source pursuant to 326 IAC 2-3 for NO_x. Pursuant to Significant Permit Modification No. 109-22865-00002, the source limited their NO_x emissions from existing units to below the Emission Offset major source threshold. Compliance with these limits, combined with the potential to emit NO_x from other emission units at the source, limited the NO_x emissions to less than 100 tons per twelve (12) consecutive month period for NO_x. Therefore, the source prior to the addition of Plant No. 43 was a minor source pursuant to 326 IAC 2-3 (Emission Offset).

The potential to emit of NO_x from the Plant No. 43 modification was less than 100 tons per year. Therefore, the Plant No. 43 modification was not a major modification pursuant to 326 IAC 2-3. After the modification, the entire source had limited NO_x emissions greater than 100 tons per year. Therefore, the source became a major source under Emission Offset after the Plant No. 43 modification.

- (4) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, and Shelby, counties as attainment for the 8-hour ozone standard.

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 ozone. Since Morgan County is currently designated as attainment or unclassifiable for ozone, NO_x emissions are reviewed pursuant to the requirements for 326 IAC 2-2 (PSD) and not 326 IAC 2-3 (Emission Offset).

- (5) The existing entire source has the potential to emit less than 250 tons per year of NO_x. Since Morgan County is no longer nonattainment for the 8-hour ozone standard, the 326 IAC 2-3 minor limits established previously for NO_x have been removed.

(c) PM₁₀, PM_{2.5}, and SO₂

- (1) According to the TSD for Part 70 Operating Permit No. T109-7388-00002, Morgan County was designated as attainment for all regulated air pollutants. Therefore, the requirements of 326 IAC 2-3 (Emission Offset) and 326 IAC 2-1.1-5 (Nonattainment NSR) were not applicable to the source as of January 25, 1999.
- (2) U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, 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 were not potentially liable for a violation of the Clean Air Act, the OAQ followed the U.S. EPA's guidance to regulate PM₁₀ emissions as a

surrogate for PM_{2.5} emissions pursuant to the requirements of Nonattainment NSR (326 IAC 2-1.1-5).

- (3) According to the TSD for Part 70 Operating Permit Renewal No. T109-16617-00002 issued on June 12, 2006, the source had limited emissions greater than 100 tons per year of PM₁₀, which was a surrogate for PM_{2.5}. Therefore, the source was considered a major source under Nonattainment NSR.
- (4) Prior to the addition of Plant No. 43 permitted on September 11, 2006, the source had the potential to emit greater than 100 tons per year of PM₁₀, which was a surrogate for PM_{2.5}. Therefore, the source would have been considered major for Nonattainment NSR. Pursuant to Significant Permit Modification No. 109-22865-00002 and Significant Permit Modification No. 109-24454-00002, the source added control devices to its existing kiln operations, limiting the PM₁₀ emissions from existing units to below the Nonattainment NSR major source threshold. Since test methods are now available for PM_{2.5}, IDEM is no longer using the PM₁₀ surrogate policy; therefore, the source shall limit the PM_{2.5} emissions from existing units to below the Nonattainment NSR major source threshold as follows:
- (A) The production of bricks from Plant No. 32 shall not exceed 120,012 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (B) The PM_{2.5} emissions from the following operations shall not exceed the emission limits listed in the table below:

Unit(s)	Unit ID(s)	Control Device ID	PM _{2.5} Emission Limit (lb/ton)
Plant No. 32 Brick Dryer, Plant No. 32 Brick Kiln, & Plant No. 32 Injection Silo	EU-P32-BD1, EU-P32-K, & EU-LS2	DIFF-02	0.336

Compliance with this limit, combined with the limited emissions from the source existing prior to the addition of Plant No. 43 and the potential to emit PM_{2.5} from other emission units at the source, shall limit the PM_{2.5} emissions to less than 100 tons per year from the source existing prior to the addition of Plant No. 43. Therefore, the source prior to the addition of Plant No. 43 was a minor source pursuant to 326 IAC 2-1.1-5 (Nonattainment NSR).

- (5) Pursuant to Significant Permit Modification No. 109-22865-00002 and Significant Permit Modification No. 109-24454-00002, the source was previously determined to have potential to emit PM₁₀, which was a surrogate for PM_{2.5}, greater than 100 tons per year, and source-wide PM₁₀ emissions were limited in order to render 326 IAC 2-1.1-5 not applicable as follows:

Emission Unit	PM ₁₀ Emission Limitation (lb/ton)	PM ₁₀ PTE (tons/yr)
Clay/Shale Processing Operation (EU-001)	n/a	1.01
Plant No. 20 and Plant No. 32 Operations (EU-002)	0.0036 (each mill room), 0.336 (each kiln)	44.1
Brick Crushing	n/a	2.22
Insignificant Activities	n/a	31.2

Emission Unit	PM ₁₀ Emission Limitation (lb/ton)	PM ₁₀ PTE (tons/yr)
	TOTAL	78.6

Subsequently, pursuant to Significant Permit Modification No. 109-29219-00002, the source permanently shut down the brick manufacturing line identified as Plant No. 20. Since test methods are now available for PM_{2.5}, IDEM is no longer using the PM₁₀ surrogate policy. As a result, the source existing prior to the addition of Plant No. 43 had the potential to emit less than 100 tons per year of PM_{2.5} without the mill room limit as follows (based upon the Technical Support Document (TSD) for Operating Permit Renewal No. T109-29661-00002):

Emission Unit	PM ₁₀ Emission Limitation (lb/ton)	PM _{2.5} PTE (tons/yr)
Clay/Shale Processing Operation (EU-001)	n/a	2.06
Sand Processing System	n/a	16.86
Coal Crusher	n/a	7.23
Plant No. 32 Mill Room	n/a	11.05
Plant No. 32 Brick Dryer, Plant No. 32 Kiln, & Plant No. 32 Injection Silo	0.336	20.16
Insignificant Activities	n/a	11.45
	TOTAL	68.81

Stack tests results for the Plant No. 32 Kiln indicate actual PM_{2.5} emissions have never exceeded 100 tons per year. Therefore, the 326 IAC 2-1.1-5 minor limit established previously for PM₁₀ for the Plant No. 32 Mill Room has been removed.

- (6) The potential to emit of PM₁₀, which was a surrogate for PM_{2.5}, from the Plant No. 43 modification was greater than 100 tons per year. Therefore, 326 IAC 2-1.1-5 would have applied to the Plant No. 43 modification. Pursuant to Significant Permit Modification No. 109-22865-00002 and Significant Permit Modification No. 109-30813-00002, the source limited the PM₁₀ emissions below the Nonattainment NSR major source threshold of 100 tons per year. Since test methods are now available for PM_{2.5}, IDEM is no longer using the PM₁₀ surrogate policy; therefore, the source shall limit the PM_{2.5} emissions from existing units to below the Nonattainment NSR major source threshold as follows:

- (A) The production of bricks from Plant No. 43 shall not exceed 180,018 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (B) The PM_{2.5} emissions from the following operations shall not exceed the emission limits listed in the table below:

Unit(s)	Unit ID(s)	Control Device ID	PM _{2.5} Emission Limit (lb/ton)
Plant No. 43 Brick Kiln & Plant No. 43 Injection Silo	EU-P43-K & EU-LS3	DIFF-03	0.336

This rendered the requirements of 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable to the Plant No. 43 modification. After the modification, the entire source had limited PM_{2.5} emissions greater than 100 tons per year. Therefore, the source became a major source under Nonattainment NSR after the Plant No. 43 modification.

- (7) Pursuant to Significant Permit Modification No. 109-22865-00002 and Significant Permit Modification No. 109-24454-00002, the Plant No. 43 modification was previously determined to have potential to emit PM₁₀, which was a surrogate for PM_{2.5}, greater than 100 tons per year, and PM₁₀ emissions due to the Plant No. 43 modification were limited in order to render 326 IAC 2-1.1-5 not applicable as follows:

Emission Unit	PM ₁₀ Emission Limitation (lb/ton)	PM ₁₀ PTE (tons/yr)
Plant No. 43 Mill Room	0.0036	1.14
Plant No. 43 Brick Dryer	n/a	16.8
Plant No. 43 Kiln	0.336	30.3
Insignificant Activities	n/a	0.984
TOTAL		49.3

Since test methods are now available for PM_{2.5}, IDEM is no longer using the PM₁₀ surrogate policy. Based upon the Technical Support Document (TSD) for Operating Permit Renewal No. T109-29661-00002, revised emission calculations indicate the Plant No. 43 modification without the mill room limit had the potential to emit less than 100 tons per year of PM_{2.5} as follows:

Emission Unit	PM ₁₀ Emission Limitation (lb/ton)	PM _{2.5} PTE (tons/yr)
Plant No. 43 Mill Room	n/a	11.44
Plant No. 43 Brick Dryer	n/a	16.83
Plant No. 43 Kiln & Plant No. 43 Injection Silo	0.336	30.24
Insignificant Activities	n/a	7.65
TOTAL		66.16

Stack tests results for the Plant No. 43 Kiln indicate actual PM_{2.5} emissions have never exceeded 100 tons per year. Therefore, the 326 IAC 2-1.1-5 minor limit established previously for PM_{2.5} for the Plant No. 43 Mill Room has been removed.

Summary of PSD, Emission Offset, and Nonattainment NSR Limits - Plant No. 32

- (a) The production of bricks from Plant No. 32 shall not exceed 120,012 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The PM_{2.5} emissions from the following operations shall not exceed the emission limits listed in the table below:

Unit(s)	Unit ID(s)	Control Device ID	PM _{2.5} Emission Limit (lb/ton)
Plant No. 32 Brick Dryer,	EU-P32-BD1,	DIFF-02	0.336

Unit(s)	Unit ID(s)	Control Device ID	PM _{2.5} Emission Limit (lb/ton)
Plant No. 32 Brick Kiln, & Plant No. 32 Injection Silo	EU-P32-K, & EU-LS2		

- (c) The SO₂ emissions from the following operations shall not exceed the emission limits listed in the table below:

Unit(s)	Unit ID(s)	Control Device ID	SO ₂ Emission Limit (lb/ton)
Plant No. 32 Brick Dryer & Plant No. 32 Brick Kiln	EU-P32-BD1 & EU-P32-K	DIFF-02	2.50

Compliance with these limits, combined with the potential to emit PM_{2.5} and SO₂ from other emission units at the source, shall limit the SO₂ emissions to less than 250 tons per twelve (12) consecutive month period and the PM_{2.5} emissions to less than 100 tons per twelve (12) consecutive month period from the source existing prior to the addition of Plant No. 43. This shall render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable to the source existing prior to the addition of Plant No. 43.

Summary of PSD, Emission Offset, and Nonattainment NSR Limits - Plant No. 43

- (a) The production of bricks from Plant No. 43 shall not exceed 180,018 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The PM_{2.5} emissions from the following operations shall not exceed the emission limits listed in the table below:

Unit(s)	Unit ID(s)	Control Device ID	PM _{2.5} Emission Limit (lb/ton)
Plant No. 43 Brick Kiln & Plant No. 43 Injection Silo	EU-P43-K & EU-LS3	DIFF-03	0.336

- (c) The SO₂ emissions from the following operations shall not exceed the emission limits listed in the table below:

Unit(s)	Unit ID(s)	Control Device ID	SO ₂ Emission Limit (lb/ton)
Plant No. 43 Brick Kiln	EU-P43-K	DIFF-03	2.60

Compliance with these limits, combined with the potential to emit PM_{2.5} and SO₂ from other emission units at the source, shall limit the SO₂ emissions to less than 250 tons per twelve (12) consecutive month period each and the PM_{2.5} emissions to less than 100 tons per twelve (12) consecutive month period from the Plant No. 43 modification. This shall render the requirements of 326 IAC 2-2 (PSD), 326 IAC 2-3 (Emission Offset), and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable to the Plant No. 43 modification.

326 IAC 2-6 (Emission Reporting)

This source, not located in Lake, Porter, or LaPorte County, is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit pursuant to 326 IAC 2-7 (Part 70). The potential to emit of VOC and PM₁₀ is less than 250 tons per year, each, and the potential to emit of CO, NO_x, and SO₂ is less than 2,500 tons per year, each. Therefore, pursuant to 326 IAC 2-6-3(a)(2), triennial reporting is required. An emission statement shall be submitted in accordance with the compliance schedule in 326 IAC 2-6-3 by July 1, 2014, and every three (3) years thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 5-1 (Opacity Limitations)

This source is subject to the opacity limitations specified in 326 IAC 5-1-2(1).

326 IAC 6-4 (Fugitive Dust Emissions)

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

The potential fugitive particulate matter emissions from the source are less than 25 tons per year. Therefore, the requirements of 326 IAC 6-5 are not applicable.

326 IAC 6.5 (PM Limitations Except Lake County)

This source is not subject to 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne.

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)

326 IAC 8-1-6 does not apply since the potential VOC emissions from each emission unit are less than twenty-five (25) tons per year.

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)

This source is located in Morgan County. Therefore, the requirements of 326 IAC 8-9 are not applicable.

326 IAC 9-1 (Carbon Monoxide Emission Limits)

Although this is a stationary source of CO emissions commencing operation after March 21, 1972, there are no applicable CO emission limits for this type of source pursuant to 326 IAC 9-1-2. Therefore, 326 IAC 9-1 does not apply.

326 IAC 10-1 (Nitrogen Oxide Emission Limitations)

The plant is not subject to the requirements of 326 IAC 10-1 (Nitrogen Oxide Emission Limitations) because the plant is not located in Clark County or Floyd County.

State Rule Applicability – Individual Facilities

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

- (a) The coal and natural gas-fired kiln, identified as EU-P32-K, was constructed prior to July 27, 1997. Therefore, 326 IAC 2-4.1 does not apply to this emission unit.
- (b) The operation of the brick kiln, identified as EU-P43-K, has the potential to emit greater than 10 tons per year of a single HAP and 25 tons per year of a combination of HAPs, each. Therefore, 326 IAC 2-4.1 would have applied to kiln EU-P43-K. However, the source has decided to limit their HAP emissions below the major source threshold as follows:
 - (1) The production of bricks from Plant No. 43 shall not exceed 180,018 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (2) The HCl emissions from the brick kiln EU-P43-K shall not exceed 0.056 lb/ton.
 - (3) The combined HF emissions from brick kiln EU-P32-K and brick kiln EU-P43-K shall not exceed 9.90 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with the above limits shall limit single HAP emissions from the brick kiln (EU-P43-K) to less than ten (10) tons per twelve (12) consecutive month period and combined HAP emissions from the brick kiln (EU-P43-K) to less than 25 tons per twelve (12)

consecutive month period. This shall render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable to brick kiln EU-P43-K.

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

- (a) Pursuant to 326 IAC 6-3-2(e)(1), the allowable particulate emissions from each of the following processes shall not exceed the pound per hour limitations specified in the following table:

Unit Description	Max. Process Weight Rate (tons/hr)	Particulate Emission Limit (lb/hr)
Clay/Shale Processing Operation (EU-001)	100	51.3
Sand Processing System	2.73	8.04
Coal Processing System	1.50	5.38
Plant No. 32 Mill Room (EU-P32-MR)	70	47.8
Brick Dryer (Plant No. 32)	13.7	23.7
Brick Kiln (Plant No. 32)	13.7	23.7
Injection System (Plant No. 32)	0.21	1.44
Plant No. 43 Mill Room (EU-P43-MR)	72.5	48.1
Brick Dryer (Plant No. 43)	20.55	31.1
Brick Kiln (Plant No. 43)	20.55	31.1
Injection System (Plant No. 43)	0.21	1.44

The pounds per hour limitations were calculated with the following equations:

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:

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

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:

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

The dry injection fabric filter (DIFF-02) shall be in operation at all times the Plant No. 32 brick kiln is in operation, and the dry injection fabric filter (DIFF-03) shall be in operation at all times the Plant No. 43 brick kiln is in operation, in order to comply with these limits.

Each of these remaining emission units is capable of complying with the corresponding 326 IAC 6-3-2 limit without the use of controls.

- (b) Pursuant to 326 IAC 6-3-2(e)(2), the allowable particulate emissions from each of the vacuum cleaning systems shall not exceed 0.551 lb/hr.

The vacuum filters shall be in operation at all times either of the vacuum cleaning systems is in operation, in order to comply with these limits.

- (c) All remaining emission units have potential emissions less than 0.551 pounds per hour, each. Therefore, pursuant to 326 IAC 6-3-1(b)(14), they are exempt from the requirements of 326 IAC 6-3-2.

326 IAC 7-1.1 Sulfur Dioxide Emission Limitations

- (a) The potential to emit SO₂ from the brick kilns EU-P32-K and EU-P43-K are greater than twenty-five (25) tons per year or ten (10) pounds per hour, each. Therefore, each kiln is subject to the requirements of 326 IAC 7-1.1. Pursuant to 326 IAC 7-1.1-2(a)(1), 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 entire source are less than ten thousand (10,000) tons per year. Therefore, the requirements of 326 IAC 7-3 are not applicable.
- (c) General Shale Brick, Inc. is not listed in 326 IAC 7-4-11 (Morgan County sulfur dioxide emission limitations). Therefore, the requirements of 326 IAC 7-4 are not applicable.

326 IAC 8-3-2 (Cold Cleaner Operations)

This cold cleaner degreasing facility is located in Morgan County, was constructed after January 1, 1980, and is used to perform organic solvent degreasing operations. Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), the Permittee of a cold cleaning facility shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

This cold cleaner degreasing facility is located in Morgan County and was in existence as of July 1, 1990. Therefore, the requirements of 326 IAC 8-3-5 do not apply.

326 IAC 8-4-6 (Gasoline Dispensing Facilities)

- (a) The three (3) insignificant petroleum fuel dispensing facilities, known as On-Road Fuel, Off-Road Fuel, and Off-Road Fuel, do not meet the definition of a "gasoline dispensing facility" because, pursuant to 326 IAC 8-4-6(a)(8), diesel fuel is not considered to be a motor vehicle fuel. Therefore, the requirements of 326 IAC 8-4-6 are not applicable.
- (b) The gasoline storage tank, known as Gasoline, meets the definition of a gasoline dispensing facility, pursuant to 326 IAC 8-4-6(a)(8), because it has a capacity of 250 gallons or more. However, pursuant to 326 IAC 8-4-1(d), 326 IAC 8-4-6(a) and (b) apply to any gasoline storage tank at a gasoline dispensing facility with a monthly gasoline throughput of 10,000 gallons per month or greater. The source has elected to comply with the following limit in order for the requirements of 326 IAC 8-4-6(a) and (b) to not be applicable to them:

- (1) The monthly gasoline throughput from the gasoline storage tank, known as Gasoline, shall not exceed 10,000 gallons per month.

Therefore, the requirements of 326 IAC 8-4-6(a) and (b) are not included in the permit.

- (c) This source is not located in any of the following counties: Clark, Floyd, Lake, or Porter. Therefore, pursuant to 326 IAC 8-4-1(e), the requirements of 326 IAC 8-4-6(c) are not included in the permit.

326 IAC 8-4-9 (Leaks from Vapor Collection Systems)

Since the source has elected to limit the monthly gasoline throughput from the gasoline storage tank, known as Gasoline, in order for the requirements of 326 IAC 8-4-6(a) and (b) to not be applicable to them, the tank does not require a vapor collection system. Therefore, the requirements of 326 IAC 8-4-9 are not included in the permit.

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 General Shale Brick, Inc. are as follows:

(a) Emission Controls Operation

- (1) The dry injection fabric filter (DIFF-02) for particulate, SO₂, and HAP control shall be in operation and control emissions from the Plant No. 32 brick dryer, kiln, and injection silo at all times that the facilities are in operation.
- (2) The dry injection fabric filter (DIFF-03) for particulate, SO₂, and HAP control shall be in operation and control emissions from the Plant No. 43 kiln and injection silo at all times that the facilities are in operation.
- (3) The bag filters for particulate control shall be in operation and control emissions from the vacuum cleaning systems (EU-P32VS and EU-P43VS) at all times that the systems are in operation.

(b) Sulfur Content

Compliance with 326 IAC 7-2 (SO₂ Emissions Limitations) shall be determined utilizing one of the following options:

- (1) Providing vendor analysis of coal delivered, if accompanied by a certification from the fuel supplier; or
 - (2) Sampling and analyzing the coal by using one of the following procedures:
 - (A) Minimum coal sampling requirements and analysis methods, including preparation of the coal sample, heat content analysis, and sulfur content analysis as determined pursuant to 326 IAC 3-7-2(c), (d), and (e); or
 - (B) Sampling and analyzing the coal pursuant to 326 IAC 3-7-3; or
 - (3) Conducting a stack test for sulfur dioxide emissions from the two (2) 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 (1) or (2) above. [326 IAC 7-2-1(b)]
- (c) Broken or Failed Bag Detection – Single Compartment Baghouse
- (1) For a single compartment baghouse controlling emissions from a process operated continuously, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced.
 - (2) 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 emissions unit.

(d) Testing Requirements

Emission Unit(s)	Control Device	Timeframe for Testing	Pollutant	Frequency of Testing	Limit or Requirement
Brick Dryer & Kiln (Plant No. 32)	Dry injection fabric filter (DIFF-02)	Within 5 years of previous test	PM _{2.5}	Once every 5 years	0.336 lb/ton of fired product
Brick Dryer & Kiln (Plant No. 32)	Dry injection fabric filter (DIFF-02)	Within 5 years of previous test	SO ₂	Once every 5 years	2.50 lb/ton of fired product
Brick Dryer & Kiln (Plant No. 32)	Dry injection fabric filter (DIFF-02)	Within 5 years of previous test	HF	Once every 5 years	0.057 lb/ton of fired product
Brick Dryer & Kiln (Plant No. 32)	Dry injection fabric filter (DIFF-02)	Within 5 years of previous test	HCl	Once every 5 years	0.056 lb/ton of fired product
Brick Kiln (Plant No. 43)	Dry injection fabric filter (DIFF-03)	Within 5 years of previous test	PM _{2.5}	Once every 5 years	0.336 lb/ton of fired product
Brick Kiln (Plant No. 43)	Dry injection fabric filter (DIFF-03)	Within 5 years of previous test	SO ₂	Once every 5 years	2.60 lb/ton of fired product
Brick Kiln (Plant No. 43)	Dry injection fabric filter (DIFF-03)	Within 180 days of issuance	HF	Once every 5 years	0.057 lb/ton of fired product
Brick Kiln (Plant No. 43)	Dry injection fabric filter (DIFF-03)	Within 180 days of issuance	HCl	Once every 5 years	0.056 lb/ton of fired product

These requirements are required to ensure compliance with 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) and to render 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable.

The compliance monitoring requirements applicable to General Shale Brick, Inc. are as follows:

- (a) Visible Emissions Notations

- (1) The Permittee shall perform daily visible emission notations of the baghouse exhaust (CD-P32-MR) for the Plant No. 32 mill room (EP-P32-MR).
 - (2) The Permittee shall perform daily visible emission notations of the baghouse exhaust (CD-P43-MR) for the Plant No. 43 mill room (EP-P43-MR).
 - (3) The Permittee shall perform daily visible emission notations of the dry injection fabric filter exhaust (DIFF-02) for the Plant No. 32 brick dryer and kiln.
 - (4) Pursuant to 40 CFR 64 (CAM), the Permittee shall perform daily visible emission notations of the dry injection fabric filter exhaust (DIFF-03) for the Plant No. 43 kiln.
- (b) SO₂ Monitoring Parameters
- (1) Pursuant to 40 CFR 64 (CAM), the Permittee shall continuously monitor the dry lime and/or sodium bicarbonate feed rates to the dry injection fabric filters DIFF-02 and DIFF-03.
 - (2) Pursuant to 40 CFR 64 (CAM), the Permittee shall inspect the dry lime and/or sodium bicarbonate feed system and feeder setting on the dry injection fabric filters DIFF-02 and DIFF-03 once per shift.
 - (3) Pursuant to 40 CFR 64 (CAM), if the lime and/or sodium bicarbonate feeder setting drops below the level established during the latest performance test, the switches monitoring the interlock system on the limestone and/or sodium bicarbonate delivery systems, including the lime and/or sodium bicarbonate 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.
- (c) Broken or Failed Bag Detection – Multi-Compartment Baghouse

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.

These monitoring conditions are necessary because the control devices for the facilities must operate properly to ensure compliance with 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), 40 CFR 64 (CAM), 326 IAC 2-2 (PSD), and 326 IAC 2-7 (Part 70).

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit Renewal No. T109-29661-00002. These corrections, changes, and removals may include Title I changes (i.e., changes that add or modify synthetic minor emission limits). Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

IDEM, OAQ Changes:

- (a) On October 27, 2010, the Indiana Air Pollution Control Board issued revisions to 326 IAC 2. These revisions resulted in changes to the rule cites listed in the permit. These

changes are not changes to the underlining provisions. The change is only to cite of these rules in Section A - General Information, Section A - Emission Units and Pollution Control Equipment Summary, Section A - Insignificant Activities, Section B - Preventative Maintenance Plan, Section B - Emergency Provisions, Section B - Operational Flexibility, Section C - Risk Management Plan, the Facility Descriptions, and Section D - Preventative Maintenance Plan.

- (b) For clarity, IDEM has changed references to the general conditions: "in accordance with Section B", "in accordance with Section C", or other similar language, to "Section C ... contains the Permittee's obligations with regard to the ... required by this condition."
- (c) IDEM has decided that the phrases "no later than" and "not later than" are clearer than "within" in relation to the end of a timeline. Therefore, all timelines have been switched to "no later than" or "not later than" except for the timelines in Section B - Emergency Provisions and Section B - Annual Fee Payment. The underlying rules state "within."
- (d) 326 IAC 2-7 requires that "a responsible official" perform certain actions. 326 IAC 2-7-1(34) allows for multiple people to meet the definition of "responsible official." Therefore, IDEM is revising all instances of "the responsible official" to read "a responsible official."
- (e) IDEM has decided to clarify what rule requirements a certification needs to meet. IDEM has decided to remove the last sentence dealing with the need for certification from the forms because the Conditions requiring the forms already address this issue.
- (f) Section B - Duty to Provide Information has been revised to remove the duplicative requirement for submittal of the certification by a "responsible official".
- (g) To clarify that Section B - Certification only states what a certification must be, IDEM has revised the condition. IDEM, OAQ has decided to clarify Section B - Certification to be consistent with the rule.
- (h) IDEM has added a new paragraph (b) to handle a future situation where the Permittee adds units that need preventive maintenance plans developed. IDEM, OAQ has decided to clarify Section B - Preventive Maintenance Plan to be consistent with the rule.
- (i) IDEM, OAQ is revising Section B - Emergency Provisions to delete paragraph (h). 326 IAC 2-7-5(3)(C)(ii) allows that deviations reported under an independent requirement do not have to be included in the Quarterly Deviation and Compliance Monitoring Report.
- (j) IDEM, OAQ has decided that having a separate condition for the reporting of deviations is unnecessary. Therefore, IDEM has removed Section B - Deviation form Permit Requirements and Conditions and added the requirements of that condition to Section C - General Reporting Requirements. Paragraph (d) of Section C - General Reporting Requirements has been removed because IDEM already states the timeline and certification needs of each report in the condition requiring the report. Subparagraph (g)(4) has been revised to match the underlying rule language.
- (k) IDEM has decided to state which rule establishes the authority to set a deadline for the Permittee to submit additional information. Therefore, Section B - Permit Renewal has been revised.
- (l) IDEM has decided to state that no notice is required for approved changes in Section B - Permit Revision Under Economic Incentives and Other Programs.
- (m) IDEM has added 326 IAC 5-1-1 to the exception clause of Section C.1 - Opacity, since 326 IAC 5-1-1 does list exceptions.

- (n) IDEM has revised Section C - Incineration to more closely reflect the two underlying rules.
- (o) IDEM has removed the first paragraph of Section C - Performance Testing due to the fact that specific testing conditions elsewhere in the permit will specify the timeline and procedures.
- (p) IDEM has revised Section C - Compliance Monitoring. The reference to recordkeeping has been removed due to the fact that other conditions already address recordkeeping. The voice of the condition has been changed to clearly indicate that it is the Permittee that must follow the requirements of the condition.
- (q) IDEM, OAQ has decided to clarify the Permittee's responsibility under CAM in Section C - Compliance Monitoring, Section C - Response to Excursions or Exceedances, Section C - General Reporting Requirements, and the Quarterly Deviation and Compliance Monitoring Report.
- (r) IDEM has removed Section C - Monitoring Methods. The conditions that require the monitoring or testing, if required, state what methods shall be used.
- (s) IDEM has revised Section C - Response to Excursions or Exceedances. The introduction sentence has been added to clarify that it is only when an excursion or exceedance is detected that the requirements of this condition need to be followed. The word "excess" was added to the last sentence of paragraph (a) because the Permittee only has to minimize excess emissions. The middle of paragraph (b) has been deleted as it was duplicative of paragraph (a). The phrase "or are returning" was added to subparagraph (b)(2) as this is an acceptable response assuming the operation or emission unit does return to normal or its usual manner of operation. The phrase "within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable" was replaced with "normal or usual manner of operation" because the first phrase is just a limited list of the second phrase. The recordkeeping required by paragraph (e) was changed to require only records of the response because the previously listed items are required to be recorded elsewhere in the permit.
- (t) IDEM has revised Section C - Actions Related to Noncompliance Demonstrated by a Stack Test. The requirements to take response steps and minimize excess emissions have been removed because Section C - Response to Excursions or Exceedances already requires response steps related to exceedances and excess emissions minimization. The start of the timelines was switched from "the receipt of the test results" to "the date of the test." There was confusion if the "receipt" was by IDEM, the Permittee, or someone else. Since the start of the timelines has been moved up, the length of the timelines was increased. The new timelines require action within a comparable timeline; and the new timelines still ensure that the Permittee will return to compliance within a reasonable timeframe.
- (u) Paragraph (b) of Section C - Emission Statement has been removed. It was duplicative of the requirement in Section C - General Reporting Requirements.
- (v) On October 27, 2010, the Indiana Air Pollution Control Board issued revisions to 326 IAC 2. These revisions included the incorporation of the U.S. EPA's definition of reasonable possibility. The permit previously cited to the EPA definition. Also, the revisions resulted in changes to other rule cites listed in the permit. Neither of these changes are changes to the underlining provisions. The change is only to cite these rules in Section C - General Reporting and Section C - General Recordkeeping.

- (w) The voice of paragraph (b) of Section C - General Record Keeping Requirements has been changed to clearly indicate that it is the Permittee that must follow the requirements of the paragraph.
- (x) IDEM, OAQ has clarified the Permittee's responsibility with regards to record keeping in Section C - General Record Keeping Requirements.
- (y) IDEM has decided to simplify the referencing in Section C - Compliance with 40 CFR 82 and 326 IAC 22-1.
- (z) IDEM, OAQ has decided to clarify Section D - Testing Requirements to state that testing shall be in accordance with 326 IAC 3-6 instead of in accordance another permit condition that refers to 326 IAC 3-6.
- (aa) IDEM, OAQ has included the replacement of an instrument as an acceptable action.
- (bb) The word "status" has been added to Section D - Record Keeping Requirements. The Permittee has the obligation to document the compliance status. The wording has been revised to properly reflect this.
- (cc) The word "status" has been added to Section D - Reporting Requirements. The Permittee has the obligation to document the compliance status. The wording has been revised to properly reflect this.
- (dd) The phrase "of this permit" has been added to the paragraph of the Quarterly Deviation and Compliance Monitoring Report to match the underlying rule.
- (ee) The record keeping requirements of Section D.1 for the grinder capacity have been removed because the source has already submitted this information to IDEM, OAQ, which has been confirmed and incorporated into this permit.
- (ff) The PM, PM₁₀, and NO_x avoidance limits in Condition D.2.1 have been removed because the emission unit does not fall under the rule applicability any longer. The PM₁₀ avoidance limit in Condition D.2.1 has been revised as a PM_{2.5} avoidance limit.
- (gg) The baghouse parametric monitoring requirements for the Plant No. 32 Mill Room baghouse in Section D.2 have been removed since the source will continue to perform visible emission notations. The corresponding record keeping requirements have also been removed.
- (hh) The record keeping and reporting requirements of Section D.2 for the date baghouse DIFF-02 commenced operation have been removed because the source has already submitted this information to IDEM, OAQ, which has been confirmed and incorporated into this permit.
- (ii) The PM and PM₁₀ avoidance limits in Condition D.3.1 have been removed because the emission unit does not fall under the rule applicability any longer. The PM₁₀ avoidance limit in Condition D.3.1 has been revised as a PM_{2.5} avoidance limit.
- (jj) The baghouse parametric monitoring requirements for the Plant No. 43 Mill Room baghouse in Section D.3 have been removed since the source will continue to perform visible emission notations. The corresponding record keeping requirements have also been removed.
- (kk) The particulate limit of Section D.4 has been removed because the waste brick crushing operations have been determined to not be part of the same major source.

- (ll) A 326 IAC 6-3-2 particulate limit has been added in Condition D.4 for the vacuum cleaning systems. The corresponding operation control requirement has also been added.
- (mm) The appropriate emission standards for cold cleaning operations and the appropriate avoidance limits for the gasoline storage tank have been added in Condition D.4.
- (nn) Effective March 1, 2013, 326 IAC 8-3 (Organic Solvent Degreasing Operations) has been revised and updated.
- (oo) Section E.1 has been revised to include the NSPS, Subpart OOO requirements for the two transfer conveyors.
- (pp) Section E.2 has been added to include the NSPS, Subpart JJJJ requirements for the emergency generator.
- (qq) Section E.3 has been added to include the NESHAP, Subpart ZZZZ requirements for the emergency generator.
- (rr) Section E.4 has been added to include the NESHAP, Subpart CCCCCC requirements for the gasoline dispensing facility.

The permit has been revised as follows:

SECTION A SOURCE SUMMARY

* * * * *

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(4514)] [326 IAC 2-7-1(22)]

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

Source Address:	Highway 67 South and CR 1000 North 148 Sycamore Lane , Mooreville, Indiana 46158
General Source Phone Number:	(317) 831-3317
SIC Code:	3251
County Location:	Morgan
Source Location Status:	Nonattainment for PM _{2.5} standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD and Nonattainment NSR Rules and Emission Offset; Area Minor Source, under Section 112 of the Clean Air Act Not in 1 of 28 listed Source Categories

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

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

- (a) Plant No. ~~20~~ **32** is located at ~~Highway 67 South and CR 1000 N~~ **148 Sycamore Lane**, Mooreville, Indiana;
- (b) Plant No. ~~32~~ **43** is located at ~~Highway 67 South and CR 1000 N~~ **148 Sycamore Lane**, Mooreville, Indiana; and

- (c) ~~The New Plant quarry is located at Highway 67 South and CR 1000 N west of the intersection of Merriman Road and North Bethel Road (North County Road 200E), Mooresville, Indiana.~~

~~Since the three (3) However, these plants are located on one or more contiguous or adjacent properties, belong to have the same industrial grouping, and two digit SIC code or have a support relationship, and are still under common ownership or common control of the same entity; therefore, they will be are considered one (1) major source, as defined by 326 IAC 2-7-1(22).~~

A.3 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(4514)]

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. One (1) quarry, constructed in 1970, with a capacity of 100 tons of raw material per hour.~~
- (b) ~~One (1) clay/shale processing operation, identified as EU-001, permitted in 2014, consisting of one (1) Stedman Grandslam crusher and two (2) Diester screens, with a maximum throughput of 100 tons of raw material per hour, equipped with a using baghouse identified as CD-001 (installed in 1993) as for particulate control, exhausting to Stack EP-001, capacity: 200 tons of clay/shale per hour. consisting of the following equipment:~~
- ~~(1) One (1) primary crusher, installed in 1970 and replaced in 1999, with a maximum capacity of 100 tons of raw material per hour. Under NSPS Subpart OOO, the primary crusher is an affected facility vented through a stack and is subject to the provisions listed in 40 CFR 60.670(d)(1).~~
 - ~~(2) Two (2) Deister screens, approved in 2011 for construction, with a maximum capacity of 200 tons of raw material per hour. Under NSPS Subpart OOO, the screens are affected facilities vented through a stack.~~
 - ~~(3) One (1) secondary crusher, approved in 2011 for construction, with a maximum capacity of 200 tons of raw material per hour. Under NSPS Subpart OOO, the secondary crusher is an affected facility vented through a stack.~~
 - ~~(4) Raw material conveyance equipment, installed in 1970.~~
- (c) ~~One (1) sand processing system, installed in 1985, consisting of the following equipment:~~
- ~~(1) Two (2) sand storage silos, identified as EU-SS1 and EU-SS2, each with a maximum capacity of 50 tons and a maximum throughput of 25 tons per hour, using baghouse CD-SS as particulate control, exhausting internally to Plant No. 32 Mill Room.~~
 - ~~(2) One (1) dynamic air system, for conveyance of sand to Plant No. 32 and Plant No. 43, with a maximum capacity of 2.73 tons per hour, using baghouses CD-P32-MR and CD-P43-MR as particulate control, exhausting to Stacks EP-P32-MR and EP-P32-MR, respectively.~~

- (d) One (1) coal processing system, installed in 1979, with a maximum capacity of 1.5 tons per hour, consisting of one (1) coal crusher, identified as EU-CP, using baghouse CD-CP as particulate control, exhausting to Stack EP-CP.**

~~(c) One (1) brick manufacturing line, identified as EU-002, consisting of the following:~~

~~(1) 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 hydrated lime, sodium bicarbonate, or dry hydrated lime/sodium bicarbonate combination 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.~~

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

(e) One (1) brick manufacturing line, identified as Plant No. 32, installed in 1989 and modified in 2006 with the addition of dry injection fabric filter DIFF-02, consisting of the following equipment:

- (1) One (1) brick making room and sand system (mill room), identified as EU-P32-MR, with a maximum capacity of 70 tons of green brick per hour, consisting of one (1) extrusion operation using baghouse CD-P32-MR as particulate control exhausting to Stack EP-P32-MR, and the Plant Room 32 pugmill, material storage and conveyance equipment.**
- (2) One (1) tunnel pre-dryer and one (1) tunnel dryer, identified as EU-P32-BD1, using waste heat from Plant No. 32 Kiln, with a maximum capacity of 13.7 tons of green brick per hour, using dry injection fabric filter DIFF-02 as particulate, SO₂, and HAP control, exhausting to Stack 32KE.**
- (3) One (1) coal and natural gas-fired kiln, identified as EU-P32-K, rated at 25 million British thermal units per hour, with a maximum capacity of 13.7 tons of brick per hour, using dry injection fabric filter DIFF-02 as particulate, SO₂, and HAP control, exhausting to Stack 32KE.**
- (4) One (1) lime/sodium bicarbonate storage silo, identified as EU-LS2, with a maximum capacity of 50 tons and a maximum throughput of 25 tons per hour, using dry injection fabric filter DIFF-02 as particulate control, exhausting to Stack 32KE.**

~~(d) One (1) brick manufacturing line, identified as Plant No. 43, consisting of the following:~~

~~(1) One (1) brick making room and sand system (mill room), identified as EU-43MR, equipped with a baghouse, identified as CD-MRBH and exhausting to Stack 43MRBH, capacity: 72.5 tons of clay and shale per hour.~~

~~(2) One (1) coal/natural gas fired brick kiln, identified as EU-43K, equipped with a dry hydrated lime, sodium bicarbonate, or dry hydrated lime/sodium bicarbonate combination 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.~~

~~(3) One (1) natural gas/propane brick dryer, identified as EU-43BD1, exhausting to Stack 43BD1, capacity: 20.55 tons of bricks and 13.29 million British thermal units per hour.~~

(f) One (1) brick manufacturing line, identified as Plant No. 43, permitted in 2006, consisting of the following equipment:

- (1) One (1) brick making room and sand system (mill room), identified as EU-P43-MR, with a maximum capacity of 72.5 tons of green brick per hour, consisting of one (1) extrusion operation using baghouse CD-P43-MR as particulate control exhausting to Stack EP-P43-MR, and the Plant Room 43 pugmill, material storage and conveyance equipment.**
- (2) One (1) natural gas/propane brick dryer, identified as EU-P43-BD1, rated at 13.29 million British thermal units per hour, with a maximum capacity of 20.55 tons of green brick per hour, exhausting to Stack 43BD1.**
- (3) One (1) coal/natural gas fired brick kiln, identified as EU-P43-K, rated at 25 million British thermal units per hour, with a maximum capacity of 20.55 tons of brick per hour, using dry injection fabric filter DIFF-03 as particulate, SO₂, and HAP control, exhausting to Stack EP-P43-K.**
- (4) One (1) lime/sodium bicarbonate storage silo, identified as EU-LS3, with a maximum capacity of 50 tons and a maximum throughput of 25 tons per hour, using dry injection fabric filter DIFF-03 as particulate control, exhausting to Stack 43KE.**

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

A.4 ~~Specifically Regulated~~ Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(4514)]

~~This stationary source does not currently have any~~ **also includes the following** insignificant activities, as defined in 326 IAC 2-7-1(21) ~~that have applicable requirements.:~~

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour:

Two (2) process water heaters, identified as EU-PWH1 and EU-PWH2, with a combined maximum heat input capacity of 2.50 MMBtu per hour.

(b) Combustion source flame safety purging on start-up.

(c) Gasoline fuel transfer dispensing operations handling less than or equal to 1,300 gallons per day and filling storage tanks having a capacity equal to or less than 10,500 gallons:

One (1) storage tank, installed in 1991, identified as Gasoline, for storage of gasoline, with a maximum volume of 250 gallons. Under NESHAP Subpart CCCCCC, this is an existing affected facility. [326 IAC 8-4-6] [326 IAC 8-4-9] [40 CFR 64, Subpart CCCCCC]

(d) Petroleum fuel (other than gasoline) dispensing facilities, having a storage tank capacity less than or equal to 10,500 gallons, and dispensing 3,500 gallons per day or less:

- (1) One (1) storage tank, installed before 1985, identified as On-Road Fuel, for storage of diesel fuel, with a maximum volume of 250 gallons.
 - (2) One (1) storage tank, installed before 1985, identified as Off-Road Fuel, for storage of diesel fuel, with a maximum volume of 250 gallons.
 - (3) One (1) storage tank, installed before 1985, identified as Off-Road Fuel, for storage of diesel fuel, with a maximum volume of 1,000 gallons.
- (e) VOC and HAP storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
- (f) Refractory storage not requiring air pollution control equipment.
- (g) Degreasing operations that do not exceed one hundred forty-five (145) gallons per twelve (12) months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2]
- (h) Welding equipment related to manufacturing activities not resulting in the emission of HAPs.
- (i) Replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.
- (j) Paved and unpaved roads. [326 IAC 6-4]
- (k) Covered coal or coke conveying of less than or equal to three hundred sixty (360) tons per day, including the following equipment:
 - (1) One (1) dynamic air system, for conveyance of crushed coal to Plant No. 32. [326 IAC 6-3-2]
 - (2) One (1) dynamic air system, for conveyance of crushed coal to Plant No. 43. [326 IAC 6-3-2]
- (l) Uncovered coal or coke conveying of less than or equal to one hundred twenty (120) tons per day.
- (m) Emergency generators, including one (1) natural gas-fired emergency generator, located in Plant 43, installed in 2007, with a maximum generating rate of 25 hp. [40 CFR 60, Subpart JJJJ] [40 CFR 63, Subpart ZZZZ]
- (n) Farm operations, except concentrated animal feeding operations as defined in 40 CFR 122.23.
- (o) A laboratory as defined in 326 IAC 2-7-1(21)(H).
- (p) Activities with potential emissions within any of the following thresholds: equal to or less than 5 pounds per hour or 25 pounds per day PM_{10} , SO_2 , or NO_x ; equal to or less than 3 pounds per hour or 15 pounds per day VOC; equal to or less than 25 pounds per day CO; equal to or less than 0.6 tons per year or 3.29 pounds per day Pb; or greater than 1 pound per day but less than 5 pounds per day or 1 ton per year single HAP (and not regulated by a NESHAP):
 - (1) One (1) outdoor raw material storage pile, identified as EU-RMS, with a capacity of 100 tons of shale per hour.

- (2) One (1) raw material feed hopper, installed in 1970, with emissions uncontrolled.
- (3) One (1) ground material transfer conveyor, identified as F-GMC, installed in 1970, with emissions uncontrolled.
- (4) One (1) ground material transfer conveyor to Plant No. 32, identified as F-C32-1, installed in 1987, with emissions uncontrolled. Under NSPS Subpart OOO, this is an affected facility enclosed in a building.
- (5) Plant No. 32 ground material storage pile, identified as EU-P32-GMS, located indoors, with emissions uncontrolled.
- (6) One (1) ground material transfer conveyor to Former Plant No. 20, identified as F-C20-1, installed in 1970, with emissions uncontrolled.
- (7) One (1) ground material transfer conveyor to Plant No. 43, identified as F-C43-1, permitted in 2006, with emissions uncontrolled. Under NSPS Subpart OOO, this is an affected facility enclosed in a building.
- (8) Plant No. 43 ground material storage pile, identified as EU-P43-GMS, located indoors, with emissions uncontrolled.
- (9) One (1) ground material transfer conveyor to Plant No. 43, identified as F-C43-2, permitted in 2006, with emissions uncontrolled.
- (10) One (1) coal storage area, installed in 1979, with a maximum capacity of 1.5 tons per hour, with emissions uncontrolled, consisting of one (1) outdoor coal stockpile (EU-CPILE) and one (1) coal storage hopper (EU-CH).
- (11) One (1) Plant No. 32 kiln car vacuum cleaning system, identified as EU-P32VS. [326 IAC 6-3-2]
- (12) One (1) Plant No. 43 kiln car vacuum cleaning system, identified as EU-P43VS. [326 IAC 6-3-2]
- (13) Nine (9) flame cutting stations, using oxyacetylene, each with a maximum capacity of 1 inch cutting thickness at 8 inches per minute.
- (14) Outdoor waste brick crushing operations, identified as EU-BC, with a maximum capacity of 7 tons of waste brick per hour, with emissions uncontrolled, consisting of one (1) waste brick storage pile, one (1) crushed brick storage pile, and one (1) brick dust storage pile.

* * * * *

SECTION B GENERAL CONDITIONS

* * * * *

B.8 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

- (i1) ***
- (i2) ***

* * * * *

* * * * *

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. ~~The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year.~~ All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

* * * * *

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

- (a) **A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:**
- (1) **Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;**
 - (2) **A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and**
 - (3) **Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.**

The Permittee shall implement the PMPs.

- (ab) If required by specific condition(s) in Section D of this permit **where no PMP was previously required**, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

* * * * *

(bc) ***

(cd) ***

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

* * * * *

- (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)(98) be revised in response to an emergency.

* * * * *

* * * * *

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5] [326 IAC 2-7-10.5]

* * * * *

- (b) Provided that all terms and conditions are accurately reflected in this **combined** permit, all previous registrations and permits are superseded by this **combined new source review and part 70 operating permit**.

* * * * *

B.19 Operational Flexibility [326 IAC 2-7-20] [326 IAC 2-7-10.5]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b), ~~(e)~~, or ~~(ec)~~ without a prior permit revision, if each of the following conditions is met:

* * * * *

- (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b), ~~(e)~~, or ~~(ec)~~. The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1), ~~(e)(4)~~, and ~~(ec)(21)~~.

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SECTION C SOURCE OPERATION CONDITIONS

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C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)] [40 CFR 64] [326 IAC 3-8]

- (a) Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

* * * * *

- (b) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.
- (c) For monitoring required by CAM, except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the Permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

* * * * *

C.12 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee shall ~~prepare~~ **maintain the most recently submitted** written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

~~no later than ninety (90) days after the date of issuance of this permit.~~

~~The ERP does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).~~

- ~~(c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.~~
- ~~(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.~~
- ~~(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.~~
- (f) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.13 Risk Management Plan [326 IAC 2-7-5(4211)] [40 CFR 68]

* * * * *

C.14 Response to Excursions or Exceedances [40 CFR 64] [326 IAC 3-8] [326 IAC 2-7-5]
[326 IAC 2-7-6]

- (I) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, **not subject to CAM**, in this permit:

* * * * *

(II)

(a) **CAM Response to excursions or exceedances.**

- (1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (2) Determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

- (b) If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.
- (c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a QIP. The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.

- (d) **Elements of a QIP:**
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8 b (2).
- (e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.
- (f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(a)(2) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:
 - (1) Failed to address the cause of the control device performance problems; or
 - (2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.
- (h) **CAM recordkeeping requirements.**
 - (1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(a)(2) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.
 - (2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements

* * * * *

C.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-2]
[326 IAC 2-3]

-
- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. **Support information includes the following:**
 - (AA) All calibration and maintenance records.

- (BB) All original strip chart recordings for continuous monitoring instrumentation.
 - (CC) Copies of all reports required by the Part 70 permit.
- Records of required monitoring information include the following:
- (AA) The date, place, as defined in this permit, and time of sampling or measurements.
 - (BB) The dates the analyses were performed.
 - (CC) The company or entity that performed the analyses.
 - (DD) The analytical techniques or methods used.
 - (EE) The results of such analyses.
 - (FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

* * * * *

- (c) If there is a reasonable possibility (as defined in ~~40 CFR 51.165(a)(6)(vi)(A), 40 CFR 51.165(a)(6)(vi)(B), 40 CFR 51.166(r)(6)(vi)(A), 326 IAC 2-2-8(b)(6)(A), 326 IAC 2-2-8(b)(6)(B), 326 IAC 2-3-2(I)(6)(A), and/or 40 CFR 51.166(r)(6)(vi)(B), 326 IAC 2-3-2(I)(6)(B)~~) that a "project" (as defined in 326 IAC 2-2-1(~~qqoo~~) and/or 326 IAC 2-3-1(~~jjj~~)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(~~eedd~~) and/or 326 IAC 2-3-1(~~zy~~)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(~~ppp~~) and/or 326 IAC 2-3-1(~~mmkk~~)), the Permittee shall comply with following:

- (1) Before beginning actual construction of the "project" (as defined in 326 IAC 2-2-1(~~qqoo~~) and/or 326 IAC 2-3-1(~~jjj~~)) at an existing emissions unit, document and maintain the following records:

* * * * *

- (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:

* * * * *

- (iii) Amount of emissions excluded under section 326 IAC 2-2-1(~~ppp~~)(2)(A)(iii) and/or 326 IAC 2-3-1(~~mmkk~~)(2)(A)(iii); and

* * * * *

- (d) If there is a reasonable possibility (as defined in ~~40 CFR 51.165(a)(6)(vi)(A), 326 IAC 2-2-8(b)(6)(A) and/or 40 CFR 51.166(r)(6)(vi)(A), 326 IAC 2-3-2(I)(6)(A)~~) that a "project" (as defined in 326 IAC 2-2-1(~~qqoo~~) and/or 326 IAC 2-3-1(~~jjj~~)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a "major modification" (as defined in 326 IAC 2-2-1(~~eedd~~) and/or 326 IAC 2-3-1(~~zy~~)) may result in significant emissions increase and the Permittee elects to utilize the "projected actual emissions" (as defined in 326 IAC 2-2-1(~~ppp~~) and/or 326 IAC 2-3-1(~~mmkk~~)), the Permittee shall comply with following:

* * * * *

C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [326 IAC 2-2]
[40 CFR 64] [326 IAC 3-8]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. **Proper notice submittal under Section B – Emergency Provisions satisfies the reporting requirements of this paragraph.** Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

On and after the date by which the Permittee must use monitoring that meets the requirements of 40 CFR Part 64 and 326 IAC 3-8, the Permittee shall submit CAM reports to the IDEM, OAQ.

A report for monitoring under 40 CFR Part 64 and 326 IAC 3-8 shall include, at a minimum, the information required under paragraph (a) of this condition and the following information, as applicable:

- (1) **Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;**
- (2) **Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and**
- (3) **A description of the actions taken to implement a QIP during the reporting period as specified in Section C-Response to Excursions or Exceedances. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.**

The Permittee may combine the Quarterly Deviation and Compliance Monitoring Report and a report pursuant to 40 CFR 64 and 326 IAC 3-8.

* * * * *

- (d) ~~The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period.~~ Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.
- (e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any "project" (as defined in

326 IAC 2-2-1(~~qqoo~~) and/or 326 IAC 2-3-1(~~jjj~~) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

- (1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1(~~xxww~~) and/or 326 IAC 2-3-1(~~qqpp~~), for that regulated NSR pollutant, and

* * * * *

* * * * *

SECTION D.1 ~~FACILITY~~ **EMISSIONS UNIT OPERATION CONDITIONS**

Facility Emissions Unit Description [326 IAC 2-7-5(4514)]: Raw Material 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.~~
- (b) One (1) clay/shale processing operation, identified as EU-001, ~~permitted in 2011, consisting of one (1) Stedman Grandslam crusher and two (2) Diester screens, with a maximum throughput of 100 tons of raw material per hour, equipped with a~~ using baghouse identified as CD-001 (installed in 1993) as for particulate control, exhausting to Stack EP-001, capacity: 200 tons of clay/shale per hour. **consisting of the following equipment:**
- (1) One (1) primary crusher, installed in 1970 and replaced in 1999, with a maximum capacity of 100 tons of raw material per hour. Under NSPS Subpart OOO, the primary crusher is an affected facility vented through a stack and is subject to the provisions listed in 40 CFR 60.670(d)(1).
 - (2) Two (2) Deister screens, approved in 2011 for construction, with a maximum capacity of 200 tons of raw material per hour. Under NSPS Subpart OOO, the screens are affected facilities vented through a stack.
 - (3) One (1) secondary crusher, approved in 2011 for construction, with a maximum capacity of 200 tons of raw material per hour. Under NSPS Subpart OOO, the secondary crusher is an affected facility vented through a stack.
 - (4) Raw material conveyance equipment, installed in 1970.
- (c) One (1) sand processing system, installed in 1985, consisting of the following equipment:
- (1) Two (2) sand storage silos, identified as EU-SS1 and EU-SS2, each with a maximum capacity of 50 tons and a maximum throughput of 25 tons per hour, using baghouse CD-SS as particulate control, exhausting internally to Plant No. 32 Mill Room.
 - (2) One (1) dynamic air system, for conveyance of sand to Plant No. 32 and Plant No. 43, with a maximum capacity of 2.73 tons per hour, using baghouses CD-P32-MR and CD-P43-MR as particulate control, exhausting to Stacks EP-P32-MR and EP-P32-MR, respectively.
- (d) One (1) coal processing system, installed in 1979, with a maximum capacity of 1.5 tons per hour, consisting of one (1) coal crusher, identified as EU-CP, using baghouse CD-CP as particulate control, exhausting to Stack EP-CP.

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

D.1.1 Particulate **Emission Limitations for Manufacturing Processes** [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emissions rate from ~~clay and shale processing (screening and grinding) operation~~ **each of the following processes** shall not exceed ~~51.3 pounds~~ **the pound** per hour

when operating at a process weight rate of 100 tons per hour. limitations specified in the following table:

Unit Description	Max. Process Weight Rate (tons/hr)	Particulate Emission Limit (lb/hr)
Clay/Shale Processing Operation (EU-001)	100	51.3
Sand Processing System	2.73	8.04
Coal Processing System	1.50	5.38

The pounds per hour limitations was were calculated with the following equations:

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:

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

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.1.2 Record Keeping Requirements [40 CFR 676(a)(1), Subpart OOO]~~

~~Pursuant to 40 CFR 60.676(a)(1), on July 19, 1999, the Permittee submitted to IDEM OAA, the following information:~~

- ~~(a) The rated capacity in megagrams or tons per hour of the grinder that was constructed in 1970, and~~
- ~~(b) The rated capacity in tons per hour of the grinder constructed in 1999. Compliance with paragraphs (a) and (b) of this condition renders the requirements of 40 CFR 60.672, 40 CFR 60.674, and 40 CFR 60.675, Subpart OOO not applicable.~~

D.1.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for these facilities and their control devices.

Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

SECTION D.2 FACILITY EMISSIONS UNIT OPERATION CONDITIONS

Facility Emissions Unit Description [326 IAC 2-7-5(1514)]: Brick Manufacturing Lines (Plant No. 32)

- ~~(b) One (1) brick manufacturing line, identified as EU-002, consisting of the following:~~
 - ~~(1) 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 hydrated lime, sodium bicarbonate, or dry hydrated lime/sodium bicarbonate combination 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.	
(B) — One (1) mill room, identified as EU-P32-MR, equipped with a baghouse, identified as CD-P32-MR, capacity: 70 tons per hour.	
(e)	<p>One (1) brick manufacturing line, identified as Plant No. 32, installed in 1989 and modified in 2006 with the addition of dry injection fabric filter DIFF-02, consisting of the following equipment:</p> <p>(1) One (1) brick making room and sand system (mill room), identified as EU-P32-MR, with a maximum capacity of 70 tons of green brick per hour, consisting of one (1) extrusion operation using baghouse CD-P32-MR as particulate control exhausting to Stack EP-P32-MR, and the Plant Room 32 pugmill, material storage and conveyance equipment.</p> <p>(2) One (1) tunnel pre-dryer and one (1) tunnel dryer, identified as EU-P32-BD1, using waste heat from Plant No. 32 Kiln, with a maximum capacity of 13.7 tons of green brick per hour, using dry injection fabric filter DIFF-02 as particulate, SO₂, and HAP control, exhausting to Stack 32KE.</p> <p>(3) One (1) coal and natural gas-fired kiln, identified as EU-P32-K, rated at 25 million British thermal units per hour, with a maximum capacity of 13.7 tons of brick per hour, using dry injection fabric filter DIFF-02 as particulate, SO₂, and HAP control, exhausting to Stack 32KE.</p> <p>(4) One (1) lime/sodium bicarbonate storage silo, identified as EU-LS2, with a maximum capacity of 50 tons and a maximum throughput of 25 tons per hour, using dry injection fabric filter DIFF-02 as particulate control, exhausting to Stack 32KE.</p>
(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)	

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

(a) — The potential to emit PM, PM₁₀, SO₂, and NO_x shall not exceed the following:

Facility	NOX Limit	PM Limit	PM10 Limit	SO2 Limit
	lbs/ton bricks	lbs/ton bricks	lbs/ton bricks	lbs/ton bricks
Line 2 Kiln	1.00	0.336	0.336	2.50
Line 2 mill room (EU-P32-MR)	N/A	0.0063	0.0036	N/A

- (ba) The production of bricks at EU-002 from (Plant No. 32) shall not exceed 120,012 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The PM_{2.5} emissions from the following operations shall not exceed the emission limits listed in the table below:

Unit(s)	Unit ID(s)	Control Device ID	PM _{2.5} Emission Limit (lb/ton)
Plant No. 32 Brick Dryer, Plant No. 32 Brick Kiln, & Plant No. 32 Injection Silo	EU-P32-BD1, EU-P32-K, & EU-LS2	DIFF-02	0.336

- (c) The SO₂ emissions from the following operations shall not exceed the emission limits listed in the table below:

Unit(s)	Unit ID(s)	Control Device ID	SO ₂ Emission Limit (lb/ton)
Plant No. 32 Brick Dryer & Plant No. 32 Brick Kiln	EU-P32-BD1 & EU-P32-K	DIFF-02	2.50

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 NOX to less than one hundred (100) tons per year from the source existing prior to the addition of Plant No. 43. Therefore, the source prior to the addition of Plant No. 43 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.

Compliance with these limits, combined with the potential to emit PM₁₀ and SO₂ from other emission units at the source, shall limit the SO₂ emissions to less than 250 tons per twelve (12) consecutive month period and the PM_{2.5} emissions to less than 100 tons per twelve (12) consecutive month period from the source existing prior to the addition of Plant No. 43. This shall render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable to the source existing prior to the addition of Plant No. 43.

D.2.2 Avoidance Limits for HAPs ~~Limits [326 IAC 2-4.1] [326 IAC 2-7-5(1)]~~ **[40 CFR 63, Subpart JJJJJ]**

~~The HAPs emissions shall not exceed the following:~~

Facility	Hydrogen fluoride (Hydrofluoric acid)	Hydrochloric acid
	lbs/ton bricks	lbs/ton bricks
Line 2 Kiln	0.057	0.056

The combined HF emissions from brick kiln EU-P32-K and brick kiln EU-P43-K shall not exceed 9.90 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits, combined with the limited emissions in Condition D.3.2 and the potential to emit HAPs from other emission units at the source, shall limit single HAP emissions from the entire source to less than ten (10) tons per twelve (12) consecutive month period and combined HAP emissions from the entire source to less than twenty-five (25) tons per twelve (12) consecutive month period. This shall render the requirements of 40 CFR 63, Subpart JJJJJ not applicable to the source.

~~Compliance with this limitation shall limit the potential to emit of a single HAP to less than ten (10) tons per year and of a combination of HAPs to less than twenty five (25) tons per year from Line 2 Kiln and renders the requirements of 326 IAC 2-4.1 not applicable to Line 2 Kiln.~~

~~Compliance with this limitation in conjunction with Condition D.3.1(c) and HAPs emission from other emission units at the source shall limit the source wide potential to emit of a single HAP to less than ten (10) tons per year and of a combination of HAPs to less than twenty five (25) tons per year. Therefore, this source is an area source of HAP.~~

D.2.3 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-1]

Pursuant to 326 IAC 7-1.1 (SO₂ Emissions Limitations), the SO₂ emissions from ~~Line 2 brick kiln EU-P32-K~~ shall not exceed six (6.0) pounds per million British thermal units heat input while combusting coal.

D.2.4 Particulate **Emission Limitations for Manufacturing Processes** [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(1), the allowable particulate emissions from each of the following processes shall not exceed the pound per hour limitations specified in the following table:

Unit Description	Max. Process Weight Rate (tons/hr)	Particulate Emission Limit (lb/hr)
Plant No. 32 Mill Room	70	47.8
Brick Dryer (Plant No. 32)	13.7	23.7
Brick Kiln (Plant No. 32)	13.7	23.7
Injection System (Plant No. 32)	0.21	1.44

The pounds per hour limitations were calculated with the following equations:

- (a) ~~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:~~

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

- (b) ~~Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the 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:~~

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

D.2.5 Preventive Maintenance Plan [326 IAC 2-7-5(4312)]

* * * * *

D.2.6 Particulate, SO₂, and HAP Control [326 IAC 2-7-6(6)]

In order to ensure compliance with Conditions D.2.1, D.2.2, D.2.3, and D.2.4, the dry injection fabric filter, identified as DIFF-02, for particulate, SO₂, and HAP control shall be in operation and control emissions from the Plant No. 32 brick dryer, kiln, and injection silo at all times that the emission units are in operation.

D.2.7 Broken or Failed Bag Detection – Single Compartment Baghouse

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, the feed to the 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 emissions unit. 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.2.68 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

- (a) ~~No later than 180 days after the issuance of this Part 70 permit renewal, 109-16617-00002, in order to demonstrate compliance with Condition D.2.1, the Permittee shall perform SO₂ testing for the Line 2 Kiln stack 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 kiln commence operation, this testing shall be superseded by the testing required in Condition D.2.6(c).~~
- (b) ~~No later than 180 days after issuance of this Part 70 permit renewal, 109-16617-00002, in order to demonstrate compliance with Condition D.2.4, the Permittee shall perform PM testing for the Line 2 Kiln stack 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 Plant No. 43 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, the Permittee shall perform PM, PM₁₀, SO₂ and NO_x testing for the Line 2 Kiln/Dryer stack (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) ~~In order to demonstrate compliance with Conditions D.2.2 and D.3.1(c), the Permittee shall perform HF and HCl testing using natural gas for the one (1) coal/natural gas fired brick kiln stack (DIFF-02) as indicated in the following timeline:~~

~~No later than five (5) years after the most recent HF and HCl testing, performed on Line 2 Kiln.~~

~~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.~~

- (a) **In order to demonstrate compliance with Condition D.2.1(b), the Permittee shall perform PM_{2.5} testing of the Plant No. 32 brick dryer (EU-P32-BD1), kiln (EU-P32-K), and injection silo (EU-LS2) controlled by dry injection fabric filter DIFF-02 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM_{2.5} includes filterable and condensable PM_{2.5}.**
- (b) **In order to demonstrate compliance with Conditions D.2.1(c) and D.2.3, the Permittee shall perform SO₂ testing of the Plant No. 32 brick dryer (EU-P32-BD1) and kiln (EU-P32-K) controlled by dry injection fabric filter DIFF-02 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.**
- (c) **In order to demonstrate compliance with Conditions D.2.2 and D.3.2, the Permittee shall perform HF and HCl testing of the Plant No. 32 brick dryer (EU-P32-BD1) and kiln (EU-P32-K) controlled by dry injection fabric filter DIFF-02 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.**

D.2.79 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 2-7-5(3)(A)] [326 IAC 2-7-6]

~~Pursuant to 326 IAC 7-2 and in order to ensure compliance with Condition D.2.3, the Permittee shall demonstrate that the sulfur dioxide emissions from the Line 2 Kiln does not exceed six (6.0) pounds per million British thermal units. Compliance shall be determined utilizing utilize one of the following options:~~

~~* * * * *~~

D.2.8 Particulate, SO₂ and HAPs Control [326 IAC 2-7-6(6)]

- (a) ~~In order to comply with Condition D.2.1, D.2.2 and D.2.4(a), the dry hydrated lime, sodium bicarbonate, or dry hydrated lime/sodium bicarbonate combination injection baghouse, identified as DIFF-02, for particulate, SO₂ and HAPS control shall be in operation and control emissions from the Line 2 Kiln at all times that the Line 2 Kiln is in operation.~~
- (b) ~~In order to comply with Condition D.2.1 and D.2.4(b), 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, OAG 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.2.10 Hydrogen Fluoride/Hydrofluoric Acid (HF)

In order to determine compliance with the HF emissions limit in Condition D.2.2(c), the HF emissions from brick kiln EU-P32-K and brick kiln EU-P43-K shall be calculated using the following formula:

$$E_{TOTAL} = (EF_{32} \times H_{32} / 2000) + (EF_{43} \times H_{43} / 2000)$$

where:

E_{TOTAL} = combined total tons of HF emissions per month
 EF_{32} = HF emission factor from the Plant No. 32 brick kiln, which equals 0.057 lb/ton or the most recent valid compliance demonstration
 H_{32} = tons of brick per month produced from the Plant No. 32 tunnel kiln
2000 = lb/ton
 EF_{43} = HF emission factor from the Plant No. 43 brick kiln, which equals 0.057 lb/ton or the most recent valid compliance demonstration
 H_{43} = tons of brick per month produced from the Plant No. 43 tunnel kiln

D.2.911 Visible Emissions Notations

- (a) ~~Visible emission notations of the Line 2 Kiln Plant No. 32 mill room stack exhaust (DIFF-02) and the mill room baghouses (CD-P32-MR) (Stack EP-P32-MR) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.~~
- (b) **Visible emission notations of the Plant No. 32 brick dryer, kiln, and injection silo stack exhaust (Stack 32KE) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.**
- (bc) ***
- (ed) ***
- (de) ***
- (ef) ***

D.2.10 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 (CDP32-MR) used in conjunction with the mill rooms (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.2.12 Compliance Assurance SO₂ Monitoring [40 CFR 64]

Pursuant to 40 CFR 64 (CAM), the Permittee shall perform the following monitoring:

- (a) The Permittee shall continuously monitor the reagent feed rate at the dry injection fabric filter, identified as DIFF-02.**
- (b) The Permittee shall inspect the reagent system and feeder setting on the dry injection fabric filter, identified as DIFF-02, once per shift.**
- (c) If the reagent feeder setting drops below the level established during the latest performance test, the switches monitoring the interlock system on the reagent delivery systems, including the reagent 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. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.**

D.2.13 Broken or Failed Bag Detection – Multi-Compartment Baghouse

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.2.11 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.2.12 Compliance Assurance SO₂ Monitoring [40 CFR 64]~~

~~Pursuant to 40 CFR 64, Compliance Assurance Monitoring, the Permittee shall perform the following monitoring:~~

- ~~(a) The Permittee shall continuously monitor the dry lime and/or sodium bicarbonate feed rate at the baghouse, identified as DIFF-02.~~

- (b) ~~The Permittee shall inspect the dry lime feed and/or sodium bicarbonate system and feeder setting on the baghouse, identified as DIFF-02, once per shift.~~
- (c) ~~If the lime and/or sodium bicarbonate feeder setting drops below the level established during the latest performance test, the switches monitoring the interlock system on the limestone and/or sodium bicarbonate delivery systems, including the lime and/or sodium bicarbonate 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. Failure to take response steps shall be considered a deviation from this permit. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.~~

D.2.14 Record Keeping Requirements

- (a) To document the compliance status with Conditions D.2.1 **and D.2.2** the Permittee shall maintain records in accordance with (1) through (54) below. Records maintained for (1) through (54) shall be taken monthly and shall be complete and sufficient to establish compliance with the emission limits established in Conditions D.2.1 **and D.2.2**.
- (1) Calendar dates covered in the compliance determination period.
- (2) Sulfur content, heat content, and ash content of the coal.
- (34) Sulfur dioxide emission rates.
- (43) The total number **weight** of bricks produced at EU-002 (Plant No. 32) each month.
- (5) **Monthly records of Hydrogen Fluoride/Hydrofluoric Acid (HF) emission rates.**
- (b) To document the compliance status with Condition D.2.911, the Permittee shall maintain records of once per day visible emission notations of the ~~Line 2 Kiln stack exhaust (DIFF-02) while combusting coal and the mill room baghouse (CD-P32-MR)~~ **Plant No. 32 brick dryer, kiln, and injection silo stack exhaust (Stack 32KE) and the Plant No. 32 mill room stack exhaust (Stack EP-P32-MR)**. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (c) ~~To document the compliance status with Condition D.2.10, the Permittee shall maintain records once per day of the pressure drop across the baghouse (CD-P32-MR) used in conjunction with the mill rooms (EU-P32-MR) during normal operation when venting to the atmosphere. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of pressure drop reading (e.g. the process did not operate that day).~~
- (dc) To document the compliance status with Condition D.2.12, the Permittee shall maintain records of the feeder setting once per shift and continuous records of the dry lime/sodium bicarbonate feed rate. **The Permittee shall include in its once per shift record when a feeder setting reading is not taken and the reason for the lack of the feeder setting reading (e.g. the process did not operate that shift).**
- (e) ~~To document the compliance status with Condition D.2.1, the Permittee shall maintain a record of the date the baghouse, identified as DIFF-02, commences operation.~~

- (fd) Section C – General Record Keeping Requirements, of this permit contains the Permittee's obligations with regard to the records required by this condition ~~and that the Permittee make such records available upon request to IDEM, OAQ, and the US EPA.~~

D.2.4415 Reporting Requirements

- (a) ~~Reports indicating the date the one (1) dry lime injection baghouse, identified as DIFF-02, commences 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 the baghouse. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

- (b)(a) A quarterly ~~summary report of the information~~ **brick production** to document the compliance status with Condition D.2.1(a) shall be submitted ~~to the address listed in not later than thirty (30) days after the end of the quarter being reported.~~ 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 **contains the Permittee's obligations with regard to the reporting required by this condition.** The report submitted by the Permittee does require the a certification ~~that meets the requirements of 326 IAC 2-7-6(1) by the a~~ "responsible official," as defined by 326 IAC 2-7-1(34).

- (b) A quarterly report of HF emissions to document the compliance status with Conditions D.2.2 and D.3.2 shall be submitted not later than thirty (30) days after the end of the quarter being reported.

Section C – General Reporting contains the Permittee's obligations with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official," as defined by 326 IAC 2-7-1(34).

SECTION D.3 FACILITY EMISSIONS UNIT OPERATION CONDITIONS

Facility Emissions Unit Description [326 IAC 2-7-5(4514)]: Brick Manufacturing Line (New Plant No. 43)

- (c) ~~One (1) brick manufacturing line, identified as Plant No. 43, consisting of the following:~~
- (1) ~~One (1) brick making room and sand system (mill room), identified as EU-43MR, equipped with a baghouse, identified as CD-43MRBH and exhausting to Stack 43MRBH, capacity: 72.5 tons of clay and shale per hour.~~
 - (2) ~~One (1) coal/natural gas fired brick kiln, identified as EU-43K, equipped with a dry hydrated lime, sodium bicarbonate, or dry hydrated lime/sodium bicarbonate combination 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.~~
 - (3) ~~One (1) natural gas/propane brick dryer, identified as EU-43BD1, exhausting to Stack 43BD1, capacity: 20.55 tons of bricks and 13.29 million British thermal units per hour.~~
- (f) **One (1) brick manufacturing line, identified as Plant No. 43, permitted in 2006, consisting of the following equipment:**
- (1) **One (1) brick making room and sand system (mill room), identified as EU-P43-MR, with a maximum capacity of 72.5 tons of green brick per hour, consisting of one (1) extrusion operation using baghouse CD-P43-MR as particulate control exhausting to Stack EP-P43-MR, and the Plant Room 43 pugmill, material storage**

and conveyance equipment.

- (2) One (1) natural gas/propane brick dryer, identified as EU-P43-BD1, rated at 13.29 million British thermal units per hour, with a maximum capacity of 20.55 tons of green brick per hour, exhausting to Stack 43BD1.
- (3) One (1) coal/natural gas fired brick kiln, identified as EU-P43-K, rated at 25 million British thermal units per hour, with a maximum capacity of 20.55 tons of brick per hour, using dry injection fabric filter DIFF-03 as particulate, SO₂, and HAP control, exhausting to Stack EP-P43-K.
- (4) One (1) lime/sodium bicarbonate storage silo, identified as EU-LS3, with a maximum capacity of 50 tons and a maximum throughput of 25 tons per hour, using dry injection fabric filter DIFF-03 as particulate control, exhausting to Stack 43KE.

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

D.3.1 Avoidance Limits for PSD and Nonattainment NSR Minor Modification Limits [326 IAC 2-2] [326 IAC 2-1.1-5] [326 IAC 2-4.1]

(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 using the testing required by Condition D.2.6(c).~~

(b) ~~The potential to emit PM, PM₁₀, and SO₂ shall be limited as follows:~~

Facility	PM Limit lbs/ton	PM ₁₀ Limit lbs/ton bricks	SO ₂ Limit lbs/ton bricks
Kiln (EU-43K)	0.336	0.336	2.60
Mill Room (EU-43MR)	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 Plant No. 43. 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.~~

(c) ~~In order to render 326 IAC 2-4.1 not applicable and render the source minor under NESHAP, the potential to emit HAPs shall not exceed the following:~~

Facility	Hydrogen fluoride (Hydrofluoric acid) lbs/ton bricks	Hydrochloric acid lbs/ton bricks
Kiln (EU-43K)	0.057	0.056

~~Compliance with these limitations limits the potential to emit a single HAP to less than ten (10) tons per year and of a combination of HAPs to less than twenty five (25) tons per year from EU-NPK and renders the requirements of 326 IAC 2-4.1 not applicable to Kiln (EU-43K).~~

~~Compliance with this limitation in conjunction with Condition D.2.2 and the potential to emit HAP from other emission units at the source shall limit the potential to emit of single~~

~~HAP to less than ten (10) tons per year and of a combination of HAPs to less than twenty-five (25) tons per year. Therefore, this source is an area source of HAP.~~

(da) The production of bricks at kiln ~~EU-43K~~ **from Plant No. 43** shall not exceed 180,018 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The $PM_{2.5}$ emissions from the following operations shall not exceed the emission limits listed in the table below:

Unit(s)	Unit ID(s)	Control Device ID	$PM_{2.5}$ Emission Limit (lb/ton)
Plant No. 43 Brick Kiln & Plant No. 43 Injection Silo	EU-P43-K & EU-LS3	DIFF-03	0.336

(c) The SO_2 emissions from the following operations shall not exceed the emission limits listed in the table below:

Unit(s)	Unit ID(s)	Control Device ID	SO_2 Emission Limit (lb/ton)
Plant No. 43 Brick Kiln	EU-P43-K	DIFF-03	2.60

Compliance with these limits, combined with the potential to emit PM_{10} and SO_2 from other emission units at the source, shall limit the SO_2 emissions to less than 250 tons per twelve (12) consecutive month period each and the $PM_{2.5}$ emissions to less than 100 tons per twelve (12) consecutive month period from the Plant No. 43 modification. This shall render the requirements of 326 IAC 2-2 (PSD), 326 IAC 2-3 (Emission Offset), and 326 IAC 2-1.1-5 (Nonattainment NSR) not applicable to the Plant No. 43 modification.

D.3.2 Avoidance Limits for HAPs [326 IAC 2-4.1] [40 CFR 63, Subpart JJJJJ]

The combined HF emissions from brick kiln EU-P32-K and brick kiln EU-P43-K shall not exceed 9.90 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits shall limit single HAP emissions from the brick kiln EU-P43-K to less than ten (10) tons per twelve (12) consecutive month period and combined HAP emissions from the brick kiln EU-P43-K to less than 25 tons per twelve (12) consecutive month period. This shall render the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable to brick kiln EU-P43-K.

Compliance with these limits, combined with the limited emissions in Condition D.2.2 and the potential to emit HAPs from other emission units at the source, shall limit single HAP emissions from the entire source to less than ten (10) tons per twelve (12) consecutive month period and combined HAP emissions from the entire source to less than 25 tons per twelve (12) consecutive month period. This shall render the requirements of 40 CFR 63, Subpart JJJJJ not applicable to the source.

D.3.23 Sulfur Dioxide (SO_2) [326 IAC 7-1.1-1]

Pursuant to 326 IAC 7-1.1 (SO_2 Emissions Limitations), the SO_2 emissions from ~~the brick kiln EU-P43-K, identified as EU-43K,~~ shall not exceed six (6.0) pounds per million British thermal units heat input while combusting coal.

D.3.34 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(1), the allowable particulate emissions from each of the following processes shall not exceed the pound per hour limitations specified in the following table:

Unit Description	Max. Process Weight Rate (tons/hr)	Particulate Emission Limit (lb/hr)
Plant No. 43 Mill Room	72.5	48.1
Brick Dryer (Plant No. 43)	20.55	31.1
Brick Kiln (Plant No. 43)	20.55	31.1
Injection System (Plant No. 43)	0.21	1.44

The pounds per hour limitations were calculated with the following equations:

- (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-43MR) 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-43K) 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-43BD1) 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:

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

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.3.45 Preventive Maintenance Plan [326 IAC 2-7-5(4312)]

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

No later than 180 days after 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, SO₂, and HAP Control [326 IAC 2-7-6(6)]

- (a) In order to ~~comply~~ **ensure compliance** with Conditions D.3.1(b), **D.3.2, D.3.3,** and D.3.3(b)~~4~~, the dry hydrated lime, sodium bicarbonate, or dry hydrated lime/sodium bicarbonate combination injection baghouse **fabric filter**, identified as DIFF-03, for particulate, **SO₂,** and **SO₂-HAP** control shall be in operation and control emissions from the one (1) coal/natural gas fired **Plant No. 43** brick kiln (EU-43K) at all times that the kiln **emission unit** is in operation.
- (b) ~~In order to comply with Condition D.3.1(b), the baghouse, identified as CD-43MRBH, for particulate control shall be in operation and control emissions from the one (1) brick making room and sand system, identified as EU-43MR, at all times that the one (1) brick making room and sand system, identified as EU-43MR, 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 Broken or Failed Bag Detection – Single Compartment Baghouse

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, the feed to the 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 emissions unit. 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.3.8 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

- (a) In order to demonstrate compliance with Conditions D.3.1(b) and D.3.4, the Permittee shall perform PM_{2.5} testing of the Plant No. 43 brick kiln (EU-P43-K) and injection silo (EU-LS3) controlled by dry injection fabric filter DIFF-03 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM_{2.5} includes filterable and condensable PM_{2.5}.
- (b) In order to demonstrate compliance with Conditions D.3.1(c) and D.3.3, the Permittee shall perform SO₂ testing of the Plant No. 43 brick kiln (EU-P43-K) controlled by dry injection fabric filter DIFF-03 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.
- (c) In order to demonstrate compliance with Conditions D.2.2 and D.3.2, the Permittee shall perform HF and HCl testing of the Plant No. 43 brick kiln (EU-P43-K) controlled by dry injection fabric filter DIFF-03 utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.3.79 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 2-7-5(3)(A)] [326 IAC 2-7-6]

Pursuant to 326 IAC 7-2 and in order to ensure compliance with Condition D.3.3, the Permittee shall demonstrate that the sulfur dioxide emissions from the kiln (EU-43K) do not exceed six (6.0) pounds per million British thermal units. Compliance shall be determined utilizing ~~utilize~~ one of the following options:

* * * * *

D.3.10 Hydrogen Fluoride/Hydrofluoric Acid (HF)

In order to determine compliance with the HF emissions limit in Condition D.3.2(c), the HF emissions from brick kiln EU-P32-K and brick kiln EU-P43-K shall be calculated using the following formula:

$$E_{TOTAL} = (EF_{32} \times H_{32} / 2000) + (EF_{43} \times H_{43} / 2000)$$

where:

E_{TOTAL} = combined total tons of HF emissions per month
 EF_{32} = HF emission factor from the Plant No. 32 brick kiln, which equals 0.057 lb/ton or the most recent valid compliance demonstration
 H_{32} = tons of brick per month produced from the Plant No. 32 tunnel kiln
 2000 = lb/ton
 EF_{43} = HF emission factor from the Plant No. 43 brick kiln, which equals 0.057 lb/ton or the most recent valid compliance demonstration
 H_{43} = tons of brick per month produced from the Plant No. 43 tunnel kiln

D.3.811 Visible Emissions Notations

- (a) Visible emission notations of ~~(1) coal/natural gas fired brick kiln (EU-43K)~~ **the Plant No. 43 mill room stack exhaust (Stack EP-P43-MR) (DIFF-03) and the one (1) brick making room and sand system (EU-43MR) baghouse stack exhaust (43MRBH)** shall be performed once per day during normal daylight operations. **A trained employee shall record whether emissions are normal or abnormal.**
- (b) **Pursuant 40 CFR 64 (CAM), visible emission notations of the Plant No. 43 kiln and injection silo stack exhaust (Stack EP-P43-K) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.**
- (bc) ***
- (ed) ***
- (de) ***
- (ef) ***

~~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-43MRBH) used in conjunction with the one (1) brick making room and sand system (EU-43MR) 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. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps 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.3.4112 Compliance Assurance SO₂ Monitoring [40 CFR 64]

Pursuant to 40 CFR 64 (CAM), the Permittee shall perform the following monitoring:

- (a) The Permittee shall continuously monitor the **reagent dry lime and/or sodium bicarbonate** feed rate at the ~~one (1) dry hydrated lime, sodium bicarbonate, or dry hydrated lime/sodium bicarbonate combination line~~ **dry injection baghouse fabric filter**, identified as DIFF-03.
- (b) The Permittee shall inspect the **reagent dry lime and/or sodium bicarbonate** feed system and feeder setting on the ~~one (1) dry hydrated lime, sodium bicarbonate, or dry hydrated lime/sodium bicarbonate combination line~~ **dry injection baghouse fabric filter**, identified as DIFF-03, once per shift.
- (c) If the **reagent lime and/or sodium bicarbonate** feeder setting drops below the level established during the latest performance test, the switches monitoring the interlock system on the **reagent limestone and/or sodium bicarbonate** delivery systems, including the **reagent 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. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

D.3.13 Broken or Failed Bag Detection – Multi-Compartment Baghouse

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.3.4214 Record Keeping Requirements

-
- (a) To document the compliance status with Conditions D.3.1 **and D.3.2** the Permittee shall maintain records in accordance with (1) through (54) below. Records maintained for (1) through (54) 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 Conditions D.3.1 **and D.3.2**.
 - (1) ~~The total number of bricks produced at each kiln each month;~~
 - (21) Calendar dates covered in the compliance determination period.
 - (32) Sulfur content, heat content, and ash content of the coal.
 - (34) Sulfur dioxide emission rates.
 - (4) **The total weight of bricks produced at Plant No. 43 each month; and**
 - (5) **Monthly records of Hydrogen Fluoride/Hydrofluoric Acid (HF) emission rates.**
 - (b) To document the compliance status with Condition D.3.811, the Permittee shall maintain records of once per day visible emission notations of the ~~one (1) coal/natural gas-fired~~ **Plant No. 43 brick kiln (EU-43K) stack exhaust (Stack EP-P43-K) and the Plant No. 43 mill room stack exhaust (Stack EP-P43-MR) (DIFF-03) while combusting coal and the brick making room and sand system (EU-43MR) baghouse stack (43MRBH) exhaust.**

The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

- (e) ~~To document the compliance status with Condition D.3.9, the Permittee shall maintain records once per day of the pressure drop across the baghouse (CD-43MRBH) used in conjunction with the one (1) brick making room and sand system (EU-43MR) during normal operation when venting to the atmosphere. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of pressure drop reading (e.g. the process did not operate that day).~~
- (ec) To document the compliance status with Condition D.3.11, the Permittee shall maintain records of the feeder setting once per shift: **and continuous records of the dry lime/sodium bicarbonate feed rate. The Permittee shall include in its once per shift record when a feeder setting reading is not taken and the reason for the lack of the feeder setting reading (e.g. the process did not operate that shift).**
- (ed) Section C – General Record Keeping Requirements, of this permit contains the Permittee's obligations with regard to the records required by this condition ~~and the Permittee make such records available upon request to IDEM, OAQ, and the US EPA.~~

D.3.1315 Reporting Requirements

- (a) A quarterly ~~summary report of the information~~ **brick production** to document the compliance status with Condition D.3.1 (da) 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~~ **not later than** 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).~~ Section C - General Reporting contains the Permittee's obligations with regard to the reporting required by this condition. **The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official,” as defined by 326 IAC 2-7-1(34).**
- (b) A quarterly report of HF emissions to document the compliance status with Conditions D.2.2 and D.3.2 shall be submitted not later than thirty (30) days after the end of the quarter being reported.

Section C – General Reporting contains the Permittee's obligations with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a “responsible official,” as defined by 326 IAC 2-7-1(34).

SECTION D.4 ~~FACILITY~~ **EMISSIONS UNIT** OPERATION CONDITIONS

Facility Emissions Unit Description [326 IAC 2-7-5(1514)]: ~~Waste Brick Crushing~~ **Insignificant Activities**

- ~~(d) Waste brick crushing operations, identified as EU-BC, including conveying, crushing and screening, using wet suppression, capacity: 150 tons of bricks per hour.~~
- (c) **Gasoline fuel transfer dispensing operations handling less than or equal to 1,300 gallons per day and filling storage tanks having a capacity equal to or less than 10,500 gallons:**
- One (1) storage tank, installed in 1991, identified as Gasoline, for storage of gasoline, with a maximum volume of 250 gallons. Under NESHAP Subpart CCCCCC, this is an existing affected facility. [326 IAC 8-4-6] [326 IAC 8-4-9] [40 CFR 64, Subpart CCCCCC]
- (g) **Degreasing operations that do not exceed one hundred forty-five (145) gallons per twelve (12) months, except if subject to 326 IAC 20-6. [326 IAC 8-3-2]**
- (k) **Covered coal or coke conveying of less than or equal to three hundred sixty (360) tons per day, including the following equipment:**
- (1) **One (1) dynamic air system, for conveyance of crushed coal to Plant No. 32. [326 IAC 6-3-2]**
- (2) **One (1) dynamic air system, for conveyance of crushed coal to Plant No. 43. [326 IAC 6-3-2]**
- (p) **Activities with potential emissions within any of the following thresholds: equal to or less than 5 pounds per hour or 25 pounds per day PM₁₀, SO₂, or NO_x; equal to or less than 3 pounds per hour or 15 pounds per day VOC; equal to or less than 25 pounds per day CO; equal to or less than 0.6 tons per year or 3.29 pounds per day Pb; or greater than 1 pound per day but less than 5 pounds per day or 1 ton per year single HAP (and not regulated by a NESHAP):**
- (11) **One (1) Plant No. 32 kiln car vacuum cleaning system, identified as EU-P32VS. [326 IAC 6-3-2]**
- (12) **One (1) Plant No. 43 kiln car vacuum cleaning system, identified as EU-P43VS. [326 IAC 6-3-2]**

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

D.4.1 **Particulate Emission Limitations for Manufacturing Processes [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:~~

~~$$E = 55.0 P^{0.44} - 40$$~~ where ~~E = rate of emission in pounds per hour; and~~
~~P = process weight rate in tons per hour~~

- (a) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the coal processing system shall not exceed 5.38 pounds per hour when operating at a process weight rate of 1.50 tons per hour. 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:

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

- (b) Pursuant to 326 IAC 6-3-2(e)(2), the allowable particulate emissions from the vacuum cleaning systems EU-P32VS and EU-P43VS shall not exceed 0.551 lb/hr, each.

D.4.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Degreaser Control Equipment and Operating Requirements), for cold cleaning degreasers without remote solvent reservoirs constructed after July 1, 1990:

- (a) The Permittee shall ensure the following control equipment and operating requirements are met:
- (1) Equip the degreaser with a cover.
 - (2) Equip the degreaser with a device for draining cleaned parts.
 - (3) Close the degreaser cover whenever parts are not being handled in the degreaser.
 - (4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases.
 - (5) Provide a permanent, conspicuous label that lists the operating requirements in (a)(3), (a)(4), (a)(6), and (a)(7) of this condition.
 - (6) Store waste solvent only in closed containers.
 - (7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.
- (b) The Permittee shall ensure the following additional control equipment and operating requirements are met:
- (1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

- (B) A water cover when solvent used is insoluble in, and heavier than, water.
 - (C) A refrigerated chiller.
 - (D) Carbon adsorption.
 - (E) An alternative system of demonstrated equivalent or better control as those outlined in (b)(1)(A) through (D) of this condition that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.
- (2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.
 - (3) If used, solvent spray:
 - (A) must be a solid, fluid stream; and
 - (B) shall be applied at a pressure that does not cause excessive splashing.

D.4.3 Avoidance Limit for VOC [326 IAC 8-4-6] [326 IAC 8-4-9]

In order to render the requirements of 326 IAC 8-4-6 and 326 IAC 8-4-9 not applicable to the storage tank identified as Gasoline, the monthly gasoline throughput from the storage tank shall not exceed 10,000 gallons per month. Compliance with the above limit will render the requirements of 326 IAC 8-4-6 and 326 IAC 8-4-9 not applicable to the storage tank.

Compliance Determination Requirements

D.4.4 Particulate Control [326 IAC 2-7-6(6)]

In order to ensure compliance with Condition D.4.1(b), bag filters for particulate control shall be in operation and control emissions from the vacuum cleaning systems (EU-P32-VS and EU-P43VS) at all times that the corresponding system is in operation.

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

D.4.5 Record Keeping Requirements

- (a) To document the compliance status with Condition D.4.3, the Permittee shall maintain monthly records of gasoline throughput from the storage tank identified as Gasoline.
- (b) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required to be maintained by this condition.

SECTION E.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(4)(14)]: Clay/ and Shale Processing

- (a) One (1) clay/shale processing operation, identified as EU-001, permitted in 2011, consisting of one (1) Stedman Grandslam crusher and two (2) Diester screens, equipped with a baghouse identified as 001 for particulate control, exhausting to Stack 001, capacity: 200 tons of clay/shale per hour.

- (b) One (1) clay/shale processing operation, identified as EU-001, with a maximum throughput of 100 tons of raw material per hour, using baghouse CD-001 (installed in 1993) as particulate control, exhausting to Stack EP-001, consisting of the following equipment:
- (1) One (1) primary crusher, installed in 1970 and replaced in 1999, with a maximum capacity of 100 tons of raw material per hour. Under NSPS Subpart OOO, the primary crusher is an affected facility vented through a stack and is subject to the provisions listed in 40 CFR 60.670(d)(1).
 - (2) Two (2) Deister screens, approved in 2011 for construction, with a maximum capacity of 200 tons of raw material per hour. Under NSPS Subpart OOO, the screens are affected facilities vented through a stack.
 - (3) One (1) secondary crusher, approved in 2011 for construction, with a maximum capacity of 200 tons of raw material per hour. Under NSPS Subpart OOO, the secondary crusher is an affected facility vented through a stack.

Insignificant Activities

- (p) Activities with potential emissions within any of the following thresholds: equal to or less than 5 pounds per hour or 25 pounds per day PM₁₀, SO₂, or NO_x; equal to or less than 3 pounds per hour or 15 pounds per day VOC; equal to or less than 25 pounds per day CO; equal to or less than 0.6 tons per year or 3.29 pounds per day Pb; or greater than 1 pound per day but less than 5 pounds per day or 1 ton per year single HAP (and not regulated by a NESHAP):
- (4) One (1) ground material transfer conveyor to Plant No. 32, identified as F-C32-1, installed in 1987, with emissions uncontrolled. Under NSPS Subpart OOO, this is an affected facility enclosed in a building.
 - (7) One (1) ground material transfer conveyor to Plant No. 43, identified as F-C43-1, permitted in 2006, with emissions uncontrolled. Under NSPS Subpart OOO, this is an affected facility enclosed in a building.

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

E.1.2 New Source Performance Standards for Nonmetallic Mineral Processing Plants [326 IAC 12] [40 CFR Part 60, Subpart OOO]

The Permittee who **operates** a stationary brick and structural clay manufacturing source shall comply with the following provisions of 40 CFR Part 60, Subpart OOO (included, **in its entirety**, as Attachment A of this permit):

- (4a) 40 CFR 60.670(a)(4), (d), (e), (f);
- (2b) 40 CFR 60.671;
- (3c) 40 CFR 60.672(a), (b), (d), (e);
- (d) **40 CFR 60.673;**
- (4e) 40 CFR 60.674(c), (d);
- (5f) 40 CFR 60.675(a), (b), (c)(1)(i), (c)(1)(ii), (c)(3), (d), (e), (g), (i);
- (6g) 40 CFR 60.676(a)(1), (b)(4), (f), (h), (i)(1), (j), (k);
- (7h) Table 1 to 40 CFR 63, Subpart OOO;
- (i) **Table 2 to 40 CFR 63, Subpart OOO; and**
- (j) **Table 3 to 40 CFR 63, Subpart OOO.**

SECTION E.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]: Spark Ignition Internal Combustion Engines

Insignificant Activities

- (m) Emergency generators, including one (1) natural gas-fired emergency generator, located in Plant 43, installed in 2007, with a maximum generating rate of 25 hp. [40 CFR 60, Subpart JJJJ] [40 CFR 63, Subpart ZZZZ]

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

E.2.1 General Provisions Relating to NSPS, Subpart JJJJ [326 IAC 12] [40 CFR Part 60, Subpart A]

Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 12, except as otherwise specified in 40 CFR 60, Subpart JJJJ.

E.2.2 New Source Performance Standards for Spark Ignition Internal Combustion Engines [326 IAC 12] [40 CFR Part 60, Subpart JJJJ]

The Permittee who operates a spark ignition internal combustion engine shall comply with the following provisions of 40 CFR Part 60, Subpart JJJJ (included, in its entirety, as Attachment B of this permit):

- (a) 40 CFR 63.4230(a)(6);
- (b) 40 CFR 63.4236; and
- (c) 40 CFR 63.4248.

SECTION E.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]: Reciprocating Internal Combustion Engines

Insignificant Activities

- (m) Emergency generators, including one (1) natural gas-fired emergency generator, located in Plant 43, installed in 2007, with a maximum generating rate of 25 hp. [40 CFR 60, Subpart JJJJ] [40 CFR 63, Subpart ZZZZ]

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

E.3.1 General Provisions Relating to NESHAP ZZZZ [326 IAC 20-1] [40 CFR Part 63, Subpart A]

- (a) Pursuant to 40 CFR 63.6580, 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 40 CFR 63, Subpart ZZZZ in accordance with Table 8 in 40 CFR Part 63, Subpart ZZZZ.
- (b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

**Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251**

and

**United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590**

E.3.2 Stationary Reciprocating Internal Combustion Engines NESHAP [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

The Permittee which engages in the use of a reciprocating internal combustion engine shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included, in its entirety, as Attachment C of this permit):

- (a) 40 CFR 63.6580;
- (b) 40 CFR 63.6585(a), (c); and
- (c) 40 CFR 63.6590(a)(2)(iii), (c)(1).

SECTION E.4 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(14)]: Gasoline Dispensing Facilities

Insignificant Activities

- (c) Gasoline fuel transfer dispensing operations handling less than or equal to 1,300 gallons per day and filling storage tanks having a capacity equal to or less than 10,500 gallons:

One (1) storage tank, installed in 1991, identified as Gasoline, for storage of gasoline, with a maximum volume of 250 gallons. Under NESHAP Subpart CCCCCC, this is an existing affected facility. [326 IAC 8-4-6] [326 IAC 8-4-9] [40 CFR 64, Subpart CCCCCC]

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

E.4.1 General Provisions Relating to NESHAP CCCCCC [326 IAC 20-1] [40 CFR Part 63, Subpart A]

- (a) Pursuant to 40 CFR 63.11130, 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 40 CFR Part 63, Subpart CCCCCC in accordance with the schedule in 40 CFR 63 Subpart CCCCCC.
- (b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

**Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251**

and

**United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590**

E.4.2 National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities [40 CFR Part 63, Subpart CCCCCC]

The Permittee which engages in gasoline dispensing activities shall comply with the following provisions of 40 CFR 63, Subpart CCCCCC (included, in its entirety, as Attachment D of this permit), as specified as follows:

- (a) 40 CFR 63.11110;
- (b) 40 CFR 63.11111(a), (b), (e), (f), (h), (i), (j), (k);
- (c) 40 CFR 63.11112(a), (d);
- (d) 40 CFR 63.11113(b), (c), (e)(2);
- (e) 40 CFR 63.11115;
- (f) 40 CFR 63.11116;
- (g) 40 CFR 63.11125(b), (d);
- (h) 40 CFR 63.11126(b);
- (i) 40 CFR 63.11130;
- (j) 40 CFR 63.11131; and
- (k) 40 CFR 63.11132.

**COMPLIANCE AND ENFORCEMENT BRANCH
PART 70 OPERATING PERMIT
CERTIFICATION**

Source Name: General Shale Brick, Inc.
Source Address: ~~Highway 67 South and CR 1000 North~~ **148 Sycamore Lane**, Mooresville,
Indiana 46158
Part 70 Permit No.: T109-~~16617~~**29661**-00002

**PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT**

Source Name: General Shale Brick, Inc.
Source Address: ~~Highway 67 South and CR 1000 North~~ **148 Sycamore Lane**, Mooresville,
Indiana 46158
Part 70 Permit No.: T 109-~~16617~~**29661**-00002

~~A certification is not required for this report.~~

Part 70 Quarterly Report

Source Name: General Shale Brick, Inc.
Source Address: ~~Highway 67 South and CR 1000 North~~ **148 Sycamore Lane**, Mooresville, Indiana 46158
Part 70 Permit No.: T109-~~46617~~**29661**-00002
Facility: ~~EU-002~~ **Brick Manufacturing Line (Plant 32)**

~~Attach a signed certification to complete this report.~~

Part 70 Quarterly Report

Source Name: General Shale Brick, Inc.
Source Address: ~~Highway 67 South and CR 1000 North~~ **148 Sycamore Lane**, Mooresville, Indiana 46158
Part 70 Permit No.: T109-~~46617~~**29661**-00002
Facility: ~~EU-43K~~ **Brick Manufacturing Line (Plant 43)**

~~Attach a signed certification to complete this report.~~

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
Part 70 Quarterly Report**

Source Name: General Shale Brick, Inc.
Source Address: 148 Sycamore Lane, Mooresville, Indiana 46158
Part 70 Permit No.: T109-16617-00002
Facility: Brick Kilns (Plant 32 and Plant 43)
Parameter: Hydrogen Fluoride (HF) Emissions
Limit: Shall not exceed 9.90 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: _____

Month	HF Emissions (tons)	HF Emissions (tons)	HF Emissions (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: _____

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: General Shale Brick, Inc.
Source Address: ~~Highway 67 South and CR 1000 North~~ **148 Sycamore Lane**, Mooresville,
Indiana 46158
Part 70 Permit No.: ~~T 109-16617~~**29661**-00002

~~Attach a signed certification to complete this report.~~

Recommendation

The staff recommends to the Commissioner that the Part 70 Operating Permit Renewal be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on September 10, 2010. Additional information was received on November 15, 2010; December 10, 2010; December 13, 2010; February 21, 2012; and May 18, 2012.

Conclusion

The operation of this stationary brick and structural clay manufacturing source shall be subject to the conditions of the attached Part 70 Operating Permit Renewal No. T109-29661-00002.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to John Haney at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5328 or toll free at 1-800-451-6027 extension 4-5328.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Appendix A: Emission Calculations
Clay Processing Particulate Emissions

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Process:	Maximum Rate (tons/hr)	Pollutant	Controlled Emission Factor (lb/ton)	Controlled Emissions (tons/yr)	Type of Control	Control Eff. (%)	Uncontrolled Emissions (tons/yr)
Primary Crusher <i>Source of Criteria Pollutant Factors:</i> SCC# 3-05-003-02*, AP-42, Ch. 11.3, Table 11.3-2	100	PM	0.00059	0.26	baghouse	90.0	2.58
		PM ₁₀	0.00059	0.26	baghouse	90.0	2.58
		PM _{2.5}	0.00059	0.26	baghouse	90.0	2.58

* PM has been assumed to be equal to PM₁₀.

CD-001

2.58	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	0.59	lb/hr PM
2.58	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	0.59	lb/hr PM ₁₀
		0.59	lb/hr *	24	hr/day =	14.2	lb/day PM ₁₀

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates greater than 30 tons per hour:

$$P = \frac{100}{55.0} \times \left(\frac{\text{tons/hr}}{100} \right)^{0.11} - 40 = 51.3 \text{ lb/hr PM}$$

This unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

Process:	Maximum Rate (tons/hr)	Pollutant	Uncontrolled Emission Factor (lb/ton)	Uncontrolled Emissions (tons/yr)	Type of Control	Control Eff. (%)	Controlled Emissions (tons/yr)
Grinding and Screening Operations (One secondary crusher, two screens, and four conveyors) <i>Source of Criteria Pollutant Factors:</i> SCC# 3-05-003-02*, AP-42, Ch. 11.3, Table 11.3-2	100	PM	0.025	10.95	baghouse	90.0	1.10
		PM ₁₀	0.0023	1.01	baghouse	90.0	0.10
		PM _{2.5}	0.0023	1.01	baghouse	90.0	0.10

* Processing wet material uncontrolled

CD-001

10.95	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	2.50	lb/hr PM
1.01	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	0.23	lb/hr PM ₁₀
		0.23	lb/hr *	24	hr/day =	5.5	lb/day PM ₁₀

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates greater than 30 tons per hour:

$$P = \frac{100}{55.0} \times \left(\frac{\text{tons/hr}}{100} \right)^{0.11} - 40 = 51.3 \text{ lb/hr PM}$$

This unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

Notes:

The secondary crusher and two screens can process material at a rate of 200 tons per hour. However, the entire clay/shale processing operation (EU-001) operates at 100 tons/hr.

This is the process weight rate used for purposes of determining compliance with 326 IAC 6-3-2 since it is the more stringent of the two throughputs.

The secondary crusher and two screens are bottlenecked by the amount of ground material that can be conveyed both into and from the operation (100 tons/hr).

This is the maximum capacity used for purposes of determining compliance with 326 IAC 2-2.

PM_{2.5} has been assumed to be equal to PM₁₀.

Methodology:

Primary Crusher

Controlled Emissions (tons/yr) = Maximum Rate (tons/hr) * Controlled Emission Factor (lb/ton) * 8760 hr/yr ÷ 2000 lbs/ton

Uncontrolled Emissions (tons/yr) = Controlled Emissions (tons/yr) ÷ (1 - Control Efficiency)

Grinding and Screening Operations

Uncontrolled Emissions (tons/yr) = Maximum Rate (tons/hr) * Uncontrolled Emission Factor (lb/ton) * 8760 hr/yr ÷ 2000 lbs/ton

Controlled Emissions (tons/yr) = Uncontrolled Emissions (tons/yr) * (1 - Control Efficiency)

Appendix A: Emission Calculations
Sand Processing Particulate Emissions

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Process:	Maximum Rate (tons/hr)	Pollutant	Uncontrolled Emission Factor (lb/ton)	Uncontrolled Emissions (tons/yr)	Type of Control	Control Eff. (%)	Controlled Emissions (tons/yr)
Sand Processing System	2.73	PM	0.73	8.73	baghouse	90.0	0.87
Sand Silos - Loading (EU-SS1, EU-SS2)		PM ₁₀	0.47	5.62	baghouse	90.0	0.56
		PM _{2.5}	0.47	5.62	baghouse	90.0	0.56
Source of Criteria Pollutant Factors: SCC# 3-05-011-07*, AP-42, Ch. 11.12, Table 11.12-2							

* Cement unloading to elevated storage silo (pneumatic)

CD-SS

8.73	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	1.99	lb/hr PM
5.62	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	1.28	lb/hr PM ₁₀
		1.28	lb/hr *	24	hr/day =	30.8	lb/day PM ₁₀

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = \frac{2.73 \text{ tons/hr}}{4.1 \times (2.73)^{0.67}} = 8.04 \text{ lb/hr PM}$$

Each unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

Process:	Maximum Rate (tons/hr)	Pollutant	Uncontrolled Emission Factor (lb/ton)	Uncontrolled Emissions (tons/yr)	Type of Control	Control Eff. (%)	Controlled Emissions (tons/yr)
Sand Conveying System ("Dynamic Air System")	2.73	PM	0.73	8.73	baghouse	90.0	0.87
Plant No. 32, Plant No. 43		PM ₁₀	0.47	5.62	baghouse	90.0	0.56
		PM _{2.5}	0.47	5.62	baghouse	90.0	0.56
Source of Criteria Pollutant Factors:							
SCC# 3-05-011-07*, AP-42, Ch. 11.12, Table 11.12-2							

* Cement unloading to elevated storage silo (pneumatic)

CD-P32-MR or
CD-P43-MR

8.73	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	1.99	lb/hr PM
5.62	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	1.28	lb/hr PM ₁₀
		1.28	lb/hr *	24	hr/day =	30.8	lb/day PM ₁₀

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = \frac{2.73 \text{ tons/hr}}{4.1 \times (2.73)^{0.67}} = 8.04 \text{ lb/hr PM}$$

This unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

Notes:

Each silo can be filled pneumatically by tanker trucks at a rate of 25 tons per hour. However, the entire sand processing operation operates at 2.73 tons/hr.

This is the process weight rate used for purposes of determining compliance with 326 IAC 6-3-2 since it is the more stringent of the two throughputs.

Each silo is bottlenecked by the amount of sand that can be conveyed pneumatically from the silo (2.73 tons/hr).

This is the maximum capacity used for purposes of determining compliance with 326 IAC 2-2.

PM_{2.5} has been assumed to be equal to PM₁₀.

Methodology:

Uncontrolled Emissions (tons/yr) = Maximum Rate (tons/hr) * Uncontrolled Emission Factor (lb/ton) * 8760 hr/yr ÷ 2000 lbs/ton

Controlled Emissions (tons/yr) = Uncontrolled Emissions (tons/yr) * (1 - Control Efficiency)

Appendix A: Emission Calculations
Coal Crushing

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Process:	Maximum Rate (tons/hr)	Pollutant	Uncontrolled Emission Factor (lb/ton)	Uncontrolled Emissions (tons/yr)	Type of Control	Control Eff. (%)	Controlled Emissions (tons/yr)
Coal Crusher (EU-CP) <i>Source of Criteria Pollutant Factors: SCC# 3-03-003-10*, AP-42, Ch. 12.2, Table 12.2-18</i>	1.50	PM	1.10	7.23	baghouse	90.0	0.72
		PM ₁₀	1.10	7.23	baghouse	90.0	0.72
		PM _{2.5}	1.10	7.23	baghouse	90.0	0.72

* Controlled (with cyclone) = 0.11 lb/ton, uncontrolled emission factor assumes cyclone control efficiency of 90%

CD-CP

7.23	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	1.65	lb/hr PM
7.23	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	1.65	lb/hr PM ₁₀
		1.65	lb/hr *	24	hr/day =	39.6	lb/day PM ₁₀

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = \frac{1.50 \text{ tons/hr}}{4.1} \times (1.50^{0.67}) = 5.38 \text{ lb/hr PM}$$

This unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

Notes:

PM₁₀ and PM_{2.5} have been assumed to be equal to PM.

Methodology:

Uncontrolled Emissions (tons/yr) = Maximum Rate (tons/hr) * Uncontrolled Emission Factor (lb/ton) * 8760 hr/yr ÷ 2000 lbs/ton

Controlled Emissions (tons/yr) = Uncontrolled Emissions (tons/yr) * (1 - Control Efficiency)

Appendix A: Emission Calculations
Mill Room 32 Particulate Emissions

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Permit No: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Process:	Maximum Rate (tons/hr)	Pollutant	Emission Factor (lb/ton)	Emissions (tons/yr)
Pugmill (EU-P32-MR) AP-42 Table 13.2.4-3	70	PM	3.07E-05	9.41E-03
		PM ₁₀	1.45E-05	4.45E-03
		PM _{2.5}	2.20E-06	6.74E-04

9.41E-03	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	2.15E-03	lb/hr PM
4.45E-03	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	1.02E-03	lb/hr PM ₁₀
6.74E-04	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	1.54E-04	lb/hr PM _{2.5}

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates greater than 30 tons per hour:

$$P = 70 \text{ tons/hr}$$

$$\text{limit} = 55.0 \times \left(\frac{70}{70} \right)^{0.11} - 40 = 47.8 \text{ lb/hr PM}$$

This unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

Process:	Maximum Rate (tons/hr)	Pollutant	Controlled Emission Factor (lb/ton)	Controlled Emissions (tons/yr)	Type of Control	Control Eff. (%)	Uncontrolled Emissions (tons/yr)
Extrusion Operation (EU-P43-MR) Source of Criteria Pollutant Factors: SCC# 3-05-003-42, AP-42, Ch. 11.3, Table 11.3-1	70	PM	3.60E-03	1.10	CD-P32-MR	90.0	11.04
		PM ₁₀	3.60E-03	1.10	CD-P32-MR	90.0	11.04
		PM _{2.5}	3.60E-03	1.10	CD-P32-MR	90.0	11.04

11.04	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	2.52	lb/hr PM
11.04	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	2.52	lb/hr PM ₁₀
		2.52	lb/hr *	24	hr/day =	60.5	lb/day PM ₁₀
11.04	tons/yr *	2000.00	lb/ton ÷	8760.00	hr/yr =	2.52	lb/hr PM _{2.5}

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates greater than 30 tons per hour:

$$P = 70 \text{ tons/hr}$$

$$\text{limit} = 55.0 \times \left(\frac{70}{70} \right)^{0.11} - 40 = 47.8 \text{ lb/hr PM}$$

This unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

Notes:

AP-42 Table 13.2.4-1 (dated 11/06)
 $EF = k(0.0032)^{0.5} \left(\frac{U}{5} \right)^{1.3} \left(\frac{M}{2} \right)^{1.4}$
 where Ef = emission factor (lb/ton)
 M = 10 Moisture content (wt %)
 U = 1 mean wind speed (m/s)
 k= particle size multiplier (dimensionless)
 PM = 0.74
 PM₁₀ = 0.35
 PM_{2.5} = 0.053

Methodology:

Pugmill

Limited PTE of PM (tons/yr) = [Emission Factor (lb/ton)] * [throughput of scrap (tpy)] * (ton/2000 lbs)
 Limited PTE of PM₁₀ (tons/yr) = [Emission Factor (lb/ton)] * [throughput of scrap (tpy)] * (ton/2000 lbs)
 Limited PTE of PM_{2.5} (tons/yr) = [Emission Factor (lb/ton)] * [throughput of scrap (tpy)] * (ton/2000 lbs)

Extrusion

Controlled Emissions (tons/yr) = Maximum Rate (tons/hr) * Controlled Emission Factor (lb/ton) * 8760 hr/yr ÷ 2000 lbs/ton
 Uncontrolled Emissions (tons/yr) = Controlled Emissions (tons/yr) ÷ (1 - Control Efficiency/100)

Appendix A: Emission Calculations
Brick Dryer - Plant No. 32

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Permit No: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Process:	Maximum Rate (tons/hr)	Pollutant	Emission Factor (lb/ton)	Uncontrolled Emissions (tons/yr)	Type of Control	Control Eff. (%)	Controlled Emissions (tons/yr)
Brick Dryer (EU-P32-BD1) Plant No. 32 <i>Source of Criteria Pollutant Factors: SCC# 3-05-003-50, AP-42, Ch. 11.3, Tables 11.3-1 and 11.3-5</i>	13.7	PM	0.077	4.62	dry injection fabric filter	see note	
		PM ₁₀	0.187	11.22	dry injection fabric filter	see note	
		PM _{2.5}	0.187	11.22	dry injection fabric filter	see note	
		SO ₂	see note	0.00	see note		
		NO _x	see note	0.00	see note		
		VOC	0.03	1.80	none	0.0	1.80
		CO	see note	0.00	see note		
		fluorides	see note	0.00	see note		
		HF	see note	0.00	see note		
		HCl	see note	0.00	see note		
		total HAPs	see note	0.00	see note		
		CO ₂	see note	0	see note		
		CH ₄	see note	0.00	see note		
		N ₂ O	see note	0.00	see note		
		CO ₂ e	see note	0	see note		

DIFF-02

4.62	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	1.05	lb/hr PM
11.22	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	2.56	lb/hr PM ₁₀
		2.56	lb/hr *	24	hr/day =	61.5	lb/day PM ₁₀

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = 13.7 \text{ tons/hr}$$

$$\text{limit} = 4.1 \times (13.7)^{0.67} = 23.7 \text{ lb/hr PM}$$

This unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

Notes:

This brick dryer utilizes the waste heat from Plant No. 32 Kiln. Therefore, these emissions have been included with the Plant No. 32 Kiln.

Methodology:

Uncontrolled Emissions (tons/yr) = Maximum Rate (tons/hr) * Emission Factor (lb/ton) * 8760 hrs/yr ÷ 2000 lbs/ton

Controlled Emissions (tons/yr) = Uncontrolled Emissions (tons/yr) * (1 - Control Efficiency)

Appendix A: Emission Calculations
Coal and Natural Gas-Fired Kiln - Plant No. 32

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Permit No: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Process:	Maximum Rate (tons/hr)	Pollutant	Emission Factor (lb/ton)	Uncontrolled Emissions (tons/yr)	Type of Control	Control Eff. (%)	Controlled Emissions (tons/yr)	Stack Test Date
Coal/Natural Gas-Fired Kiln (EU-P32-K) Plant No. 32 <i>Source of Criteria Pollutant Factors:</i> SCC# 3-05-003-11*, AP-42, Ch. 11.3, Tables 11.3-1 through 11.3-7 SCC# 3-05-003-13*, AP-42, Ch. 11.3, Tables 11.3-1 through 11.3-7 40 CFR 98, Subpart A, Table A-1 40 CFR 98, Subpart C, Table C-2*	13.7	PM	1.8	108.01	dry injection fabric filter	98.3	1.80	1/24/07
		PM ₁₀	1.4	84.01	dry injection fabric filter	92.6	6.24	1/24/07
		PM _{2.5}	0.87	52.21	dry injection fabric filter	92.6	3.88	N/A
		SO ₂ **	5.79	347.43	dry injection fabric filter	76.7	81.01	1/24/07
		NO _x **	0.813	48.78	none	0.0	48.78	N/A
		VOC	0.024	1.44	none	0.0	1.44	N/A
		CO	1.2	72.01	none	0.0	72.01	N/A
		fluorides	0.59	35.40	dry injection fabric filter	89.0	3.89	N/A
		HF	0.37	22.20	dry injection fabric filter	89.0	2.44	1/24/07
		HCl	0.17	10.20	dry injection fabric filter	96.7	0.34	1/24/07
		total HAPs***	0.55	33.00	dry injection fabric filter	89.0	3.63	N/A
		CO ₂	400	24,002	none	0.0	24,002	N/A
		CH ₄ ****	0.044	2.64	none	0.0	2.64	N/A
		N ₂ O****	0.006	0.36	none	0.0	0.36	N/A
		CO ₂ e****	n/a	24,169	none	0.0	24,169	N/A

* Use the larger of the two emission factors for coal-fired kiln and natural gas-fired kiln

** The SO₂ and NO_x emission factors were established during November 11, 2004 stack test of the Plant No. 20 kiln and dryer as indicated in the TSD for SSM 109-22865-00002, issued November 22, 2006.

*** The total HAPs emission factor is derived from combining the HF and HCl emission factors with an additional 0.01 lb/ton to account for all remaining HAPs.

**** The CH₄ and N₂O emission factors (in lb/hr) are derived from the following equation: Factor (kg/mmBtu) * 2.20462 lb/kg * 25 mmBtu/hr = 13.7 tons/hr

CO₂e is calculated using the following equation: [CQ Potential Emissions (tons/yr) * CQ GWP (1)] + [CH₄ Potential Emissions (tons/yr) * CH₄ GWP (21)] + [N₂O Potential Emissions (tons/yr) * N₂O GWP (310)]

108.01	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	24.7	lb/hr PM
84.01	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	19.2	lb/hr PM ₁₀

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = \frac{13.7 \text{ tons/hr}}{4.1} \times (13.7)^{-0.67} = 23.7 \text{ lb/hr PM}$$

$$\text{with controlled potential (1/24/07 Stack Test): } 0.104 \text{ lb/ton} \times 13.7 \text{ tons/hr} = 1.42 \text{ lb/hr PM}$$

This unit is capable of complying with 326 IAC 6-3-2 WITH controls.

Process:	Limited Rate (tons/yr)	Pollutant	Emission Factor (lb/ton)	Limited Emissions (tons/yr)
Tunnel Pre-Dryer and Tunnel Dryer (EU-P32-BD1) Coal/Natural Gas-Fired Kiln (EU-P32-K) Coal Conveying System ("Dynamic Air System") Plant No. 32	120.012	PM	N/A	N/A
		PM ₁₀	N/A	N/A
		PM _{2.5}	0.336	20.16
		SO ₂	2.50	150.02
		HF*	N/A	9.90
		HCl	0.056	3.36
		total HAPs**	N/A	19.80

* This is the combined limited HF emissions for both the Plant No. 32 Kiln and the Plant No. 43 Kiln.

** This is a total of the combined limited HF and HCl emissions for both the Plant No. 32 Kiln and the Plant No. 43 Kiln as well as an additional 0.01 lb/ton from each kiln in order to account for all remaining HAPs.

Methodology:

Uncontrolled Emissions (tons/yr) = Maximum Rate (tons/hr) * Emission Factor (lb/ton) * 8760 hrs/yr ÷ 2000 lbs/ton

Controlled Emissions (tons/yr) = Uncontrolled Emissions (tons/yr) * (1 - Control Efficiency)

Limited Emissions (tons/yr) = Limited Rate (tons/hr) * Emission Factor (lb/ton) * 8760 hrs/yr ÷ 2000 lbs/ton

Appendix A: Emission Calculations
Dry Injection 32 Particulate Emissions

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Process:	Maximum Rate (tons/hr)	Pollutant	Uncontrolled Emission Factor (lb/ton)	Uncontrolled Emissions (tons/yr)	Type of Control	Controlled/ Limited Emissions (tons/yr)
Dry Injection System - Plant No. 32 Lime/Sodium Bicarbonate Silo - Loading (EU-LS2) <i>Source of Criteria Pollutant Factors:</i> SCC# 3-05-0111-17*, AP-42, Ch. 11.12, Table 11.12-2 40 CFR 98, Subpart N, Table N-1	0.21	PM	3.14	2.89	dry injection fabric filter	**see note
		PM ₁₀	1.10	1.01	dry injection fabric filter	**see note
		PM _{2.5}	1.10	1.01	dry injection fabric filter	**see note
		CO ₂ e***	880	809	none	809

* Cement supplement unloading to elevated storage silo (pneumatic)

** These emissions have been accounted for with the Plant No. 32 Kiln.

*** Use the larger of the two emission factors for limestone and soda ash, converted to lb CQ per ton raw material

CO₂e is calculated using the following equation: [CQ Potential Emissions (tons/yr) * CQ GWP (1)] + [CH₄ Potential Emissions (tons/yr) * CH₄ GWP (21)] + [N₂O Potential Emissions (tons/yr) * N₂O GWP (310)]

2.89	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	0.66	lb/hr PM
1.01	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	0.23	lb/hr PM ₁₀
		0.23	lb/hr *	24	hr/day =	5.5	lb/day PM ₁₀

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = \frac{0.21 \text{ tons/hr}}{4.1 \times (0)^{0.67}} = 1.44 \text{ lb/hr PM}$$

Each unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

Process:	Maximum Rate (tons/hr)	Pollutant	Uncontrolled Emission Factor (lb/ton)	Uncontrolled Emissions (tons/yr)	Type of Control	Controlled/ Limited Emissions (tons/yr)
Lime/Sodium Bicarbonate Conveying System ("Dynamic Air System") Plant No. 32 <i>Source of Criteria Pollutant Factors:</i> SCC# 3-05-0111-17*, AP-42, Ch. 11.12, Table 11.12-2	0.21	PM	3.14	2.89	dry injection fabric filter	**see note
		PM ₁₀	1.10	1.01	dry injection fabric filter	**see note
		PM _{2.5}	1.10	1.01	dry injection fabric filter	**see note

* Cement supplement unloading to elevated storage silo (pneumatic)

** These emissions have been accounted for with the Plant No. 32 Kiln.

2.89	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	0.66	lb/hr PM
1.01	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	0.23	lb/hr PM ₁₀
		0.23	lb/hr *	24	hr/day =	5.5	lb/day PM ₁₀

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = \frac{0.21 \text{ tons/hr}}{4.1 \times (0.21)^{0.67}} = 1.44 \text{ lb/hr PM}$$

This unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

Notes:

Each silo can be filled pneumatically by tanker trucks at a rate of 25 tons per hour. However, the entire injection system for Kiln No. 32 operates at 420 lb/hr.

This is the process weight rate used for purposes of determining compliance with 326 IAC 6-3-2 since it is the more stringent of the two throughputs.

Each silo is bottlenecked by the amount of injection material that can be conveyed pneumatically from the silo (420 lb/hr, the injection rate for the 7/1/10 stack test of the Plant No. 43 Kiln).

This is the maximum capacity for each silo used for purposes of determining compliance with 326 IAC 2-2.

PM_{2.5} has been assumed to be equal to PM₁₀.

Methodology:

Uncontrolled Emissions (tons/yr) = Maximum Rate (tons/hr) * Uncontrolled Emission Factor (lb/ton) * 8760 hr/yr ÷ 2000 lbs/ton

Appendix A: Emission Calculations
Mill Room 43 Particulate Emissions

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Permit No: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Process:	Maximum Rate (tons/hr)	Pollutant	Emission Factor (lb/ton)	Emissions (tons/yr)
Pugmill (EU-P32-MR)	72.5	PM	3.07E-05	9.75E-03
		PM ₁₀	1.45E-05	4.61E-03
		PM _{2.5}	2.20E-06	6.98E-04

AP-42 Table 13.2.4-3

9.75E-03	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	2.23E-03	lb/hr PM
4.61E-03	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	1.05E-03	lb/hr PM ₁₀
6.98E-04	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	1.59E-04	lb/hr PM _{2.5}

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates greater than 30 tons per hour:

$$P = \frac{72.5}{55.0} \times (72.5)^{0.11} - 40 = 48.1 \text{ lb/hr PM}$$

This unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

Process:	Maximum Rate (tons/hr)	Pollutant	Controlled Emission Factor (lb/ton)	Controlled Emissions (tons/yr)	Type of Control	Control Eff. (%)	Uncontrolled Emissions (tons/yr)
Extrusion Operation (EU-P43-MR) <i>Source of Criteria Pollutant Factors:</i> SCC# 3-05-003-42, AP-42, Ch. 11.3, Table 11.3-1	72.5	PM	3.60E-03	1.14	CD-P43-MR	90.0	11.43
		PM ₁₀	3.60E-03	1.14	CD-P43-MR	90.0	11.43
		PM _{2.5}	3.60E-03	1.14	CD-P43-MR	90.0	11.43

11.43	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	2.61	lb/hr PM
11.43	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	2.61	lb/hr PM ₁₀
2.61	lb/hr *			24	hr/day =	62.6	lb/day PM ₁₀

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates greater than 30 tons per hour:

$$P = \frac{72.5}{55.0} \times (72.5)^{0.11} - 40 = 48.1 \text{ lb/hr PM}$$

This unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

Notes:

AP-42 Table 13.2.4-1 (dated 11/06)

$$EF = k(0.0032) \left(\frac{U}{5} \right)^{1.3} \left(\frac{M}{2} \right)^{1.4}$$

where Ef = emission factor (lb/ton)

M = 10 Moisture content (wt %)

U = 1 mean wind speed (m/s)

k = particle size multiplier (dimensionless)

PM = 0.74

PM₁₀ = 0.35

PM_{2.5} = 0.053

Methodology:

Pugmill

Limited PTE of PM (tons/yr) = [Emission Factor (lb/ton)] * [throughput of scrap (tpy)] * (ton/2000 lbs)

Limited PTE of PM₁₀ (tons/yr) = [Emission Factor (lb/ton)] * [throughput of scrap (tpy)] * (ton/2000 lbs)

Limited PTE of PM_{2.5} (tons/yr) = [Emission Factor (lb/ton)] * [throughput of scrap (tpy)] * (ton/2000 lbs)

Extrusion

Controlled Emissions (tons/yr) = Maximum Rate (tons/hr) * Controlled Emission Factor (lb/ton) * 8760 hr/yr ÷ 2000 lbs/ton

Uncontrolled Emissions (tons/yr) = Controlled Emissions (tons/yr) ÷ (1 - Control Efficiency/100)

Appendix A: Emission Calculations
Brick Dryer - Plant No. 43

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Permit No: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Process:	Maximum Rate (tons/hr)	Pollutant	Emission Factor (lb/ton)	Uncontrolled Emissions (tons/yr)	Type of Control	Control Eff. (%)	Controlled Emissions (tons/yr)
Brick Dryer (EU-P43-BD1) Plant No. 43 Source of Criteria Pollutant Factors: SCC# 3-05-003-50, AP-42, Ch. 11.3, Tables 11.3-1 and 11.3-5 SCC# 3-05-003-51, AP-42, Ch. 11.3, Tables 11.3-3 and 11.3-5	20.55	PM	0.077	6.93	none	0.0	6.93
		PM ₁₀	0.187	16.83	none	0.0	16.83
		PM _{2.5}	0.187	16.83	none	0.0	16.83
		SO ₂ *	3.80E-04	0.03	none	0.0	0.03
		NO _x	0.098	8.82	none	0.0	8.82
		VOC	0.03	2.70	none	0.0	2.70
		CO	0.31	27.90	none	0.0	27.90
		fluorides	0.00	0.00	none	0.0	0.00
		HF	0.00	0.00	none	0.0	0.00
		HCl	0.00	0.00	none	0.0	0.00
		total HAPs	see below	0.11	none	0.0	0.11
		CO ₂ *	76	6,848	none	0.0	6,848
		CH ₄ *	0.001	0.13	none	0.0	0.13
		N ₂ O*	0.001	0.13	none	0.0	0.13
		CO ₂ e**	N/A	6,890	none	0.0	6,890

* The SO₂, CO₂, CH₄, and N₂O emission factors are established in AP-42, Ch. 14, Table 14-2, and converted as follows:

Factor (lb/MMcf) ÷ 1020 MMBtu/MMcf * 13.29 MMBtu/hr ÷ 20.55 tons/hr
** CO₂e is calculated using the following equation: [CQ Potential Emissions (tons/yr) * CO₂ GWP (1)] + [CH₄ Potential Emissions (tons/yr) * CH₄ GWP (21)] + [N₂O Potential Emissions (tons/yr) * N₂O GWP (310)]

6.93	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	1.58	lb/hr PM
16.83	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	3.84	lb/hr PM ₁₀
		3.84	lb/hr *	24	hr/day =	92.2	lb/day

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = \frac{20.55 \text{ tons/hr}}{4.1 \times (20.55)^{0.67}} = 31.1 \text{ lb/hr PM}$$

This unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

HAP emissions:	Total Heat Input Capacity		mmBtu		Potential Throughput
	MMBtu/hr		mmscf		MMcf/yr
	13.29		1020		114.14
	HAPs - Organics				
Emission Factor (lb/MMcf)	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emissions (tons/yr)	1.198E-04	6.848E-05	4.280E-03	1.027E-01	1.940E-04
	HAPs - Metals				
Emission Factor (lb/MMcf)	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emissions (tons/yr)	2.853E-05	6.278E-05	7.990E-05	2.169E-05	1.198E-04

Notes:

The five highest organic and metal HAPs emission factors are provided above.
Additional HAP emission factors are available in AP-42, Chapter 1.4.

Methodology:

Uncontrolled Emissions (tons/yr) = Maximum Rate (tons/hr) * Emission Factor (lb/ton) * 8760 hrs/yr ÷ 2000 lbs/ton
Controlled Emissions (tons/yr) = Uncontrolled Emissions (tons/yr) * (1 - Control Efficiency)
Potential Throughput (MMcf/yr) = Heat Input Capacity (MMBtu/hr) * 8760 hr/yr ÷ 1020 MMBtu/MMcf
Potential Emissions (tons/yr) = Potential Throughput (MMcf/yr) x Emission Factor (lb/MMcf) ÷ 2000 lb/ton

Appendix A: Emission Calculations
Coal and Natural Gas-Fired Kiln - Plant No. 43

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Permit No: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Process:	Maximum Rate (tons/hr)	Pollutant	Emission Factor (lb/ton)	Uncontrolled Emissions (tons/yr)	Type of Control	Control Eff. (%)	Controlled Emissions (tons/yr)	Stack Test Date
Coal/Natural Gas-Fired Kiln (EU-P43-K) Plant No. 43 <i>Source of Criteria Pollutant Factors:</i> SCC# 3-05-003-11*, AP-42, Ch. 11.3, Tables 11.3-1 through 11.3-7 SCC# 3-05-003-13*, AP-42, Ch. 11.3, Tables 11.3-1 through 11.3-7	20.55	PM	1.8	162.02	dry injection fabric filter	98.0	3.24	8/14/12
		PM ₁₀	1.4	126.01	dry injection fabric filter	84.4	19.62	8/14/12
		PM _{2.5}	0.87	78.31	dry injection fabric filter	84.4	12.19	N/A
		SO ₂ **	5.79	521.15	dry injection fabric filter	72.0	145.81	8/14/12
		NO _x **	0.813	73.18	none	0.0	73.18	N/A
		VOC	0.024	2.16	none	0.0	2.16	N/A
		CO	1.2	108.01	none	0.0	108.01	N/A
		fluorides	0.59	53.11	dry injection fabric filter	76.8	12.34	N/A
		HF	0.37	33.30	dry injection fabric filter	76.8	7.74	8/14/12
		HCl	0.17	15.30	dry injection fabric filter	93.5	0.99	8/14/12
		total HAPs***	0.55	49.50	dry injection fabric filter	76.8	11.51	N/A
		CO ₂	400	36,004	none	0.0	36,004	N/A
		CH ₄ ****	0.044	3.96	none	0.0	3.96	N/A
		N ₂ O****	0.006	0.54	none	0.0	0.54	N/A
		CO ₂ e****	n/a	36,254	none	0.0	36,254	N/A

* Use the larger of the two emission factors for coal-fired kiln and natural gas-fired kiln

** The SO₂ and NO_x emission factors were established during November 11, 2004 stack test of the Plant No. 20 kiln and dryer as indicated in the TSD for SSM 109-22865-00002, issued November 22, 2006.

*** The total HAPs emission factor is derived from combining the HF and HCl emission factors with an additional 0.01 lb/ton to account for all remaining HAPs.

**** The CH₄ and N₂O emission factors (in lb/hr) are derived from the following equation: Factor (kg/mmBtu) * 2.20462 lb/kg * 25 mmBtu/hr = 13.7 tons/hr

CO₂e is calculated using the following equation: [CQ Potential Emissions (tons/yr) * CQ GWP (1)] + [CH₄ Potential Emissions (tons/yr) * CH₄ GWP (21)] + [N₂O Potential Emissions (tons/yr) * N₂O GWP (310)]

162.02	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	37.0	lb/hr PM
126.01	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	28.8	lb/hr PM ₁₀

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = \frac{20.55 \text{ tons/hr}}{4.1 \times (20.55)^{0.67}} = 31.1 \text{ lb/hr PM}$$

$$\text{with controlled potential (7/1/10 Stack Test): } 0.017 \text{ lb/ton} * 19.76 \text{ tons/hr} = 0.34 \text{ lb/hr PM}$$

This unit is capable of complying with 326 IAC 6-3-2 WITH controls.

Process:	Limited Rate (tons/yr)	Pollutant	Emission Factor (lb/ton)	Limited Emissions (tons/yr)
Coal/Natural Gas-Fired Kiln (EU-P43-K) Coal Conveying System ("Dynamic Air System") Plant No. 43	180,018	PM	N/A	N/A
		PM ₁₀	N/A	N/A
		PM _{2.5}	0.336	30.24
		SO ₂	2.60	234.02
		HF*	N/A	9.90
		HCl	0.056	5.04
		total HAPs**	N/A	19.80

* This is the combined limited HF emissions for both the Plant No. 32 Kiln and the Plant No. 43 Kiln.

** This is a total of the combined limited HF and HCl emissions for both the Plant No. 32 Kiln and the Plant No. 43 Kiln as well as an additional 0.01 lb/ton from each kiln in order to account for all remaining HAPs.

Methodology:

Uncontrolled Emissions (tons/yr) = Maximum Rate (tons/hr) * Emission Factor (lb/ton) * 8760 hrs/yr ÷ 2000 lbs/ton

Controlled Emissions (tons/yr) = Uncontrolled Emissions (tons/yr) * (1 - Control Efficiency)

Limited Emissions (tons/yr) = Limited Rate (tons/hr) * Emission Factor (lb/ton) * 8760 hrs/yr ÷ 2000 lbs/ton

Appendix A: Emission Calculations
Dry Injection 43 Particulate Emissions

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Process:	Maximum Rate (tons/hr)	Pollutant	Uncontrolled Emission Factor (lb/ton)	Uncontrolled Emissions (tons/yr)	Type of Control	Controlled/ Limited Emissions (tons/yr)
Dry Injection System - Plant No. 43 Lime/Sodium Bicarbonate Silo - Loading (EU-LS3) Source of Criteria Pollutant Factors: SCC# 3-05-011-17*, AP-42, Ch. 11.12, Table 11.12-2 40 CFR 98, Subpart N, Table N-1	0.21	PM	3.14	2.89	dry injection fabric filter	**see note
		PM ₁₀	1.10	1.01	dry injection fabric filter	**see note
		PM _{2.5}	1.10	1.01	dry injection fabric filter	**see note
		CO ₂ e***	880	809.42	none	809.42

* Cement supplement unloading to elevated storage silo (pneumatic)

** These emissions have been accounted for with the Plant No. 43 Kiln.

*** Use the larger of the two emission factors for limestone and soda ash, converted to lb CQ per ton raw material

CO₂e is calculated using the following equation: [CQ Potential Emissions (tons/yr) * CQ GWP (1)] + [CH₄ Potential Emissions (tons/yr) * CH₄ GWP (21)] + [N₂O Potential Emissions (tons/yr) * N₂O GWP (310)]

2.89	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	0.66	lb/hr PM
1.01	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	0.23	lb/hr PM ₁₀
		0.23	lb/hr *	24	hr/day =	5.5	lb/day PM ₁₀

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = 0.21 \text{ tons/hr}$$

$$\text{limit} = 4.1 \times (0.21)^{0.67} = 1.44 \text{ lb/hr PM}$$

Each unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

Process:	Maximum Rate (tons/hr)	Pollutant	Uncontrolled Emission Factor (lb/ton)	Uncontrolled Emissions (tons/yr)	Type of Control	Controlled/ Limited Emissions (tons/yr)
Lime/Sodium Bicarbonate Conveying System ("Dynamic Air System") Plant No. 43 Source of Criteria Pollutant Factors: SCC# 3-05-011-17*, AP-42, Ch. 11.12, Table 11.12-2	0.21	PM	3.14	2.89	dry injection fabric filter	**see note
		PM ₁₀	1.10	1.01	dry injection fabric filter	**see note
		PM _{2.5}	1.10	1.01	dry injection fabric filter	**see note

* Cement supplement unloading to elevated storage silo (pneumatic)

** These emissions have been accounted for with the Plant No. 43 Kiln.

2.89	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	0.66	lb/hr PM
1.01	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	0.23	lb/hr PM ₁₀
		0.23	lb/hr *	24	hr/day =	5.5	lb/day PM ₁₀

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = 0.21 \text{ tons/hr}$$

$$\text{limit} = 4.1 \times (0.21)^{0.67} = 1.44 \text{ lb/hr PM}$$

This unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

Notes:

Each silo can be filled pneumatically by tanker trucks at a rate of 25 tons per hour. However, the entire injection system for Kiln No. 32 operates at 420 lb/hr.

This is the process weight rate used for purposes of determining compliance with 326 IAC 6-3-2 since it is the more stringent of the two throughputs.

Each silo is bottlenecked by the amount of injection material that can be conveyed pneumatically from the silo (420 lb/hr, the injection rate for the 7/1/10 stack test of the Plant No. 43 Kiln).

This is the maximum capacity for each silo used for purposes of determining compliance with 326 IAC 2-2.

PM_{2.5} has been assumed to be equal to PM₁₀.

Methodology:

Uncontrolled Emissions (tons/yr) = Maximum Rate (tons/hr) * Uncontrolled Emission Factor (lb/ton) * 8760 hr/yr ÷ 2000 lbs/ton

Appendix A: Emission Calculations
Insignificant Activities Summary

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Uncontrolled Emissions (tons/year)

Emission Units		PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	VOC	CO	Total Fluorides	HF	HCl	Total HAPs	GHGs (as CO ₂ e)
Clay Processing	Transfer Conveyors (100-ton without control)	0.03	0.01	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Storage Pile - Plant No. 32	0.01	0.01	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Storage Pile - Plant No. 43	0.01	0.01	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Coal Processing	Dynamic Air System - Plant No. 32	4.80	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Dynamic Air System - Plant No. 43	4.80	3.09	3.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Plant No. 32	Storage Pile Dispensing	0.01	neg.	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Transfer Conveyors (70-ton)	0.02	0.02	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Surge Bin	0.01	neg.	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Texture Feeders	neg.	neg.	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Plant No. 43	Vacuum Cleaning System	5.00	4.56	4.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Storage Pile Dispensing	0.01	neg.	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Transfer Conveyor (72.5-ton without control)	0.01	neg.	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Transfer Conveyors (72.5-ton with control)	0.02	0.01	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Surge Bin	0.01	neg.	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Texture Feeders	neg.	neg.	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Welding & Flame Cutting		3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	10,683
Emergency Generator		neg.	neg.	neg.	neg.	0.19	0.01	0.01	0.00	0.00	0.00	neg.	6
Natural Gas Usage		0.02	0.08	0.08	0.01	1.07	0.06	0.90	0.00	0.00	0.00	0.02	1,296
Gasoline Dispensing Facilities		0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0
Total		23.47	19.15	19.10	0.01	1.26	2.06	0.92	0.00	0.00	0.00	0.06	11,985

Limited Emissions (tons/year)

Emission Units		PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	VOC	CO	Total Fluorides	HF	HCl	Total HAPs	GHGs (as CO ₂ e)
Clay Processing	Transfer Conveyors (100-ton without control)	0.03	0.01	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Storage Pile - Plant No. 32	0.01	0.01	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Storage Pile - Plant No. 43	0.01	0.01	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Coal Processing	Dynamic Air System - Plant No. 32	4.80	3.09	0*	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Dynamic Air System - Plant No. 43	4.80	3.09		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Plant No. 32	Storage Pile Dispensing	0.01	neg.	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Transfer Conveyors (70-ton)	0.02	0.02	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Surge Bin	0.01	neg.	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Texture Feeders	neg.	neg.	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Plant No. 43	Vacuum Cleaning System	5.00	4.56	4.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Storage Pile Dispensing	0.01	neg.	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Transfer Conveyor (72.5-ton without control)	0.01	neg.	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Transfer Conveyors (72.5-ton with control)	0.02	0.01	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Surge Bin	0.01	neg.	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
	Texture Feeders	neg.	neg.	neg.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0
Welding & Flame Cutting		3.72	3.72	3.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	10,683
Emergency Generator		neg.	neg.	neg.	neg.	0.19	0.01	0.01	0.00	0.00	0.00	neg.	6
Natural Gas Usage		0.02	0.08	0.08	0.01	1.07	0.06	0.90	0.00	0.00	0.00	0.02	1,296
Gasoline Dispensing Facilities		0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0
Total		23.47	19.15	12.92	0.01	1.26	2.06	0.92	0.00	0.00	0.00	0.06	11,985

* These emissions have been accounted for with the Plant No. 32 Kiln and the Plant No. 43 Kiln.

Appendix A: Emission Calculations
Insignificant Clay/Shale Processing Particulate Emissions

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Process: Transfer Conveyors (F-C32-1, F-C43-1)
Process: Ground Material Storage Piles (EU-P32-GMS, EU-P43-GMS)

The following calculations determine the amount of emissions created by dropping of material (AP-42, Sec. 13.2.4, eq. 1):

$$\text{Emission Factor} = k * (0.0032) * (U/5)^{1.3} \div (M/2)^{1.4}$$

where k_{PM} = 0.74 particle size multiplier
 k_{PM10} = 0.35 particle size multiplier
 $k_{PM2.5}$ = 0.053 particle size multiplier
 U = 1 mean wind speed, mph
 M = 10 % material moisture content

Emission Factor (PM) = 3.07E-05 lb PM/ton
 Emission Factor (PM₁₀) = 1.45E-05 lb PM₁₀/ton
 Emission Factor (PM_{2.5}) = 2.20E-06 lb PM_{2.5}/ton

Uncontrolled PM Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM/ton) * 8760 hr/yr ÷ 2000 lb/ton							
Uncontrolled PM Emissions (tpy) =	100	tons/hr *	3.07E-05	lb/ton *	8760	hr/yr ÷	2000 lb/ton
Uncontrolled PM Emissions (tpy) =	0.01	tons/yr					
Uncontrolled PM ₁₀ Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM ₁₀ /ton) * 8760 hr/yr ÷ 2000 lb/ton							
Uncontrolled PM ₁₀ Emissions (tpy) =	100	tons/hr *	1.45E-05	lb/ton *	8760	hr/yr ÷	2000 lb/ton
Uncontrolled PM ₁₀ Emissions (tpy) =	0.01	tons/yr					
Uncontrolled PM _{2.5} Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM _{2.5} /ton) * 8760 hr/yr ÷ 2000 lb/ton							
Uncontrolled PM _{2.5} Emissions (tpy) =	100	tons/hr *	2.20E-06	lb/ton *	8760	hr/yr ÷	2000 lb/ton
Uncontrolled PM _{2.5} Emissions (tpy) =	9.63E-04	tons/yr					

Allowable Emissions:

Each emission unit is exempt from 326 IAC 6-3-2 because each unit has potential particulate emissions less than 0.551 lb/hr.

Notes:

The mean wind speed "U" for the emission factor equation (AP-42, Sec. 13.2.4, eq. 1) has been assumed to be 1 mph since the pile is located indoors.

The percent moisture content "M" for the emission factor equation (AP-42, Sec. 13.2.4, eq. 1) has been conservatively assumed to be 10%, even though the average moisture content of the material is 13%.

Appendix A: Emission Calculations
Insignificant Coal Processing Particulate Emissions

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Process:	Maximum Rate (tons/hr)	Pollutant	Uncontrolled Emission Factor (lb/ton)	Uncontrolled Emissions (tons/yr)	Type of Control	Controlled/ Limited Emissions (tons/yr)
Coal Conveying System ("Dynamic Air System") Plant No. 32 <i>Source of Criteria Pollutant Factors:</i> SCC# 3-05-011-07*, AP-42, Ch. 11.12, Table 11.12-2	1.50	PM	0.73	4.80	dry injection fabric filter	**see note
		PM ₁₀	0.47	3.09	dry injection fabric filter	**see note
		PM _{2.5}	0.47	3.09	dry injection fabric filter	**see note

* Cement unloading to elevated storage silo (pneumatic)

DIFF-02

** These emissions have been accounted for with the Plant No. 32 Kiln.

4.80	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	1.10	lb/hr PM
3.09	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	0.71	lb/hr PM ₁₀
		0.71	lb/hr *	24	hr/day =	16.9	lb/day PM ₁₀

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = 1.50 \text{ tons/hr}$$

$$\text{limit} = 4.1 \times (1.50)^{0.67} = 5.38 \text{ lb/hr PM}$$

This unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

Process:	Maximum Rate (tons/hr)	Pollutant	Uncontrolled Emission Factor (lb/ton)	Uncontrolled Emissions (tons/yr)	Type of Control	Controlled/ Limited Emissions (tons/yr)
Coal Conveying System ("Dynamic Air System") Plant No. 43 <i>Source of Criteria Pollutant Factors:</i> SCC# 3-05-011-07*, AP-42, Ch. 11.12, Table 11.12-2	1.50	PM	0.73	4.80	dry injection fabric filter	**see note
		PM ₁₀	0.47	3.09	dry injection fabric filter	**see note
		PM _{2.5}	0.47	3.09	dry injection fabric filter	**see note

* Cement unloading to elevated storage silo (pneumatic)

DIFF-03

** These emissions have been accounted for with the Plant No. 43 Kiln.

4.80	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	1.10	lb/hr PM
3.09	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	0.71	lb/hr PM ₁₀
		0.71	lb/hr *	24	hr/day =	16.9	lb/day PM ₁₀

Allowable Emissions:

The following calculations determine PM compliance with 326 IAC 6-3-2 for process weight rates less than 30 tons per hour:

$$P = 1.50 \text{ tons/hr}$$

$$\text{limit} = 4.1 \times (1.50)^{0.67} = 5.38 \text{ lb/hr PM}$$

This unit is capable of complying with 326 IAC 6-3-2 WITHOUT controls.

Methodology:

PM_{2.5} has been assumed to be equal to PM₁₀.

Uncontrolled Emissions (tons/yr) = Maximum Rate (tons/hr) x Uncontrolled Emission Factor (lb/ton) x 8760 hr/yr ÷ 2000 lbs/ton

Controlled Emissions = Uncontrolled Emissions (tons/yr) x (1 - Control Efficiency/100)

Appendix A: Emission Calculations
Insignificant Plant No. 32 Particulate Emissions
Milling

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Process: Ground Material Storage Pile - Dispensing (EU-P32-GMS)

Process: Two Mill Room Transfer Conveyors

Process: Surge Bin

The following calculations determine the amount of emissions created by dropping of material (AP-42, Sec. 13.2.4, eq. 1):

$$\text{Emission Factor} = k * (0.0032) * (U/5)^{1.3} \div (M/2)^{1.4}$$

where k_{PM} =	0.74	particle size multiplier
k_{PM10} =	0.35	particle size multiplier
$k_{PM2.5}$ =	0.053	particle size multiplier
U =	1	mean wind speed, mph
M =	10	% material moisture content

Emission Factor (PM) =	3.07E-05	lb PM/ton
Emission Factor (PM ₁₀) =	1.45E-05	lb PM ₁₀ /ton
Emission Factor (PM _{2.5}) =	2.20E-06	lb PM _{2.5} /ton

Uncontrolled PM Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM/ton) * 8760 hr/yr ÷ 2000 lb/ton								
Uncontrolled PM Emissions (tpy) =	70	tons/hr *	3.07E-05	lb/ton *	8760	hr/yr ÷	2000	lb/ton
Uncontrolled PM Emissions (tpy) =	0.01	tons/yr						
Uncontrolled PM ₁₀ Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM ₁₀ /ton) * 8760 hr/yr ÷ 2000 lb/ton								
Uncontrolled PM ₁₀ Emissions (tpy) =	70	tons/hr *	1.45E-05	lb/ton *	8760	hr/yr ÷	2000	lb/ton
Uncontrolled PM ₁₀ Emissions (tpy) =	4.45E-03	tons/yr						
Uncontrolled PM _{2.5} Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM _{2.5} /ton) * 8760 hr/yr ÷ 2000 lb/ton								
Uncontrolled PM _{2.5} Emissions (tpy) =	70	tons/hr *	2.20E-06	lb/ton *	8760	hr/yr ÷	2000	lb/ton
Uncontrolled PM _{2.5} Emissions (tpy) =	6.74E-04	tons/yr						

Allowable Emissions:

Each emission unit is exempt from 326 IAC 6-3-2 because each unit has potential particulate emissions less than 0.551 lb/hr.

Process: Four Texture Feeders

The following calculations determine the amount of emissions created by dropping of material (AP-42, Sec. 13.2.4, eq. 1):

$$\text{Emission Factor} = k * (0.0032) * (U/5)^{1.3} \div (M/2)^{1.4}$$

where k_{PM} =	0.74	particle size multiplier
k_{PM10} =	0.35	particle size multiplier
$k_{PM2.5}$ =	0.053	particle size multiplier
U =	1	mean wind speed, mph
M =	10	% material moisture content

Emission Factor (PM) =	3.07E-05	lb PM/ton
Emission Factor (PM ₁₀) =	1.45E-05	lb PM ₁₀ /ton
Emission Factor (PM _{2.5}) =	2.20E-06	lb PM _{2.5} /ton

Uncontrolled PM Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM/ton) * 8760 hr/yr ÷ 2000 lb/ton								
Uncontrolled PM Emissions (tpy) =	5	tons/hr *	3.07E-05	lb/ton *	8760	hr/yr ÷	2000	lb/ton
Uncontrolled PM Emissions (tpy) =	6.72E-04	tons/yr						
Uncontrolled PM ₁₀ Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM ₁₀ /ton) * 8760 hr/yr ÷ 2000 lb/ton								
Uncontrolled PM ₁₀ Emissions (tpy) =	5	tons/hr *	1.45E-05	lb/ton *	8760	hr/yr ÷	2000	lb/ton
Uncontrolled PM ₁₀ Emissions (tpy) =	3.18E-04	tons/yr						
Uncontrolled PM _{2.5} Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM _{2.5} /ton) * 8760 hr/yr ÷ 2000 lb/ton								
Uncontrolled PM _{2.5} Emissions (tpy) =	5	tons/hr *	2.20E-06	lb/ton *	8760	hr/yr ÷	2000	lb/ton
Uncontrolled PM _{2.5} Emissions (tpy) =	4.82E-05	tons/yr						

Allowable Emissions:

Each emission unit is exempt from 326 IAC 6-3-2 because each unit has potential particulate emissions less than 0.551 lb/hr.

Notes:

The mean wind speed "U" for the emission factor equation (AP-42, Sec. 13.2.4, eq. 1) has been assumed to be 1 mph since the pile is located indoors.

The percent moisture content "M" for the emission factor equation (AP-42, Sec. 13.2.4, eq. 1) has been conservatively assumed to be 10%, even though the average moisture content of the material is 13%.

**Appendix A: Emission Calculations
Insignificant Plant No. 32 Particulate Emissions
Non-Milling**

**Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013**

Process: Vacuum Cleaning System (EU-P32VS)

The vacuum cleaning system has potential uncontrolled PM emissions less than the 5 tons/yr threshold required to list the unit as an insignificant activity, as defined in 326 IAC 2-7-1(21)(E) and 326 IAC 2-1.1-3(e)(1).
The vacuum cleaning system has potential uncontrolled PM₁₀ emissions less than the 25 lb/day threshold required to list the unit as an insignificant activity, as defined in 326 IAC 2-7-1(21)(E)(vi).

Uncontrolled Emissions:

5.00	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	1.14	lb/hr PM
25	lb PM ₁₀ /day *	365	days/yr ÷	2000	lb/ton =	4.56	tons PM ₁₀ /yr
4.56	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	1.04	lb/hr PM ₁₀

Controlled Emissions:

Outlet Concentration =	0.01	gr/dscf					
Flow Rate =	1336	scfm					
Controlled Emissions (lb/hr) =	0.01	gr/dscf *	1336	scfm *	60	min/hr ÷	7000 gr/lb
Controlled Emissions (lb/hr) =	0.11	lb/hr					
Controlled Emissions (tpy) =	0.11	lb/hr *	8760	hr/yr ÷	2000	lb/ton	
Controlled Emissions (tpy) =	0.50	tons/yr					

Allowable Emissions:

Process Weight Rate (lb/hr) =	5.00	tons/yr *	2000	lb/ton ÷	8760	hr/yr
Process Weight Rate (lb/hr) =	1.14	lb/hr				

Note: The process weight rate is less than 100 lb/hr.

Pursuant to 326 IAC 6-3-2(e)(2):

E =	0.551	lb/hr PM	(capable of complying	WITH	controls)
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Appendix A: Emission Calculations
Insignificant Plant No. 43 Particulate Emissions
Milling

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Process: Ground Material Storage Pile - Dispensing (EU-P43-GMS)
Process: Transfer Conveyor (F-C43-2)
Process: Two Mill Room Transfer Conveyors
Process: Surge Bin

The following calculations determine the amount of emissions created by dropping of material (AP-42, Sec. 13.2.4, eq. 1):

$$\text{Emission Factor} = k * (0.0032) * (U/5)^{1.3} \div (M/2)^{1.4}$$

where k_{PM} =	0.74	particle size multiplier
k_{PM10} =	0.35	particle size multiplier
$k_{PM2.5}$ =	0.053	particle size multiplier
U =	1	mean wind speed, mph
M =	10	% material moisture content

Emission Factor (PM) =	3.07E-05	lb PM/ton
Emission Factor (PM ₁₀) =	1.45E-05	lb PM ₁₀ /ton
Emission Factor (PM _{2.5}) =	2.20E-06	lb PM _{2.5} /ton

Uncontrolled PM Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM/ton) * 8760 hr/yr ÷ 2000 lb/ton							
Uncontrolled PM Emissions (tpy) =	72.5	tons/hr *	3.07E-05	lb/ton *	8760	hr/yr ÷	2000
Uncontrolled PM Emissions (tpy) =	0.01	tons/yr					lb/ton
Uncontrolled PM ₁₀ Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM ₁₀ /ton) * 8760 hr/yr ÷ 2000 lb/ton							
Uncontrolled PM ₁₀ Emissions (tpy) =	72.5	tons/hr *	1.45E-05	lb/ton *	8760	hr/yr ÷	2000
Uncontrolled PM ₁₀ Emissions (tpy) =	4.61E-03	tons/yr					lb/ton
Uncontrolled PM _{2.5} Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM _{2.5} /ton) * 8760 hr/yr ÷ 2000 lb/ton							
Uncontrolled PM _{2.5} Emissions (tpy) =	72.5	tons/hr *	2.20E-06	lb/ton *	8760	hr/yr ÷	2000
Uncontrolled PM _{2.5} Emissions (tpy) =	6.98E-04	tons/yr					lb/ton

Allowable Emissions:

Each emission unit is exempt from 326 IAC 6-3-2 because each unit has potential particulate emissions less than 0.551 lb/hr.

Process: Four Texture Feeders

The following calculations determine the amount of emissions created by dropping of material (AP-42, Sec. 13.2.4, eq. 1):

$$\text{Emission Factor} = k * (0.0032) * (U/5)^{1.3} \div (M/2)^{1.4}$$

where k_{PM} =	0.74	particle size multiplier
k_{PM10} =	0.35	particle size multiplier
$k_{PM2.5}$ =	0.053	particle size multiplier
U =	1	mean wind speed, mph
M =	10	% material moisture content

Emission Factor (PM) =	3.07E-05	lb PM/ton
Emission Factor (PM ₁₀) =	1.45E-05	lb PM ₁₀ /ton
Emission Factor (PM _{2.5}) =	2.20E-06	lb PM _{2.5} /ton

Uncontrolled PM Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM/ton) * 8760 hr/yr ÷ 2000 lb/ton							
Uncontrolled PM Emissions (tpy) =	5	tons/hr *	3.07E-05	lb/ton *	8760	hr/yr ÷	2000
Uncontrolled PM Emissions (tpy) =	6.72E-04	tons/yr					lb/ton
Uncontrolled PM ₁₀ Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM ₁₀ /ton) * 8760 hr/yr ÷ 2000 lb/ton							
Uncontrolled PM ₁₀ Emissions (tpy) =	5	tons/hr *	1.45E-05	lb/ton *	8760	hr/yr ÷	2000
Uncontrolled PM ₁₀ Emissions (tpy) =	3.18E-04	tons/yr					lb/ton
Uncontrolled PM _{2.5} Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM _{2.5} /ton) * 8760 hr/yr ÷ 2000 lb/ton							
Uncontrolled PM _{2.5} Emissions (tpy) =	5	tons/hr *	2.20E-06	lb/ton *	8760	hr/yr ÷	2000
Uncontrolled PM _{2.5} Emissions (tpy) =	4.82E-05	tons/yr					lb/ton

Allowable Emissions:

Each emission unit is exempt from 326 IAC 6-3-2 because each unit has potential particulate emissions less than 0.551 lb/hr.

Notes:

The mean wind speed "U" for the emission factor equation (AP-42, Sec. 13.2.4, eq. 1) has been assumed to be 1 mph since the pile is located indoors.

The percent moisture content "M" for the emission factor equation (AP-42, Sec. 13.2.4, eq. 1) has been conservatively assumed to be 10%, even though the average moisture content of the material is 13%.

Appendix A: Emission Calculations
Insignificant Plant No. 43 Particulate Emissions
Non-Milling

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Process: Vacuum Cleaning System (EU-P43VS)

The vacuum cleaning system has potential uncontrolled PM emissions less than the 5 tons/yr threshold required to list the unit as an insignificant activity, as defined in 326 IAC 2-7-1(21)(E) and 326 IAC 2-1.1-3(e)(1).
The vacuum cleaning system has potential uncontrolled PM₁₀ emissions less than the 25 lb/day threshold required to list the unit as an insignificant activity, as defined in 326 IAC 2-7-1(21)(E)(vi).

Uncontrolled Emissions:

5.00	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	1.14	lb/hr PM
25	lb PM ₁₀ /day *	365	days/yr ÷	2000	lb/ton =	4.56	tons PM ₁₀ /yr
4.56	tons/yr *	2000	lb/ton ÷	8760	hr/yr =	1.04	lb/hr PM ₁₀

Controlled Emissions:

Outlet Concentration =	0.01	gr/dscf						
Flow Rate =	1336	scfm						
Controlled Emissions (lb/hr) =	0.01	gr/dscf *	1336	scfm *	60	min/hr ÷	7000	gr/lb
Controlled Emissions (lb/hr) =	0.11	lb/hr						
Controlled Emissions (tpy) =	0.11	lb/hr *	8760	hr/yr ÷	2000	lb/ton		
Controlled Emissions (tpy) =	0.50	tons/yr						

Allowable Emissions:

Process Weight Rate (lb/hr) =	5.00	tons/yr *	2000	lb/ton ÷	8760	hr/yr
Process Weight Rate (lb/hr) =	1.14	lb/hr				

Note: The process weight rate is less than 100 lb/hr.

Pursuant to 326 IAC 6-3-2(e)(2):

E =	0.551	lb/hr PM	(capable of complying	WITH	controls)
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Appendix A: Emissions Calculations
Welding and Thermal Cutting

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

PROCESS	Number of Stations	Max. electrode consumption per station (lb/hr)		EMISSION FACTORS (lb pollutant/lb electrode)*				EMISSIONS (lb/hr)				HAPS (lb/hr)
				PM	Mn	Ni	Cr	PM	Mn	Ni	Cr	
WELDING												
Stick (E7018 electrode)	7	1		0.0211	0.0009			0.15	0.006	0	0	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 (lb/hr)				HAPS (lb/hr)
				PM	Mn	Ni	Cr	PM	Mn	Ni	Cr	
Oxyacetylene	9	1	8	0.1622	0.0005	0.0001	0.0003	0.70	0.002	0.0004	0.001	0.004
EMISSION TOTALS												
Potential Emissions (lb/hr)								0.85	0.008	0.0004	0.001	0.01
Potential Emissions (lb/day)								20.36	0.203	0.010	0.031	0.24
Potential Emissions (tons/year)								3.72	0.037	0.002	0.006	0.04

Allowable Emissions:

Each welding/flame cutting station is exempt from 326 IAC 6-3-2 because each station has potential particulate emissions less than 0.551 lb/hr.

Notes:

PM₁₀ and PM_{2.5} have been assumed to be equal to PM.

* Emission factors are default values for carbon steel unless a specific electrode type is noted in the Process column.

** Emission factor for plasma cutting from American Welding Society (AWS). Trials reported for wet cutting of 8 mm thick mild steel with 3.5 m/min cutting speed (at 0.2 g/min emitted).

Therefore, the emission factor for plasma cutting is for 8 mm thick rather than 1 inch, and the maximum metal thickness is not used in calculating the emissions.

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

Methodology:

Welding emissions (lb/hr) = (# of stations)(max. lbs of electrode used/hr/station)(emission factor, lb. pollutant/lb. of electrode used)

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" thick)

Plasma cutting emissions (lb/hr) = (# of stations)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 8 mm thick)

Emissions (lb/day) = Emissions (lb/hr) * 24 hr/day

Emissions (tons/yr) = Emissions (lb/hr) * 8,760 hr/yr ÷ 2000 lb/ton

Source	Purpose	Volume Consumed (m ³ /yr)	Conversion Factor (kg CO ₂ /m ³)	CO ₂ Emissions (tons/yr)
Various Gases	Welding	---	---	10,000
Acetylene	Flame Cutting	10,000	61.96	683
Total				10,683

Notes:

The total GHG emissions (as CO₂e) from welding have been conservatively estimated to not exceed 10,000 tons per year.

Acetylene has a molecular weight of 26.04 g/mol.

Acetylene is purchased as cubic meters in 250 psi pressurized containers. Using the ideal gas law, 1 m³ at 250 psi and 70°F has about 704 moles of gas.

3.38 kg of CO₂ are produced from burning one kg of acetylene.

Methodology:

1 m³ acetylene = 704 moles * 26.04 g/mol ÷ 1000 g/kg * 3.38 kg CO₂/kg acetylene = 61.96 kg CO₂

Emissions (tons/yr) = Volume Consumed (m³/yr) * Conversion Factor (kg CO₂/m³) * 2.20462 lb/kg ÷ 2000 lb/ton

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Natural Gas
4-Stroke Lean-Burn (4SLB) Engines

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Maximum Output Horsepower Rating (hp)	25
Brake Specific Fuel Consumption (BSFC) (Btu/hp-hr)	7500
Maximum Hours Operated per Year (hr/yr)	500
Potential Fuel Usage (MMBtu/yr)	94
High Heat Value (MMBtu/MMscf)	1020
Potential Fuel Usage (MMcf/yr)	0.09

Criteria Pollutants	Pollutant						
	PM*	PM ₁₀ *	PM _{2.5} *	SO ₂	NO _x	VOC	CO
Emission Factor (lb/MMBtu)	7.71E-05	9.99E-03	9.99E-03	5.88E-04	4.08E+00	1.18E-01	3.17E-01
Potential Emissions (tons/yr)	3.61E-06	4.68E-04	4.68E-04	2.76E-05	0.19	0.01	0.01

* PM emission factor is for filterable PM₁₀. PM₁₀ emission factor is filterable PM₁₀ + condensable PM.

PM_{2.5} emission factor is filterable PM_{2.5} + condensable PM.

Hazardous Air Pollutants (HAPs)

Pollutant	Emission Factor (lb/MMBtu)	Potential Emissions (tons/yr)
Acetaldehyde	8.36E-03	3.92E-04
Acrolein	5.14E-03	2.41E-04
Benzene	4.40E-04	2.06E-05
Biphenyl	2.12E-04	9.94E-06
1,3-Butadiene	2.67E-04	1.25E-05
Formaldehyde	5.28E-02	2.48E-03
Methanol	2.50E-03	1.17E-04
Hexane	1.10E-03	5.16E-05
Toluene	4.08E-04	1.91E-05
2,2,4-Trimethylpentane	2.50E-04	1.17E-05
Xylene	1.84E-04	8.63E-06
Total		3.36E-03

Greenhouse Gases (GHGs)	Greenhouse Gas (GHG)		
	CO ₂	CH ₄	N ₂ O
Emission Factor (lb/MMBtu)	110	1.25	
Emission Factor (lb/MMcf)		2.2	
Potential Emissions (tons/yr)	5.16	0.06	1.01E-04
Summed Potential Emissions (tons/yr)	5.21		
CO ₂ e Total (tons/yr)	6.42		

Notes:

Criteria pollutant emission factors are from AP-42 (Supplement F, July 2000), Table 3.2-2.

HAP pollutants consist of the eleven highest HAPs included in AP-42 Table 3.2-2.

The CO₂ and CH₄ emission factors are from AP-42 (Supplement F, July 2000), Table 3.2-2.

The N₂O emission factor is from AP 42, Table 1.4-2. The N₂O Emission Factor for uncontrolled is 2.2. The N₂O Emission Factor for low NO_x burner is 0.64.

Global Warming Potentials (GWP) are from Table A-1 of 40 CFR Part 98 Subpart A.

Methodology:

Potential Fuel Usage (MMBtu/yr) = Maximum Output Horsepower Rating (hp) * Brake Specific Fuel Consumption (Btu/hp-hr) * Maximum Hours Operated per Year (hr/yr) ÷ 1000000 Btu/MMBtu

Potential Emissions (tons/yr) = Potential Fuel Usage (MMBtu/yr) * Emission Factor (lb/MMBtu) ÷ 2000 lb/ton

For CO₂ and CH₄: Emissions (tons/yr) = Potential Fuel Usage (MMBtu/yr) * Emission Factor (lb/MMBtu) ÷ 2,000 lb/ton

For N₂O: Emission (tons/yr) = Potential Fuel Usage (MMcf/yr) * Emission Factor (lb/MMcf) ÷ 2,000 lb/ton

CO₂e (tons/yr) = [CO₂ Potential Emissions (tons/yr) * CO₂ GWP (1)] + [CH₄ Potential Emissions (tons/yr) * CH₄ GWP (21)] + [N₂O Potential Emissions (tons/yr) * N₂O GWP (310)]

**Appendix A: Emissions Calculations
Natural Gas Combustion Only (MMBtu/hr <100)**

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Emission Unit Description	Total Heat Input Capacity (MMBtu/hr)			HHV (mmBtu/mmscf)	Potential Throughput MMcf/yr		
Two (2) process water heaters	2.50			1020	21.47		
	Pollutant						
Emission Factor (lb/MMcf)	PM*	PM ₁₀ *	direct PM _{2.5} *	SO ₂	NO _x	VOC	CO
	1.9	7.6	7.6	0.6	100	5.5	84
					**see below		
Potential Emissions (tons/yr)	0.02	0.08	0.08	0.01	1.07	0.06	0.90

* PM emission factor is filterable PM only. PM₁₀ emission factor is filterable and condensable PM₁₀ combined.

PM_{2.5} emission factor is filterable and condensable PM_{2.5} combined.

** Emission factors for NO_x: Uncontrolled = 100, low NO_x burner = 50, low NO_x burners/flue gas recirculation = 32

HAPs - Organics					
Emission Factor (lb/MMcf)	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emissions (tons/yr)	2.25E-05	1.29E-05	8.05E-04	1.93E-02	3.65E-05

HAPs - Metals					
Emission Factor (lb/MMcf)	Lead	Cadmium	Chromium	Manganese	Nickel
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emissions (tons/yr)	5.37E-06	1.18E-05	1.50E-05	4.08E-06	2.25E-05

Total HAPs 2.03E-02

Greenhouse Gas			
Emission Factor (lb/MMcf)	CO ₂	CH ₄	N ₂ O
	120,000	2.3	2.2
Potential Emissions (tons/yr)	1,288	0.02	0.02
Summed Potential Emissions (tons/yr)	1,288		
CO ₂ e Total (tons/yr)	1,296		

Notes:

The five highest organic and metal HAPs emission factors are provided above.

Additional HAP emission factors are available in AP-42, Chapter 1.4.

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMcf = 1,000,000 cubic feet of gas

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.

Potential Throughput (MMcf/yr) = Heat Input Capacity (MMBtu/hr) * 8760 hr/yr ÷ HHV (MMBtu/MMcf)

Potential Emissions (tons/yr) = Potential Throughput (MMcf/yr) x Emission Factor (lb/MMcf) ÷ 2000 lb/ton

The N₂O emission factor for uncontrolled is 2.2. The N₂O emission factor for low NO_x burner is 0.64.

The emission factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

The Greenhouse Warming Potentials (GWP) are from Table A-1 of 40 CFR Part 98 Subpart A.

Potential Emissions (tons/yr) = Potential Throughput (MMcf/yr) x Emission Factor (lb/MMcf) ÷ 2,000 lb/ton

CO₂e (tons/yr) = [CO₂ Potential Emissions (tons/yr) * CO₂ GWP (1)] + [CH₄ Potential Emissions (tons/yr) * CH₄ GWP (21)] +

[N₂O Potential Emissions (tons/yr) * N₂O GWP (310)]

[illegible]

Appendix A: Emission Calculations
Fugitive Quarry Particulate Emissions

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Process:	Maximum Rate (tons/hr)	Pollutant	Uncontrolled Emission Factor (lb/ton)	Uncontrolled Emissions (tons/yr)	Type of Control
Pan/Earth Mover	18.67	PM	0.058	4.74	none
Quarry		PM ₁₀	0.058	4.74	none
Source of Criteria Pollutant Factors: AP-42, Ch. 11.9, Table 11.9-4*		PM _{2.5}	0.058	4.74	none

* Topsoil removed by scraper

Methodology:

PM₁₀ and PM_{2.5} have been assumed to be equal to PM.

Maximum Rate (tons/hr) = 16 tons/truck * 28 trucks/day ÷ 24 hr/day

Uncontrolled Emissions (tons/yr) = Maximum Rate (tons/hr) x Uncontrolled Emission Factor (lb/ton) x 8760 hr/yr ÷ 2000 lbs/ton

Process:	Maximum Rate (tons/hr)	Pollutant	Uncontrolled Emissions (tons/yr)	Type of Control
Mined Material Storage Pile	18.67	PM	0.05	none
Quarry		PM ₁₀	0.05	none
Source of Criteria Pollutant Factors: AP-42, Ch. 13.2.5		PM _{2.5}	0.05	none

Notes:

Assume the clay pile height equals 8 feet and its base width equals 60 feet.

Use friction velocity u* of 1.12 m/s (Table 13.2.5-2 Uncrushed Coal).

PM₁₀ and PM_{2.5} have been assumed to be equal to PM.

See Appendix B of the TSD for full methodology.

Process: Mined Material Loading Area

Maximum Throughput: 18.67 tons/hr

The following calculations determine the amount of emissions created by dropping of material (AP-42, Sec. 13.2.4, eq. 1):

$$\text{Emission Factor} = k * (0.0032) * (U/5)^{1.3} \div (M/2)^{1.4}$$

where $k_{PM} = 0.74$ particle size multiplier
 $k_{PM10} = 0.35$ particle size multiplier
 $k_{PM2.5} = 0.053$ particle size multiplier
 $U = 9.5$ mean wind speed, mph
 $M = 10$ % material moisture content

Emission Factor (PM) = 5.73E-04 lb PM/ton
Emission Factor (PM₁₀) = 2.71E-04 lb PM₁₀/ton
Emission Factor (PM_{2.5}) = 4.10E-05 lb PM_{2.5}/ton

Uncontrolled PM Emissions (tpy) = Maximum Rate (tons/hr) * Emission Factor (lb PM/ton) * 8760 hr/yr ÷ 2000 lb/ton
Uncontrolled PM Emissions (tpy) = 19 tons/hr * 5.73E-04 lb/ton * 8760 hr/yr ÷ 2000 lb/ton
Uncontrolled PM Emissions (tpy) = 0.05 tons/yr

Uncontrolled PM₁₀ Emissions (tpy) = Maximum Rate (tons/hr) * Emission Factor (lb PM₁₀/ton) * 8760 hr/yr ÷ 2000 lb/ton
Uncontrolled PM₁₀ Emissions (tpy) = 19 tons/hr * 2.71E-04 lb/ton * 8760 hr/yr ÷ 2000 lb/ton
Uncontrolled PM₁₀ Emissions (tpy) = 0.02 tons/yr

Uncontrolled PM_{2.5} Emissions (tpy) = Maximum Rate (tons/hr) * Emission Factor (lb PM_{2.5}/ton) * 8760 hr/yr ÷ 2000 lb/ton
Uncontrolled PM_{2.5} Emissions (tpy) = 19 tons/hr * 4.10E-05 lb/ton * 8760 hr/yr ÷ 2000 lb/ton
Uncontrolled PM_{2.5} Emissions (tpy) = 0.003 tons/yr

Notes:

The mean wind speed "U" for the emission factor equation (AP-42, Sec. 13.2.4, eq. 1) is as listed for the Indianapolis wind rose, converted to miles per hour. (<https://climate.agry.purdue.edu/climate/toolbox/windrose.kind.html>)
The percent moisture content "M" for the emission factor equation (AP-42, Sec. 13.2.4, eq. 1) has been conservatively assumed to be 10%, even though the average moisture content of the material is 13%.

**Appendix A: Emissions Calculations
Unpaved Road Fugitive Emission Calculations**

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Type of Truck	Status	Vehicle Weight (tons) [1]	Number of Trips per Day [2]	VMT per Trip (miles) [3]	Weighted Vehicle Weight (tons) [4]	VMT per Day (miles) [5]	Average Vehicle Weight (tons) [6]	PM Emission Factor (lb/VMT) [7]	PM ₁₀ Emission Factor (lb/VMT) [7]	PM _{2.5} Emission Factor (lb/VMT) [7]
Raw Material - Quarry (Loader)	Full	30	112.00	0.009	3,360.00	1.061	27.60	5.4961	1.4647	0.1465
	Empty	26	112.00	0.009	2,912.00	1.061				
Raw Material - Quarry (Tri-Axle)	Full	34	28.00	0.250	952.00	7.000				
	Empty	18	28.00	0.250	504.00	7.000				
TOTAL			280.00		7,728.00	16.121				

Control Efficiency: 50%

	PM	PM ₁₀	PM _{2.5}
Uncontrolled, Mitigated Emissions (lb/day) [8]	88.60	23.61	2.36
Uncontrolled, Mitigated Emissions (tons/yr) [9]	16.17	4.31	0.43
Controlled/Limited, Mitigated Emissions (lb/day) [10]	44.30	11.81	1.18
Controlled/Limited, Mitigated Emissions (tons/yr) [10]	8.09	2.15	0.22

Notes:

- [1] Provided by the source
- [2] Tri-Axle: 28 trucks/day
Loader: 28 trucks/day * 16 tons/truck ÷ 4 tons/loader
- [3] Provided by the source
- [4] Weighted Vehicle Weight (tons) = Vehicle Weight (tons) x Number of Trips per Day
- [5] VMT per Day (miles) = VMT per Trip (miles) x Number of Trips per Day
- [6] Average Vehicle Weight (tons) = Σ [Weighted Vehicle Weight (tons)] ÷ Σ (Number of Trips per Day)
- [7] Emission factor equation taken from AP-42, Section 13.2.2, equations 1a and 2:

$$E = (k) \times (s/12)^a \times (W/3)^b \times [(365 - P) \div 365]$$

where:

E = Emission Rate (lb/VMT)
k = 4.9 lb/VMT for PM, 1.5 lb/VMT for PM₁₀, 0.15 lb/VMT for PM_{2.5} (Table 13.2.2-2 Constants for Equations 1a and 1b)
s = Surface Material Silt Content (%) = 6.0 (Table 13.2.2-1 (Iron and Steel Production))
a = 0.7 for PM, 0.9 for PM₁₀ and PM_{2.5} (Table 13.2.2-2 Constants for Equations 1a and 1b)
W = Average Vehicle Weight (tons)
b = 0.45 for PM, PM₁₀, and PM_{2.5} (Table 13.2.2-2 Constants for Equations 1a and 1b)
P = Number of "Wet" Days with at least 0.254 mm (0.01 in) of Precipitation during the Averaging Period = 120 (AP-42, Section 13.2.1, Figure 13.2.1-2)

- [8] Uncontrolled Emissions (lb/day) = Emission Factor (lb/VMT) x Σ [VMT per Day (miles)]
- [9] Uncontrolled Emissions (tons/yr) = Emission Rate (lb/day) x 365 days/yr ÷ 2000 lb/ton
- [10] Controlled Emissions = Uncontrolled Emissions x (1 - Control Efficiency)

Appendix A: Emission Calculations
Fugitive Clay/Shale Processing Particulate Emissions

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Process: Raw Material Storage Pile (EU-RMS)
Process: Feed Hopper
Process: Transfer Conveyors (F-GMC, F-C20-1)

Maximum Throughput: 100 tons/hr

The following calculations determine the amount of emissions created by dropping of material (AP-42, Sec. 13.2.4, eq. 1):

$$\text{Emission Factor} = k * (0.0032) * (U/5)^{1.3} \div (M/2)^{1.4}$$

where k_{PM} = 0.74 particle size multiplier
 k_{PM10} = 0.35 particle size multiplier
 $k_{PM2.5}$ = 0.053 particle size multiplier
 U = 9.5 mean wind speed, mph
 M = 10 % material moisture content

Emission Factor (PM) = 5.73E-04 lb PM/ton
Emission Factor (PM₁₀) = 2.71E-04 lb PM₁₀/ton
Emission Factor (PM_{2.5}) = 4.10E-05 lb PM_{2.5}/ton

$$\text{Uncontrolled PM Emissions (tpy)} = \text{Maximum Rate (tons/hr)} * \text{Emission Factor (lb PM/ton)} * 8760 \text{ hr/yr} \div 2000 \text{ lb/ton}$$

Uncontrolled PM Emissions (tpy) =	100	tons/hr *	5.73E-04	lb/ton *	8760	hr/yr ÷	2000	lb/ton
Uncontrolled PM Emissions (tpy) =	0.25	tons/yr						

$$\text{Uncontrolled PM}_{10} \text{ Emissions (tpy)} = \text{Maximum Rate (tons/hr)} * \text{Emission Factor (lb PM}_{10}\text{/ton)} * 8760 \text{ hr/yr} \div 2000 \text{ lb/ton}$$

Uncontrolled PM ₁₀ Emissions (tpy) =	100	tons/hr *	2.71E-04	lb/ton *	8760	hr/yr ÷	2000	lb/ton
Uncontrolled PM ₁₀ Emissions (tpy) =	0.12	tons/yr						

$$\text{Uncontrolled PM}_{2.5} \text{ Emissions (tpy)} = \text{Maximum Rate (tons/hr)} * \text{Emission Factor (lb PM}_{2.5}\text{/ton)} * 8760 \text{ hr/yr} \div 2000 \text{ lb/ton}$$

Uncontrolled PM _{2.5} Emissions (tpy) =	100	tons/hr *	4.10E-05	lb/ton *	8760	hr/yr ÷	2000	lb/ton
Uncontrolled PM _{2.5} Emissions (tpy) =	0.02	tons/yr						

Allowable Emissions:

Each emission unit is exempt from 326 IAC 6-3-2 because each unit has potential particulate emissions less than 0.551 lb/hr.

Notes:

The mean wind speed "U" for the emission factor equation (AP-42, Sec. 13.2.4, eq. 1) is as listed for the Indianapolis wind rose, converted to miles per hour. (<https://climate.agry.purdue.edu/climate/toolbox/windrose.kind.html>)
The percent moisture content "M" for the emission factor equation (AP-42, Sec. 13.2.4, eq. 1) has been conservatively assumed to be 10%, even though the average moisture content of the material is 13%.

Appendix A: Emission Calculations
Fugitive Coal Processing Particulate Emissions

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Process: Coal Stockpile (EU-CPILE)
Process: Coal Hopper

Maximum Throughput: 1.5 tons/hr

The following calculations determine the amount of emissions created by dropping of material (AP-42, Sec. 13.2.4, eq. 1):

$$\text{Emission Factor} = k * (0.0032) * (U/5)^{1.3} \div (M/2)^{1.4}$$

where k_{PM} = 0.74 particle size multiplier
 k_{PM10} = 0.35 particle size multiplier
 $k_{PM2.5}$ = 0.053 particle size multiplier
 U = 9.5 mean wind speed, mph
 M = 4.8 % material moisture content

Emission Factor (PM) = 1.60E-03 lb PM/ton
Emission Factor (PM₁₀) = 7.57E-04 lb PM₁₀/ton
Emission Factor (PM_{2.5}) = 1.15E-04 lb PM_{2.5}/ton

Uncontrolled PM Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM/ton) * 8760 hr/yr ÷ 2000 lb/ton						
Uncontrolled PM Emissions (tpy) =	1.5	tons/hr *	1.60E-03	lb/ton *	8760	hr/yr ÷ 2000 lb/ton
Uncontrolled PM Emissions (tpy) =	0.01	tons/yr				
Uncontrolled PM ₁₀ Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM ₁₀ /ton) * 8760 hr/yr ÷ 2000 lb/ton						
Uncontrolled PM ₁₀ Emissions (tpy) =	1.5	tons/hr *	7.57E-04	lb/ton *	8760	hr/yr ÷ 2000 lb/ton
Uncontrolled PM ₁₀ Emissions (tpy) =	4.98E-03	tons/yr				
Uncontrolled PM _{2.5} Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM _{2.5} /ton) * 8760 hr/yr ÷ 2000 lb/ton						
Uncontrolled PM _{2.5} Emissions (tpy) =	1.5	tons/hr *	1.15E-04	lb/ton *	8760	hr/yr ÷ 2000 lb/ton
Uncontrolled PM _{2.5} Emissions (tpy) =	7.53E-04	tons/yr				

Allowable Emissions:

Each emission unit is exempt from 326 IAC 6-3-2 because each unit has potential particulate emissions less than 0.551 lb/hr.

Notes:

The mean wind speed "U" for the emission factor equation (AP-42, Sec. 13.2.4, eq. 1) is as listed for the Indianapolis wind rose, converted to miles per hour. (<https://climate.agry.purdue.edu/climate/toolbox/windrose.kind.html>)
The percent moisture content "M" for the emission factor equation (AP-42, Sec. 13.2.4, eq. 1) is the mean moisture content for coal piles at iron and steel production facilities (AP-42, Sec. 13.2.4, Table 13.2.4-1).

Appendix A: Emission Calculations
Fugitive Brick Crushing Particulate Emissions

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Process: Brick Crushing Storage Piles (Waste Brick, Crushed Brick, Brick Dust)

Maximum Throughput: 7 tons/hr

The following calculations determine the amount of emissions created by dropping of material (AP-42, Sec. 13.2.4, eq. 1):

$$\text{Emission Factor} = k * (0.0032) * (U/5)^{1.3} \div (M/2)^{1.4}$$

where k_{PM} = 0.74 particle size multiplier
 k_{PM10} = 0.35 particle size multiplier
 $k_{PM2.5}$ = 0.053 particle size multiplier
 U = 9.5 mean wind speed, mph
 M = 2.1 % material moisture content

Emission Factor (PM) = 5.09E-03 lb PM/ton
 Emission Factor (PM₁₀) = 2.41E-03 lb PM₁₀/ton
 Emission Factor (PM_{2.5}) = 3.65E-04 lb PM_{2.5}/ton

Uncontrolled PM Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM/ton) * 8760 hr/yr ÷ 2000 lb/ton							
Uncontrolled PM Emissions (tpy) =	7.0	tons/hr *	5.09E-03	lb/ton *	8760	hr/yr ÷	2000 lb/ton
Uncontrolled PM Emissions (tpy) =	0.16	tons/yr					
Uncontrolled PM ₁₀ Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM ₁₀ /ton) * 8760 hr/yr ÷ 2000 lb/ton							
Uncontrolled PM ₁₀ Emissions (tpy) =	7.0	tons/hr *	2.41E-03	lb/ton *	8760	hr/yr ÷	2000 lb/ton
Uncontrolled PM ₁₀ Emissions (tpy) =	0.07	tons/yr					
Uncontrolled PM _{2.5} Emissions (tpy) = Rate (tons/hr) * Emission Factor (lb PM _{2.5} /ton) * 8760 hr/yr ÷ 2000 lb/ton							
Uncontrolled PM _{2.5} Emissions (tpy) =	7.0	tons/hr *	3.65E-04	lb/ton *	8760	hr/yr ÷	2000 lb/ton
Uncontrolled PM _{2.5} Emissions (tpy) =	0.01	tons/yr					

Allowable Emissions:

Each storage pile is exempt from 326 IAC 6-3-2 because each pile has potential particulate emissions less than 0.551 lb/hr.

Notes:

The mean wind speed "U" for the emission factor equation (AP-42, Sec. 13.2.4, eq. 1) is as listed for the Indianapolis wind rose, converted to miles per hour. (<https://climate.agry.purdue.edu/climate/toolbox/windrose.kind.html>)

The percent moisture content "M" for the emission factor equation (AP-42, Sec. 13.2.4, eq. 1) is the mean moisture content for piles of various limestone products at stone quarrying and processing facilities (AP-42, Sec. 13.2.4, Table 13.2.4-1).

Appendix A: Emissions Calculations
Paved Road Fugitive Emission Calculations

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Type of Truck	Status	Vehicle Weight (tons) [1]	Number of Trips per Day [2]	VMT per Trip (miles) [3]	Weighted Vehicle Weight (tons) [4]	VMT per Day (miles) [5]	Average Vehicle Weight (tons) [6]	PM Emission Factor (lb/VMT) [7]	PM ₁₀ Emission Factor (lb/VMT) [7]	PM _{2.5} Emission Factor (lb/VMT) [7]
Raw Material - Brick Plant (Tri-Axle)	Full	34	28.00	0.175	952.00	4.900	27.69	2.3623	0.4725	0.1160
	Empty	18	28.00	0.175	504.00	4.900				
Final Brick Product (Flatbed)	Full	50	20.55	0.100	1,027.50	2.055				
	Empty	10	20.55	0.100	205.50	2.055				
TOTAL			97.10		2,689.00	13.910				

Control Efficiency: 50%

	PM	PM ₁₀	PM _{2.5}
Uncontrolled, Mitigated Emissions (lb/day) [8]	32.86	6.57	1.61
Uncontrolled, Mitigated Emissions (tons/yr) [9]	6.00	1.20	0.29
Controlled/Limited, Mitigated Emissions (lb/day) [10]	16.43	3.29	0.81
Controlled/Limited, Mitigated Emissions (tons/yr) [10]	3.00	0.60	0.15

Notes:

- [1] Provided by the source
- [2] Raw Material: 28 trucks/day
Final Brick Product: two kilns (13.7 and 20.55 tons/hr) = 34.25 tons/hr * 24 hr/day ÷ 40 tons/load
- [3] Provided by the source
- [4] Weighted Vehicle Weight (tons) = Vehicle Weight (tons) x Number of Trips per Day
- [5] VMT per Day (miles) = VMT per Trip (miles) x Number of Trips per Day
- [6] Average Vehicle Weight (tons) = Σ [Weighted Vehicle Weight (tons)] ÷ Σ (Number of Trips per Day)
- [7] Emission factor equation taken from AP-42, Section 13.2.1.3, eq. 2 (published 1/11):

$$E = (k) \times (sL^{0.91}) \times (W^{1.02}) \times (1 - P \div (4 \times N))$$

where:

E = Emission Rate (lb/VMT)

k = 0.011 lb/VMT for PM, 0.0022 lb/VMT for PM₁₀, 0.00054 lb/VMT for PM_{2.5}

(Table 13.2-1.1 Particle Size Multipliers for Paved Road Equation)

sL = Silt Loading = 9.7 g/m² (AP-42, Section 13.2.1, Table 13.2.1-3 (Iron and Steel Production))

W = Average Vehicle Weight (tons)

P = Number of "Wet" Days with at least 0.254 mm (0.01 in) of Precipitation during the Averaging Period = 120

(AP-42, Section 13.2.1, Figure 13.2.1-2)

N = Number of Days in the Averaging Period = 365

[8] Uncontrolled Emissions (lb/day) = Emission Factor (lb/VMT) x Σ [VMT per Day (miles)]

[9] Uncontrolled Emissions (tons/yr) = Emission Rate (lb/day) x 365 days/yr ÷ 2000 lb/ton

[10] Controlled Emissions = Uncontrolled Emissions x (1 - Control Efficiency)

Appendix A: Emissions Calculations
Unpaved Road Fugitive Emission Calculations

Company Name: General Shale Brick, Inc.
Address City IN Zip: 148 Sycamore Lane, Mooresville, IN 46158
Part 70 Operating Permit Renewal No.: T109-29661-00002
Reviewer: John Haney/Julie Alexander
Date: February 22, 2013

Type of Truck	Status	Vehicle Weight (tons) [1]	Number of Trips per Day [2]	VMT per Trip (miles) [3]	Weighted Vehicle Weight (tons) [4]	VMT per Day (miles) [5]	Average Vehicle Weight (tons) [6]	PM Emission Factor (lb/VMT) [7]	PM ₁₀ Emission Factor (lb/VMT) [7]	PM _{2.5} Emission Factor (lb/VMT) [7]
Raw Material - Brick Plant (Tri-Axle)	Full	34	28.00	0.050	952.00	1.400	26.00	5.3503	1.4258	0.1426
	Empty	18	28.00	0.050	504.00	1.400				
TOTAL			56.00		1,456.00	2.800				

Control Efficiency: 50%

	PM	PM ₁₀	PM _{2.5}
Uncontrolled, Mitigated Emissions (lb/day) [8]	14.98	3.99	0.40
Uncontrolled, Mitigated Emissions (tons/yr) [9]	2.73	0.73	0.07
Controlled/Limited, Mitigated Emissions (lb/day) [10]	7.49	2.00	0.20
Controlled/Limited, Mitigated Emissions (tons/yr) [10]	1.37	0.36	0.04

Notes:

- [1] Provided by the source
- [2] Provided by the source
- [3] Provided by the source
- [4] Weighted Vehicle Weight (tons) = Vehicle Weight (tons) x Number of Trips per Day
- [5] VMT per Day (miles) = VMT per Trip (miles) x Number of Trips per Day
- [6] Average Vehicle Weight (tons) = Σ [Weighted Vehicle Weight (tons)] \div Σ (Number of Trips per Day)
- [7] Emission factor equation taken from AP-42, Section 13.2.2, equations 1a and 2:

$$E = (k) \times (s/12)^a \times (W/3)^b \times [(365 - P) \div 365]$$

where:

E = Emission Rate (lb/VMT)

k = 4.9 lb/VMT for PM, 1.5 lb/VMT for PM₁₀, 0.15 lb/VMT for PM_{2.5} (Table 13.2.2-2 Constants for Equations 1a and 1b)

s = Surface Material Silt Content (%) = 6.0 (Table 13.2.2-1 (Iron and Steel Production))

a = 0.7 for PM, 0.9 for PM₁₀ and PM_{2.5} (Table 13.2.2-2 Constants for Equations 1a and 1b)

W = Average Vehicle Weight (tons)

b = 0.45 for PM, PM₁₀, and PM_{2.5} (Table 13.2.2-2 Constants for Equations 1a and 1b)

P = Number of "Wet" Days with at least 0.254 mm (0.01 in) of Precipitation during the Averaging Period = 120
(AP-42, Section 13.2.1, Figure 13.2.1-2)

[8] Uncontrolled Emissions (lb/day) = Emission Factor (lb/VMT) x Σ [VMT per Day (miles)]

[9] Uncontrolled Emissions (tons/yr) = Emission Rate (lb/day) x 365 days/yr \div 2000 lb/ton

[10] Controlled Emissions = Uncontrolled Emissions x (1 - Control Efficiency)

**TSD Appendix B: Emission Calculations
General Shale Brick, Inc.**

*** Outside Storage Piles**

EMISSION CALCULATIONS

General Shale Brick

Source: EU-MMS Mined Material Storage

Mooreville, IN

Description: Outside Pile for Clay Storage

EPN: Fugitive

Controls: NA NA

Factors: From AP-42 Section 13.2.5 Industrial Wind Erosion

$$\text{Emission Factor (g/m}^2\text{-year)} = k * \text{SUM (P)}$$

k = particle size multiplier (dimensionless) = 1 for $PM_{10} \leq 30$ microns;

P = erosion potential function for a dry, exposed surface

$$P = 58 (u^* - u_{t*})^2 + 25 (u^* - u_{t*})$$

$P = 0$ for $u^* \leq u_{t*}$

where: u^* = Friction velocity (m/s) from Table 13.2.5-2

u_{t*} = threshold friction velocity (m/s)

Surface Area of Pile:

The clay pile is approximately

Ht = 8 ft = 2.4384 m
Base = 60 ft = 18.288 m

Height to Base Ratio = 0.1333333 is < 0.2 so assumed a flat pile

Surface Area of pile = $3.14 * r^2 * \text{SQRT}(r^2 + h^2)$

Surface Area of pile = 271.85641 m²

Assume a cone shaped pile -- Pile A from Section 13.2.5

Step 1

Friction Velocity u^* for uncrushed coal from Table 13.2.5-2 =

1.12 m/s

Step 2

Divide pile into the exposed surface area using Table 13.2.5-3

Pile Subarea	Percent of Pile Surface Area	m ²
0.9	12%	32.62276861
0.6	48%	130.4910744
0.2	40%	108.742562

271.8564051

Step 3

Correct fasted mile values obtained from Local Climatological Data to the reference height of 10 m.
Data obtained for reference year 1996 at 10 meters so the conversion is just 1

$$u_{10} = u_z (\ln(10/.005) / (\ln(z/.005)))$$

reference anemeter = 10 meters, therefore

$u_{10} = 1$

EMISSION CALCULATIONS

General Shale Brick

Source: EU-MMS Mined Material Storage

Mooreville, IN

Step 4

Convert fasted mile to equivalent friction velocities

Period	u_{10}		u_{10}		u^*		
	mph	m/s	mph	m/s	0.2	0.6	0.9
jan	45	20.1	45	20.1	0.40	1.21	1.81
feb	37	16.5	37	16.5	0.33	0.99	1.49
mar	54	24.1	54	24.1	0.48	1.45	2.17
apr	46	20.6	46	20.6	0.41	1.23	1.85
may	36	16.1	36	16.1	0.32	0.97	1.45
jun	45	20.1	45	20.1	0.40	1.21	1.81
jul	31	13.9	31	13.9	0.28	0.83	1.25
aug	38	17.0	38	17.0	0.34	1.02	1.53
sep	28	12.5	28	12.5	0.25	0.75	1.13
oct	43	19.2	43	19.2	0.38	1.15	1.73
nov	29	13.0	29	13.0	0.26	0.78	1.17
dec	30	13.4	30	13.4	0.27	0.80	1.21

Step 5

Subdivide piles in to area (done in 2 above).

Step 6

Calculate the erosion potential P for each period using equation for P above

Month	Sub area	
	0.6 P (g/m2)	0.9 P (g/m2)
jan	2.61	44.92
feb	0.00	17.10
mar	14.47	90.58
apr	3.60	49.24
may	0.00	14.47
jun	2.61	44.92
jul	0.00	4.12
aug	0.00	19.92
sep	0.00	0.17
oct	0.90	36.84
nov	0.00	1.30
dec	0.00	2.61

Step 7

Multiply the emission factor for each subare by the size of the subarea

Month	g/month	g/month
jan	341.14056	5861.3453
feb	0	2231.1563
mar	1887.6455	11819.776
apr	469.41383	6425.3818
may	0	1887.6455
jun	341.14056	5861.3453
jul	0	537.63427
aug	0	2599.17
sep	0	21.661696
oct	117.2645	4896.781
nov	0	169.14971
dec	0	341.14056
	3156.605	42562.187

EMISSION CALCULATIONS

General Shale Brick
Mooresville, IN

Source: EU-MMS Mined Material Storage

Emissions = 45718.792 g/yr 100.70 lb/yr 0.050 tons/yr
Emissions = 5.2190402 g/hr 0.011495683 lb/hr

Pile Surface Area= 271.8564051 m2
Pile Surface Area= 2926.235159 ft2
Emissions = 3.92849E-06 lb/hr-ft2

Pollutant Name	Potential Emissions		
	(lbs/hr)	(lbs/yr)	(tons/yr)
PM	0.011	100.7	0.050
PM-10	0.011	100.7	0.050
PM 2.5	0.011	100.7	0.050



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Warren Paschal
General Shale Brick, Inc.
300 Brick Plant Road
Moncure, NC 27559

DATE: July 18, 2013

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Part 70 Operating Permit Renewal
109-29661-00002

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Dale Overcash – Trinity Consultants
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 6/13/2013



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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

July 18, 2013

TO: Mooresville Public Library

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**


Applicant Name: Genral Shale Brick, Inc.
Permit Number: 109-29661-00002

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 6/13/2013

Mail Code 61-53

IDEM Staff	GHOTOPP 7/18/2013 General Shale Brick, Inc. 109-29661-00002 Final			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
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2		Morgan County Commissioners 180 South Main Street Martinsville IN 46151 (Local Official)										
3		Mooresville Town Council 4 E Harrison Street Mooresville IN 46158 (Local Official)										
4		Mooresville Public Library 220 W Harrison St Mooresville IN 46158-1633 (Library)										
5		Mr. Alex Geisinger Valparaiso University Wessemann Hall Valparaiso IN 46383-649 (Affected Party)										
6		Clayton D. & Patricia A. Arthur 5178 Brenda Boulevard Greenwood IN 46143 (Affected Party)										
7		Morgan County Health Department 180 S Main Street, Suite 252 Martinsville IN 46151-1988 (Health Department)										
8		Dale Overcash Trinity Consultants 1 Copley Parkway, Suite 310 Morrisville NC 27560 (Consultant)										
9		T. K. Forslund 8147 E. Old St. Rd. 144 Mooresville IN 46158 (Affected Party)										
10		David Jones 7977 N. Taylors Rd. Mooresville IN 46158 (Affected Party)										
11		Claudia Parker 6761 Centenary Rd. Mooresville IN 46158 (Affected Party)										
12		James Swails 6568 E. Rosebud Lane Mooresville IN 46158 (Affected Party)										
13		John Thurston 6548 E. Watson Mooresville IN 46158 (Affected Party)										
14		Tom Anderson Save the Dunes 444 Barker Rd Michigan City IN 46360 (Affected Party)										
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