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: August 20, 2013

RE: Boral Bricks, Inc. / 167-33256-00139

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 13-17-3-4 and 326 IAC 2, this permit modification 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 13-15-7-3 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 Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of a Title V operating permit 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 impractible 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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Michael R. Pence
Governor

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Commissioner

Mary Ann Keon
Boral Bricks
200 Mansell Court East, Suite 310
Roswell, GA 30076

August 20, 2013

Re: 167-33256-00139
Significant Permit Modification to
Part 70 Renewal No.: T167-31038-00139

Dear Mary Ann:

Boral Bricks Terre Haute Plant was issued a Part 70 Operating Permit Renewal No. T167-31038-00139 on April 13, 2012 for a stationary brick manufacturing plant located at 5601 E. Price Road, Terre Haute, IN. An application requesting changes to this permit was received on May 29, 2013. Pursuant to the provisions of 326 IAC 2-7-12, a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

For your convenience, the entire Part 70 Operating Permit Renewal as modified is attached.

A copy of the permit is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/. 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

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Heath Hartley, of my staff, at 317-232-8217 or 1-800-451-6027, and ask for extension 2-8217.

Sincerely,

Jenny Acker, Section Chief
Permits Branch
Office of Air Quality

Attachment(s): Updated Permit, Technical Support Document and Appendix A

JA/hh

cc: File - Vigo County
Vigo County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch
Billing, Licensing and Training Section

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

Boral Bricks, Inc.
5601 East Price Road
Terre Haute, Indiana 47802

(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.

Operation Permit No.: T167-31038-00139	
Issued by: Original Signed Chrystal A. Wagner, Section Chief Permits Branch Office of Air Quality	Issuance Date: April 13, 2012 Expiration Date: April 13, 2017

First Significant Permit Modification No.: 167-33256-00139	
Issued by: Jenny Acker, Section Chief, Permits Branch Office of Air Quality	Issuance Date: August 20, 2013 Expiration Date: April 13, 2017

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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 through 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 manufacturing plant.

Source Address:	5601 East Price Road, Terre Haute, Indiana 47802
General Source Phone Number:	770-645-4500
SIC Code:	3251
County Location:	Vigo
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Minor Source, under PSD Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 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) Material receiving emission unit group, identified as EUG-01, consisting of:

(1) Dump truck unloading, approved for construction in 2007, identified as MR01, with a maximum short term capacity of 120 tons per hour.

(2) Receiving material apron feeder, approved for construction in 2007, identified as MR02, with a maximum short term capacity of 120 tons per hour.

(3) Three (3) crude material belt conveyors, approved for construction in 2007, identified as MR03, with a maximum short term capacity of 120 tons per hour each, and exhausting internally. Under NSPS Subpart OOO, these are conveyors with transfer points enclosed in a building.

(b) Clay grinding and screening operations emission unit group, identified as EUG-02, consisting of:

(1) Primary crusher, approved for construction in 2007, identified as GR01, with a maximum short term capacity of 120 tons per hour, and exhausting internally. Under NSPS OOO, this is an affected facility enclosed in a building.

(2) Scalping screen, approved for construction in 2007, identified as GR02, with a maximum short term capacity of 120 tons per hour, controlled by dust collector CD02, and exhausting through stack CD02. Under NSPS OOO, this is an affected facility with a stack.

(3) Screens (bank of 3 units), approved for construction in 2007, identified as GR03, with a maximum short term capacity of 120 tons per hour, controlled by dust

collector CD02, and exhausting through stack CD02. Under NSPS OOO, this is an affected facility with a stack.

(4) Five (5) processing belt conveyors, approved for construction in 2007, identified as GR04, with a maximum short term capacity of 120 tons per hour each, controlled by dust collector CD02, and exhausting through stack CD02. Under NSPS OOO, this is an affected facility with a stack.

(5) Impact crusher, approved for construction in 2007, identified as GR05, with a maximum short term capacity of 120 tons per hour, controlled by dust collector CD02, and exhausting through stack CD02. Under NSPS OOO, this is an affected facility with a stack.

(6) Two (2) screw conveyors, approved for construction in 2007, identified as GR06, with a maximum short term capacity of 120 tons per hour each, controlled by dust collector CD02, and exhausting through stack CD02. Under NSPS OOO, this is an affected facility with a stack.

(7) Two (2) raw material bins, approved for construction in 2007, identified as GR07, with a maximum short term capacity of 120 tons per hour, and exhausting internally. Under NSPS OOO, this is an affected facility enclosed in a building.

(8) Two (2) raw material feeders, approved for construction in 2007, identified as GR08, with a maximum short term capacity of 120 tons per hour, and exhausting internally. Under NSPS OOO, this is an affected facility enclosed in a building.

(c) Processed clay emission unit group, identified as EUG-03, consisting of:

(1) Processed clay bunker filling, approved for construction in 2007, identified as PC01, with a maximum short term capacity of 120 tons per hour, and exhausting internally.

(2) Reclaimer, approved for construction in 2007, identified as PC02, with a maximum short term capacity of 120 tons per hour, and exhausting internally.

(3) Five (5) processed clay feed conveyors, four (4) between the double shaft mixer and the intermediate storage area and one (1) shuttle conveyor from intermediate storage to brick manufacturing, approved for construction in 2007, identified as PC03, with a maximum short term capacity of 120 tons per hour each, and exhausting internally.

(4) Reclaimer by-pass chute, approved for construction in 2007, identified as PC04, with a maximum short term capacity of 120 tons per hour, and exhausting internally.

(d) Sand handling emission unit group, identified as EUG-04, consisting of:

Sand tank silo, approved for construction in 2007, identified as SD02, with a maximum short term capacity of 30 tons per day.

(e) Brick forming and firing emission unit group, identified as EUG-05, consisting of:

(1) Tunnel dryer, approved for construction in 2007, identified as EU01, with a maximum short term capacity of 29 tons of brick per hour, with a maximum supplemental heat rate of 5.943 million (MM) BTU per hour firing natural gas, without control, and exhausting through stack EU01.

(2) Landfill gas-fired Tunnel Kiln with natural gas as back up, approved for construction in 2007, identified as EU02, with a maximum firing rate of 55 million (MM) Btu per hour, with a maximum capacity of 29 tons of brick per hour, and exhausting through stack CD01.

A.3 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 specifically regulated insignificant activities:

(a) Paved and unpaved roads and parking lots with public access. [326 IAC 6-5]

(b) Sand (supersack), approved for construction in 2007, identified as SD01, with a maximum short term capacity of 30 tons per day. [326 IAC 6.5]

(c) Additive (supersack) approved for construction in 2007, identified as AD01, with a maximum short-term capacity of one (1) ton per hour.

(d) Texturing activity, approved for construction in 2011, identified as TA01.

A.4 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).

SECTION B GENERAL CONDITIONS

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

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

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)]

(a) This permit, T167-31038-00139, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

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

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

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

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

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

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

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

This permit does not convey any property rights of any sort or any exclusive privilege.

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(35), 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(35).

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(35).

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(35).

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(35).

(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(35).

(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 T167-31038-00139 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 permit, all previous registrations and permits are superseded by this 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(35).

(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(35).

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(35).

(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(35).

(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(35).

(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 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.2 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.3 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.4 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.5 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the attached plan as in Attachment A. The provisions of 326 IAC 6-5 are 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(35).

(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(35).

(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(35).

(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)]

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(35).

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.

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 [326 IAC 2-7-5] [326 IAC 2-7-6]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation 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.

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(35).

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)(3), starting in 2006 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(35).

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

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

(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 paragraph (a) of Section C-General Reporting. 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(35). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(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.

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: Clay/shale Processing

(a) Material receiving emission unit group, identified as EUG-01, consisting of:

(1) Dump truck unloading, approved for construction in 2007, identified as MR01, with a maximum short term capacity of 120 tons per hour.

(2) Receiving material apron feeder, approved for construction in 2007, identified as MR02, with a maximum short term capacity of 120 tons per hour.

(3) Three (3) crude material belt conveyors, approved for construction in 2007, identified as MR03, with a maximum short term capacity of 120 tons per hour each, and exhausting internally. Under NSPS Subpart OOO, these are conveyors with transfer points enclosed in a building.

(b) Clay grinding and screening operations emission unit group, identified as EUG-02, consisting of:

(1) Primary crusher, approved for construction in 2007, identified as GR01, with a maximum short term capacity of 120 tons per hour, and exhausting internally. Under NSPS OOO, this is an affected facility enclosed in a building.

(2) Scalping screen, approved for construction in 2007, identified as GR02, with a maximum short term capacity of 120 tons per hour, controlled by dust collector CD02, and exhausting through stack CD02. Under NSPS OOO, this is an affected facility with a stack.

(3) Screens (bank of 3 units), approved for construction in 2007, identified as GR03, with a maximum short term capacity of 120 tons per hour, controlled by dust collector CD02, and exhausting through stack CD02. Under NSPS OOO, this is an affected facility with a stack.

(4) Five (5) processing belt conveyors, approved for construction in 2007, identified as GR04, with a maximum short term capacity of 120 tons per hour each, controlled by dust collector CD02, and exhausting through stack CD02. Under NSPS OOO, this is an affected facility with a stack.

(5) Impact crusher, approved for construction in 2007, identified as GR05, with a maximum short term capacity of 120 tons per hour, controlled by dust collector CD02, and exhausting through stack CD02. Under NSPS OOO, this is an affected facility with a stack.

(6) Two (2) screw conveyors, approved for construction in 2007, identified as GR06, with a maximum short term capacity of 120 tons per hour each, controlled by dust collector CD02, and exhausting through stack CD02. Under NSPS OOO, this is an affected facility with a stack.

(7) Two (2) raw material bins, approved for construction in 2007, identified as GR07, with a maximum short term capacity of 120 tons per hour, and exhausting internally. Under NSPS OOO, this is an affected facility enclosed in a building.

(8) Two (2) raw material feeders, approved for construction in 2007, identified as GR08, with a maximum short term capacity of 120 tons per hour, and exhausting internally. Under NSPS OOO, this is an affected facility enclosed in a building.

(c) Processed clay emission unit group, identified as EUG-03, consisting of:

(1) Processed clay bunker filling, approved for construction in 2007, identified as PC01, with a maximum short term capacity of 120 tons per hour, and exhausting internally.

(2) Reclaimer, approved for construction in 2007, identified as PC02, with a maximum short term capacity of 120 tons per hour, and exhausting internally.

(3) Five (5) processed clay feed conveyors, four (4) between the double shaft mixer and the intermediate storage area and one (1) conveyor from intermediate storage to brick manufacturing, approved for construction in 2007, identified as PC03, with a maximum short term capacity of 120 tons per hour each, and exhausting internally.

(4) Reclaimer by-pass chute, approved for construction in 2007, identified as PC04, with a maximum short term capacity of 120 tons per hour, and exhausting internally.

(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 [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a), the Permittee shall not allow or permit the discharge into the atmosphere of any gases containing a particulate matter content greater than 0.03 grain per dry standard cubic foot.

D.1.2 PSD Minor Limit [326 IAC 2-2]

(a) The amount of clay/shale processed shall not exceed 500,000 tons per twelve consecutive month period, with compliance determined at the end of each month.

(b) The PM emissions from the Clay Preparation Dust Collector, identified as CD02, which controls emissions from the scalping screen, screens, processing belt conveyors, impact crusher, and screw conveyors, shall not exceed 0.13 pounds per ton processed.

(c) The PM_{10} emissions from the Clay Preparation Dust Collector, identified as CD02, which controls emissions from the scalping screen, screens, processing belt conveyors, impact crusher, and screw conveyors, shall not exceed 0.14 pounds per ton processed.

Compliance with these limits, in combination with compliance with Condition D.3.2 and emissions of PM and PM_{10} from all other emission units at this source, shall limit source-wide PM and PM_{10} emissions to less than 250 tons per year, each, rendering 326 IAC 2-2, PSD, not applicable.

D.1.3 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 [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

D.1.4 Particulate Control [326 IAC 2-7-6(6)]

(a) In order to comply with Conditions D.1.1 and D.1.2, the dust collector, identified as CD02, for particulate control shall be in operation and control emissions from the scalping screen (GR02), bank of 3 screens (GR03), five processing belt conveyors (GR04), impact crusher (GR05), and two screw conveyors (GR06) at all times that the applicable equipment is in operation.

(b) In the event that bag failure is observed in a multi-compartment dust collector, 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.1.5 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM and PM_{10} testing for the dust collector CD02 utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the latest valid compliance demonstration. PM_{10} includes filterable and condensable PM_{10}. Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

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

D.1.6 Visible Emissions Notations

(a) Visible emission notations of the dust collector stack, CD02, exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. 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.1.7 Dust Collector Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

(a) The Permittee shall record the pressure drop across the dust collector (CD02) used in conjunction with the clay grinding and screening operations at least once per day when the grinding and screening equipment (EUG-02) is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 6.0 inches of water or a range established during the latest stack test, 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. 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.1.8 Broken or Failed Bag Detection

(a) For a single compartment dust collector 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, or dust traces.

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

D.1.9 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.2, the Permittee shall maintain monthly records of the amount of clay/shale processed.

(b) To document the compliance status with Condition D.1.6, the Permittee shall maintain records of visible emission notations of the dust collector stack, CD02, exhaust once per day. 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.1.7, the Permittee shall maintain records once per day of the pressure drop. 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).

(d) Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the records required by this condition.

D.1.10 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.2 shall be submitted 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. Section C - General Reporting contains the Permittee's obligation 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(35).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Sand handling emission unit group

(d) Sand handling emission unit group, identified as EUG-04, consisting of:

Sand tank silo, approved for construction in 2007, identified as SD02, with a maximum short term capacity of 30 tons per day.

Specifically Regulated Insignificant Activities

(a) Paved and unpaved roads and parking lots with public access. [326 IAC 6-5]

(b) Sand (supersack), approved for construction in 2007, identified as SD01, with a maximum short term capacity of 30 tons per day. [326 IAC 6.5]

(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 Particulate [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a), the Permittee shall not allow or permit the discharge into the atmosphere any gases containing a particulate matter content greater than 0.03 grain per dry standard cubic foot.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Brick forming and firing emission unit group

(e) Brick forming and firing emission unit group, identified as EUG-05, consisting of:

(1) Tunnel dryer, approved for construction in 2007, identified as EU01, with a maximum short term capacity of 29 tons of brick per hour, with a maximum supplemental heat rate of 5.943 million (MM) BTU per hour firing natural gas, without control, and exhausting through stack EU01.

(2) Landfill gas-fired Tunnel Kiln with natural gas as back up, approved for construction in 2007, identified as EU02, with a maximum firing rate of 55 million (MM) Btu per hour, with a maximum capacity of 29 tons of brick per hour, and exhausting through stack CD01.

(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 Particulate Emissions [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a), the Permittee shall not allow or permit the discharge into the atmosphere any gases containing a particulate matter content greater than 0.03 grain per dry standard cubic foot.

D.3.2 PSD Minor Source [326 IAC 2-2]

(a) The amount of fired product from the tunnel kiln (EU02) shall not exceed 254,040 tons per twelve consecutive month period, with compliance determined at the end of each month.

(b) The SO_2 emissions from the tunnel kiln (EU02) shall not exceed 1.96 pound per ton of fired product.

Compliance with these limits shall limit source-wide SO_2 emissions to less than 250 tons per year, rendering 326 IAC 2-2, PSD, not applicable.

D.3.3 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 [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]

D.3.4 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

In order to demonstrate compliance with Conditions D.3.2, the Permittee shall perform SO_2 testing 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.

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

D.3.5 Record Keeping Requirements

(a) To document the compliance status with Condition D.3.2(a), the Permittee shall maintain monthly records of the amount of amount of fired product through the tunnel kiln (EU02).

(b) Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the records required by this condition.

D.3.6 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.3.2(a) shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation 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(35).

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Clay/shale Processing

(a) Material receiving emission unit group, identified as EUG-01, consisting of:

(1) Receiving material apron feeder, approved for construction in 2007, identified as MR02, with a maximum short term capacity of 120 tons per hour.

(2) Three (3) crude material belt conveyors, approved for construction in 2007, identified as MR03, with a maximum short term capacity of 120 tons per hour each, and exhausting internally. Under NSPS Subpart OOO, these are conveyors with transfer points enclosed in a building.

(b) Clay grinding and screening operations emission unit group, identified as EUG-02, consisting of:

(1) Primary crusher, approved for construction in 2007, identified as GR01, with a maximum short term capacity of 120 tons per hour, and exhausting internally. Under NSPS OOO, this is an affected facility enclosed in a building.

(2) Scalping screen, approved for construction in 2007, identified as GR02, with a maximum short term capacity of 120 tons per hour, controlled by dust collector CD02, and exhausting through stack CD02. Under NSPS OOO, this is an affected facility with a stack.

(3) Screens (bank of 3 units), approved for construction in 2007, identified as GR03, with a maximum short term capacity of 120 tons per hour, controlled by dust collector CD02, and exhausting through stack CD02. Under NSPS OOO, this is an affected facility with a stack.

(4) Five (5) processing belt conveyors, approved for construction in 2007, identified as GR04, with a maximum short term capacity of 120 tons per hour each, controlled by dust collector CD02, and exhausting through stack CD02. Under NSPS OOO, this is an affected facility with a stack.

(5) Impact crusher, approved for construction in 2007, identified as GR05, with a maximum short term capacity of 120 tons per hour, controlled by dust collector CD02, and exhausting through stack CD02. Under NSPS OOO, this is an affected facility with a stack.

(6) Two (2) screw conveyors, approved for construction in 2007, identified as GR06, with a maximum short term capacity of 120 tons per hour each, controlled by dust collector CD02, and exhausting through stack CD02. Under NSPS OOO, this is an affected facility with a stack.

(7) Two (2) raw material bins, approved for construction in 2007, identified as GR07, with a maximum short term capacity of 120 tons per hour, and exhausting internally. Under NSPS OOO, this is an affected facility enclosed in a building.

(8) Two (2) raw material feeders, approved for construction in 2007, identified as GR08, with a maximum short term capacity of 120 tons per hour, and exhausting internally. Under NSPS 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 New Source Performance Standards [326 IAC 12-1] [40 CFR 60, Subpart A]

(a) The provisions of 40 CFR 60, Subpart A (General Provisions), which are incorporated by reference in 326 IAC 12-1, apply to the facilities described in this Section E.1, except when otherwise specified in 40 CFR 60, Subpart OOO.

(b) Pursuant to 40 CFR 60.19, the Permittee shall submit all required notifications and reports to:

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

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

The Permittee shall comply with the following provisions of 40 CFR 60, Subpart OOO (included as Attachment A of the permit), which are incorporated by reference in 326 IAC 12:

(1) 40 CFR 60.670(a)(1),(e),(f)
(2) 40 CFR 60.671
(3) 40 CFR 60.672(a)(1),(a)(2),(b),(d),(e)(1),(e)(2)
(4) 40 CFR 60.675(a),(b)(1),(b)(2),(c)(1)(i),(c)(1)(ii),(d),(e)(1)(i),(e)(1)(ii),(g)
(5) 40 CFR 60.676(f),(i)(1),(j)

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

Source Name: Boral Bricks, Inc.
Source Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Part 70 Permit No.: T167-31038-00139

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: Boral Bricks, Inc.
Source Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Part 70 Permit No.: T167-31038-00139

This form consists of 2 pages **Page 1 of 2**

□ This is an emergency as defined in 326 IAC 2-7-1(12)

- 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: Boral Bricks Terre Haute Plant
Source Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Part 70 Permit No.: T167-31038-00139
Facility: Tunnel Kiln (EU02)
Parameter: Amount of fired product
Limit: Less than 254,040 tons per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR: _____

Month	Amount of fired product (tons)	Amount of fired product (tons)	Amount of fired product (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this month.

☐ Deviation/s occurred in this month.
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: Boral Bricks, Inc.
Source Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Part 70 Permit No.: T167-31038-00139

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: _____

FUGITIVE DUST CONTROL PLAN

BORAL BRICKS TERRE HAUTE PLANT
5601 E. Price Rd
Terre Haute, IN 47802

Prepared by:

The Benham Companies, Inc.
One West Third Street, Suite 100
Tulsa, Oklahoma 74103
(918) 492-1600

February 15, 2007

Boral Bricks, Inc. (Boral) has prepared a Fugitive Dust Control Plan (Plan) in accordance with 326 IAC 6-5. This Plan identifies sources of potential fugitive dust emissions and identifies the method of control to be used to control fugitive dust. The control methods have been taken from the list of acceptable measures in 326 ISC 6-5 and include the type of material, suppressant, and frequency of application, where applicable. However, for the most part the measures being employed are part of the design of the process, or equipment associated with the process, that provides for the control achieved.

The following documents are attached which make up the Plan:

- **Table of Fugitive Dust Emission Sources**
  Table identifies sources of fugitive dust and the control measures used for each. Monitoring and record keeping procedures are also identified for each.

- **Table of Plant Production Data**
  Table lists all emission points and quantity of material handled through each on both a short and long term basis.

- **Facility Maps of Fugitive Dust Sources**
  Facility site maps and flow diagram showing the location of all emission sources, both fugitive and non-fugitive. Roads, both paved and unpaved, parking lots, access areas, storage piles and aggregate handling equipment are also identified.

Boral Bricks Terre Haute Plant - Fugitive Dust Emission Sources

Emission Source Description [(b)]	ID	Fugitive Dust Control Measure
Dump Truck Unloading	MR01	Reduction of free fall distance, Enclosure of hopper unloading area (top+ 3 sides)
Receiving Material Apron Feeder	MR02	Enclosure of material unloading area (top+ 3 sides)
Crude Material Belt Conveyors	MR03	Enclosing conveyors on top and sides to minimize to minimize visible emissions.
Primary Crusher	GR01	Enclosure of emission source to minimize to minimize visible emissions.
Raw Material Bin	GR07	Enclosure of emission source to minimize to minimize visible emissions.
Raw Material Feeder	GR08	Enclosure of emission source to minimize to minimize visible emissions.
Processed Clay Bunker Filling (1 conveyor)	PC01	Enclosing conveyors on top and sides to minimize to minimize visible emissions.
Reclaimer	PC02	Enclosing conveyors on top and sides to minimize to minimize visible emissions.
Processed Clay Feed Conveyors	PC03	Enclosing conveyors on top and sides to minimize to minimize visible emissions.
Reclaimer by-pass chute	PC04	Enclosing conveyors on top and sides to minimize to minimize visible emissions.
Sand (supersack)	SD01	Enclosure of emission source to minimize to minimize visible emissions.
Additive (supersack)	AD01	Enclosure of emission source to minimize to minimize visible emissions.
Unpaved Roads	FUG01	Spraying with water as needed
Paved Roads	FUG02	Spraying with water as needed

Emission sources GR02, GR03, GR04, GR05 and GR06 are controlled by baghouse dust control equipment and will not be a source of fugitive dust.

Boral Bricks Terre Haute Plant
Plant Production Data
Fugitive Dust Control Plan

Plant Production Data					
Emission Source Description	ID	Maximum Number of Bricks/yr	Weight of Sbe (lb)	Maximum (tons/hr)	Maximum (tons/yr)
Tunnel Kiln	EU02	140,000,000	3.25	25.97	227,500

Boral Bricks Inc. - Indiana Plant

Emission Unit Groups	Emission Source Description [b]	# of Units	ID	Control Device	Ets. Date Const.	Est. Date Complete	Operating Time		Actual Throughput				Maximum Throughput			
							Short-Term (hrs/day)	Long-Term (days/year)	Short-Term		Long-Term		Short-Term		Long-Term	
EUG-01	Dump Truck Unloading	1	MR01		Jan-07	Oct-07	8	250	95	tons/hr	190,000	tons/yr	120	tons/hr	240,000	tons/yr
	Receiving Material Apron Feeder	1	MR02		Jan-07	Oct-07	8	250	95	tons/hr	190,000	tons/yr	120	tons/hr	240,000	tons/yr
	Crude Material Belt Conveyors	3	MR03		Jan-07	Oct-07	8	250	95	tons/hr	190,000	tons/yr	120	tons/hr	240,000	tons/yr
EUG-02	Primary Crusher	1	GR01		Jul-07	Oct-07	8	250	95	tons/hr	190,000	tons/yr	120	tons/hr	240,000	tons/yr
	Scalping Screen	1	GR02	CD02	Jul-07	Oct-07	8	250	95	tons/hr	190,000	tons/yr	120	tons/hr	240,000	tons/yr
	Screens (Bank of **3**)	1	GR03	CD02	Jul-07	Oct-07	8	250	95	tons/hr	190,000	tons/yr	120	tons/hr	240,000	tons/yr
	Processing Belt Conveyors	5	GR04	CD02	Jul-07	Oct-07	8	250	95	tons/hr	190,000	tons/yr	120	tons/hr	240,000	tons/yr
	Impact Crusher (Grinder)	1	GR05	CD02	Jul-07	Oct-07	8	250	95	tons/hr	190,000	tons/yr	120	tons/hr	240,000	tons/yr
	Screw Conveyors	2	GR06	CD02	Jul-07	Oct-07	8	250	95	tons/hr	190,000	tons/yr	120	tons/hr	240,000	tons/yr
	Raw Material Bin	2	GR07		Jul-07	Oct-07	8	250	95	tons/hr	190,000	tons/yr	120	tons/hr	240,000	tons/yr
	Raw Material Feeder	2	GR08		Jul-07	Oct-07	8	250	95	tons/hr	190,000	tons/yr	120	tons/hr	240,000	tons/yr
EUG-03	Processed Clay Bunker Filling (1 conveyor)	1	PC01		Jul-07	Oct-07	8	250	95	tons/hr	190,000	tons/yr	120	tons/hr	240,000	tons/yr
	Reclaimer	1	PC02		Jul-07	Oct-07	8	250	95	tons/hr	190,000	tons/yr	120	tons/hr	240,000	tons/yr
	Processed Clay Feed Conveyors	5	PC03		Jul-07	Oct-07	16	250	85	tons/hr	340,000	tons/yr	90	tons/hr	360,000	tons/yr
	Reclaimer by-pass chute	1	PC04		Jul-07	Oct-07	8	250	95	tons/hr	190,000	tons/yr	120	tons/hr	240,000	tons/yr
EUG-04	Sand (supersack)	1	SD01		Jul-07	Oct-07	16	250	12.5	tons/day	468	tons/yr	30	tons/day	780	tons/yr
	Additive (supersack)	1	AD01		Jul-07	Oct-07	16	350	0.25	tons/hr	1,400	tons/yr	1	tons/hr	5,600	tons/yr
EUG-05	Even Feeder (88E)	1	[a]		Jul-07	Oct-07	16	250	7.99	tons/hr	31,960	tons/yr	9.99	tons/hr	39,960	tons/yr
	Mixed Clay Feed Conveyor	2	[a]		Jul-07	Oct-07	16	250	85	tons/hr	340,000	tons/yr	90	tons/hr	360,000	tons/yr
	Forming (Pug Mill, Extruding)	1	[a]		Jul-07	Oct-07	16	250	85	tons/hr	340,000	tons/yr	90	tons/hr	360,000	tons/yr
EUG-06	Setting Brick	1	[a]		Jul-07	Oct-07	16	350	85	tons/hr	340,000	tons/yr	90	tons/hr	360,000	tons/yr
	Holding Room	1	[a]		Jul-07	Oct-07	24	365	17.53	tons/hr	153,600	tons/yr	25.97	tons/hr	227,500	tons/yr
	Tunnel Dryer #1	1	EU01		Jul-07	Oct-07	24	365	17.53	tons/hr	153,600	tons/yr	25.97	tons/hr	227,500	tons/yr
	Tunnel Kiln #1 (Natural Gas Fuel Scenario)	1	EU02	CD01	Jul-07	Oct-07	24	365	17.53	tons/hr	153,600	tons/yr	25.97	tons/hr	227,500	tons/yr
	Tunnel Kiln #1 (Landfill Gas Fuel Scenario)	1	EU02	CD01	Jul-07	Oct-07	24	365	17.53	tons/hr	153,600	tons/yr	25.97	tons/hr	227,500	tons/yr
	Brick Packaging	1	[a]		Jul-07	Oct-07	20	365	39.1	tons/hr	153,600	tons/yr	40.5	tons/hr	227,500	tons/yr

	Control Device Descriptions	# of Units	ID
	Dry-Injection Fabric Filter (DIFF)	1	CD01
	Clay Preparation Dust Collector	1	CD02

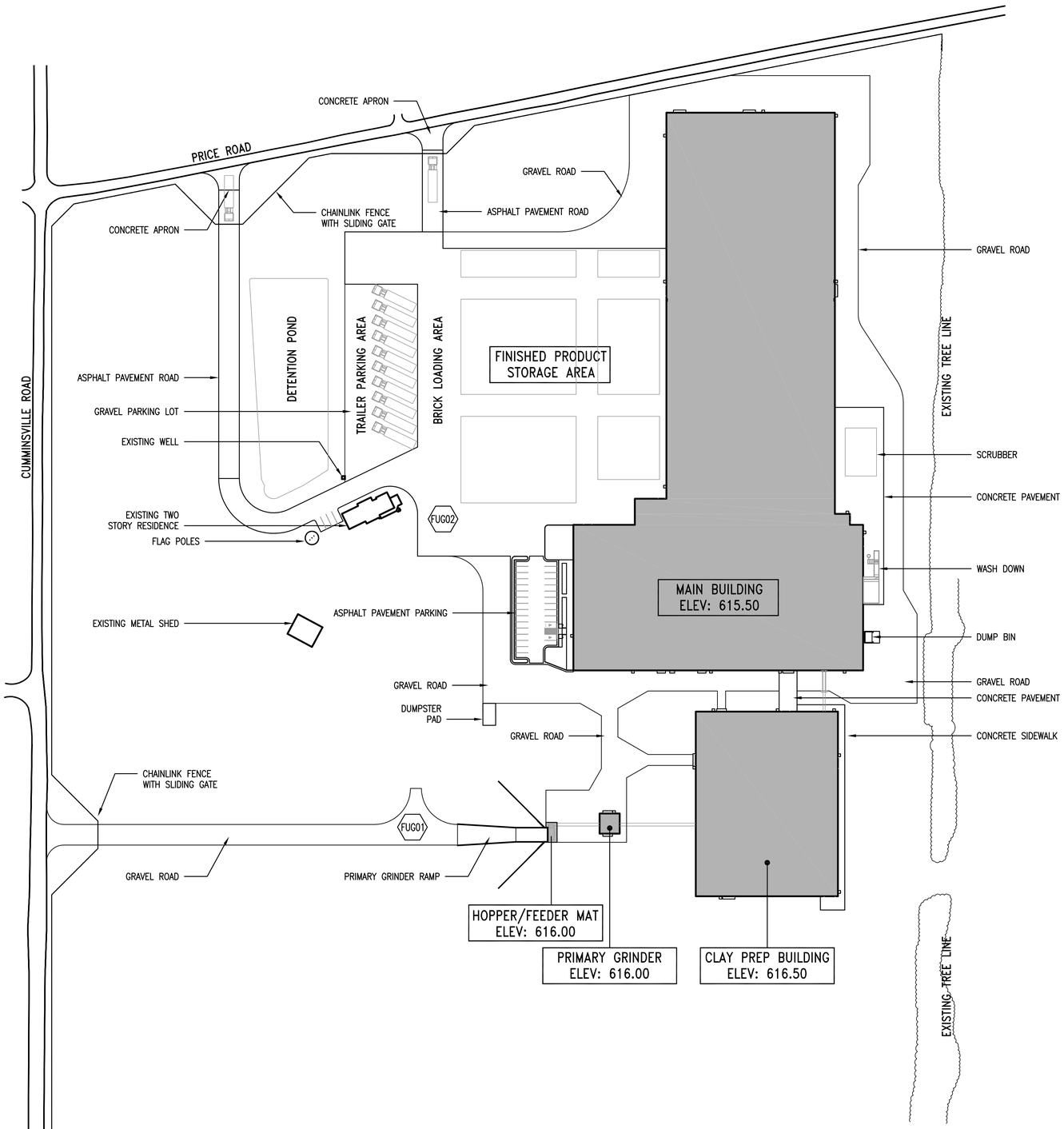
Notes:

(a) Emissions for this equipment were not calculated due to the nature of the process, including high moisture levels. We feel that no emissions are generated from these sources.

(b) This list contains all of the equipment and processes that Boral believes emit air pollutants.

GENERAL NOTES

1. THE ARCHITECTURAL SITE PLAN IS FOR REFERENCE ONLY. REFER TO OTHER DISCIPLINES FOR EXTENTS OF CONSTRUCTION ASSOCIATED WITH THE SITE.



NO.	DATE	DESCRIPTION OF REVISION OR ISSUE	BY	APP'D
B	12/15/06	INTERIOR FINISHES BID PACKAGE		RM
A	11/06/06	ISSUE FOR PERMIT		RM

BENHAM
THE BENHAM COMPANIES, LLC
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OKLAHOMA CITY, OKLAHOMA 73114
405.478.5353
www.benham.com

BORAL TERRE HAUTE – 070
Terre Haute, Indiana

ARCH SITE PLAN

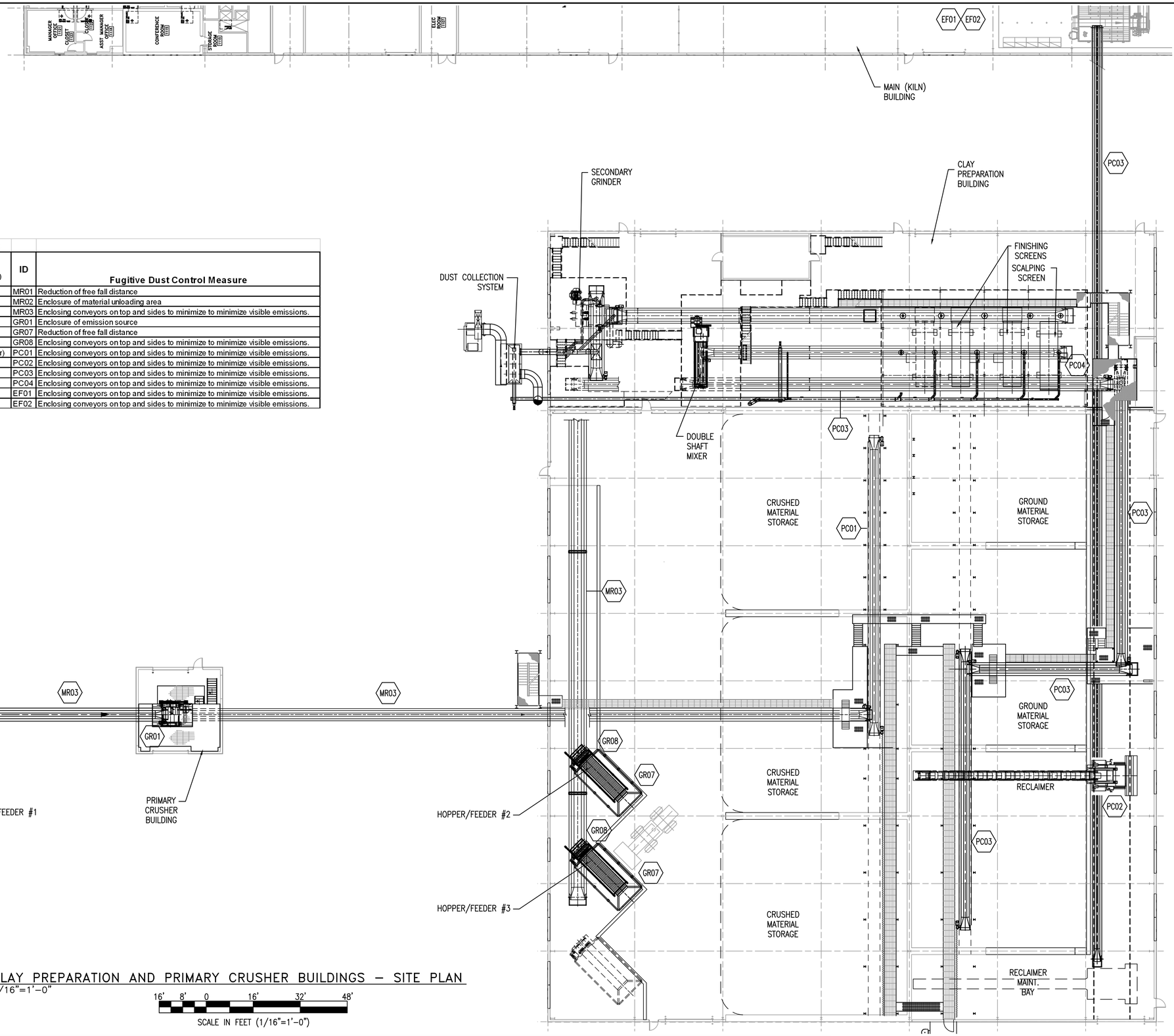
BORAL

DESIGNED BY	MN
DRAWN BY	MN
APPROVED BY	DH

DATE	10/19/06
SCALE	AS NOTED
PROJECT NUMBER	2100612200
SHEET	00A-004
REV	B

Fugitive Emission Sources

Emission Source Description [b]	ID	Fugitive Dust Control Measure
Dump Truck Unloading	MR01	Reduction of free fall distance
Receiving Material Apron Feeder	MR02	Enclosure of material unloading area
Crude Material Belt Conveyors	MR03	Enclosing conveyors on top and sides to minimize to minimize visible emissions.
Primary Crusher	GR01	Enclosure of emission source
Raw Material Bin	GR07	Reduction of free fall distance
Raw Material Feeder	GR08	Enclosing conveyors on top and sides to minimize to minimize visible emissions.
Processed Clay Bunker Filling (1 conveyor)	PC01	Enclosing conveyors on top and sides to minimize to minimize visible emissions.
Reclaimer	PC02	Enclosing conveyors on top and sides to minimize to minimize visible emissions.
Processed Clay Feed Conveyors	PC03	Enclosing conveyors on top and sides to minimize to minimize visible emissions.
Reclaimer by-pass chute	PC04	Enclosing conveyors on top and sides to minimize to minimize visible emissions.
Even Feeder (88E)	EF01	Enclosing conveyors on top and sides to minimize to minimize visible emissions.
Mixed Clay Feed Conveyor	EF02	Enclosing conveyors on top and sides to minimize to minimize visible emissions.



CLAY PREPARATION AND PRIMARY CRUSHER BUILDINGS – SITE PLAN
1/16"=1'-0"

16' 8' 0 16' 32' 48'
SCALE IN FEET (1/16"=1'-0")

NO.	DATE	DESCRIPTION OF REVISION OR ISSUE	BY	APP'D
A	01/16/07	ISSUE FOR PERMIT	BY	G.M

THE BENHAM COMPANIES, LLC
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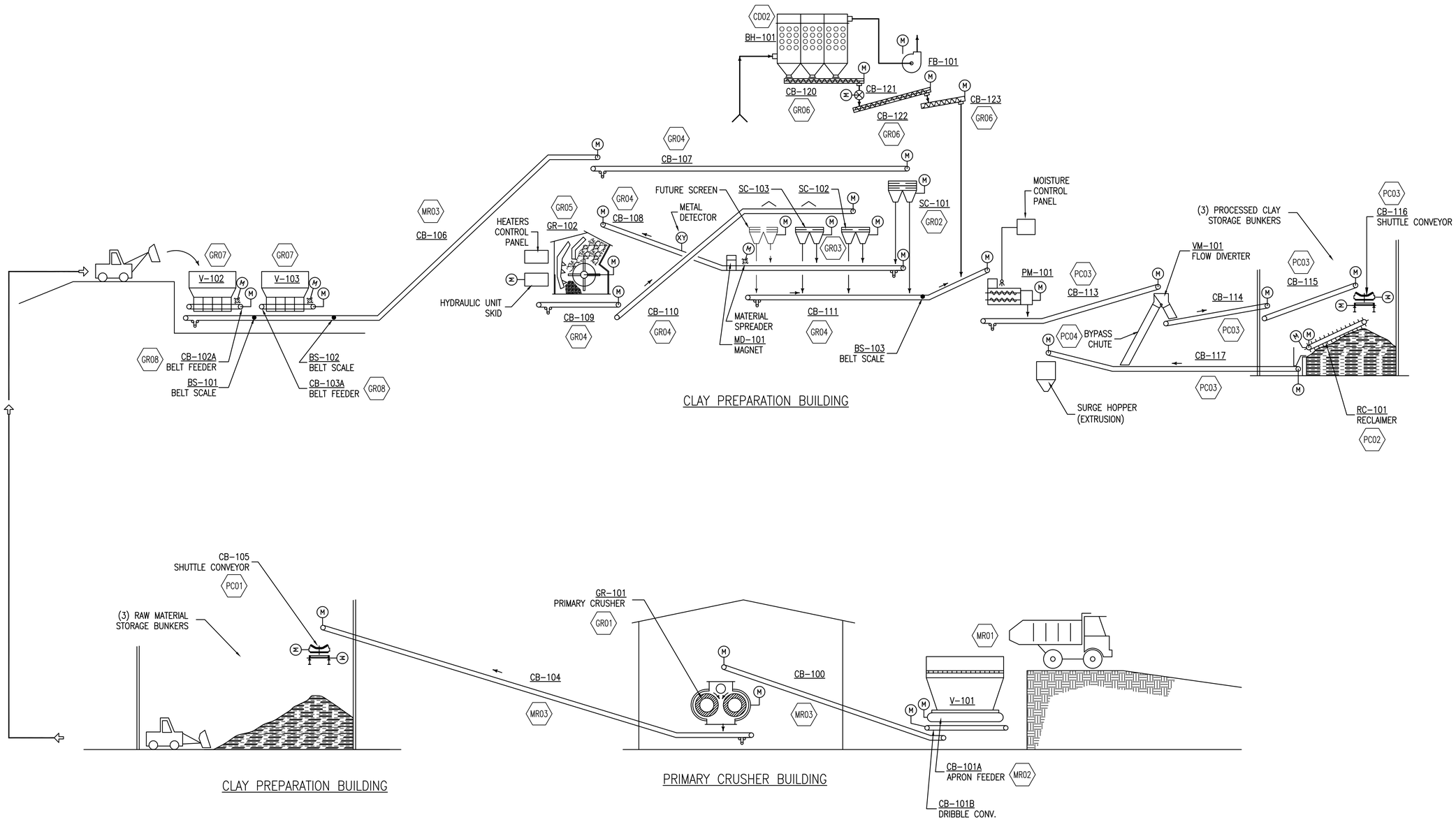
BORAL TERRE HAUTE – 070
Terre Haute, Indiana
CLAY PREP. MAIN & PRIMARY CRUSHER BUILDINGS – PROCESS SITE PLAN

DESIGNED BY	GM
DRAWN BY	GM
APPROVED BY	RM
DATE	10/19/06
SCALE	AS NOTED
PROJECT NUMBER	2100612200
SHEET	00M-101P
REV	A



1 CLAY PREPARATION MATERIAL FLOW DIAGRAM
00D-621 NO SCALE

NOT FOR CONSTRUCTION

NO.	DATE	DESCRIPTION OF REVISION OR ISSUE	BY	APP'D
A	01/16/07	ISSUE FOR PERMIT	BY	GM

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BORAL TERRE HAUTE – 070
Terre Haute, Indiana
CLAY PREP. BLDG – MATERIAL FLOW DIAGRAM

BORAL

DESIGNED BY	GM
DRAWN BY	GM
APPROVED BY	RM
DATE	10/19/06
SCALE	NONE
PROJECT NUMBER	2100612200
SHEET	00D-621P
REV	A

Attachment A

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart OOO—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 impaction 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) Fluorospar.

(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 expediently 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 H_2O (0.05 in. H_2O)] 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.

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

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 OOO—Exceptions to Applicability of Subpart A to Subpart OOO

Subpart A reference	Applies to subpart OOO	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 OOO—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).

[a]Exceptions to the PM limit apply for individual enclosed storage bins and other equipment. See §60.672(d) through (f).

[b]The 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

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.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a
Part 70 Significant Permit Modification

Source Description and Location

Source Name:	Boral Bricks Terre Haute Plant
Source Location:	5601 E. Price Road, Terre Haute, IN 47802
County:	Vigo
SIC Code:	3251 (Brick and Structural Clay Tile)
Operation Permit No.:	T 167-31038-00139
Operation Permit Issuance Date:	April 13, 2012
Significant Permit Modification No.:	167-33256-00139
Permit Reviewer:	Heath Hartley

Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. T 167-31038-00139 on April 13, 2012.

County Attainment Status

The source is located in Vigo County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Attainment effective February 6, 2006, for the Terre Haute area, including Vigo County, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
$PM_{2.5}$	Unclassifiable or attainment effective April 5, 2005
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.

(a) Ozone Standards

Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) 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 NOx emissions are considered when evaluating the rule applicability relating to ozone. Vigo County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$

Vigo County has been classified as attainment for $PM_{2.5}$. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct $PM_{2.5}$, NOx and SO_2 emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
Vigo County has been classified as attainment or unclassifiable in Indiana for SO_2, CO, PM_{10}, NO_2 and Pb. 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.

Source Status

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

Pollutant	**Emissions** (ton/yr)
PM	82.1
PM_{10}	159.1
$PM_{2.5}$	159.1
SO_2	247.9
VOC	6.3
CO	174.1
NO_X	53.6
GHGs	28,127
HF	4.8
HCl	3.2
Total HAPs	9.0

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no regulated pollutant, excluding GHGs, is emitted at a rate of two hundred fifty (250) tons per year or more, emissions of GHGs are less than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing source is not a major source of HAPs, as defined in 40 CFR 63.2, because HAP emissions are less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is not a major source under Section 112 of the Clean Air Act (CAA).

(c) These emissions are based upon Part 70 Operating Permit Renewal No. T 167-31038-00139.

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Boral Bricks Terre Haute Plant on May 29, 2013, relating to the removal of control device Dry Injection Fabric Filter (DIFF) from the Tunnel Kiln #1 (EU02 and EUG-05). The following is a list of the modified emission unit(s) and pollution control device(s):

(e) Brick forming and firing emission unit group, identified as EUG-05, consisting of:

(1) Tunnel dryer, approved for construction in 2007, identified as EU01, with a maximum short term capacity of ~~26~~**29** tons of brick per hour, with a maximum supplemental heat rate of 5.943

million (MM) BTU per hour firing natural gas, without control, and exhausting through stack EU01.

(2) Landfill gas-fired Tunnel Kiln with natural gas as back up, approved for construction in 2007, identified as EU02, with a maximum firing rate of 55 million (MM) Btu per hour, with a maximum capacity of ~~26~~**29** tons of brick per hour, ~~with a dry lime injection fabric filter (DIFF)(CD01) for control~~, and exhausting through stack CD01.

As part of the modification, IDEM OAQ has made the following additional changes for emission unit EU02:

- The PSD minor limits have been changed. The throughput limit, PM and PM10 limits have been removed. The SO_2 limit has been modified. This is a Title I change.
  - The PM limit was required by 40 CFR 63, Subpart JJJJJ; however since this NESHAP has been remanded, this limit is no longer required.
  - The PM10 emission factor is changed to reflect AP-42, ch. 11.3-2. Therefore, the permit PSD minor limit for PM10 is not required since it is the same as the emission factor.
  - The SO_2 PSD minor limit is changed to keep the source to less than 250 tons per year.
- Since the PSD minor limits have been removed for PM and PM10, the associated testing requirements have also been removed for PM and PM10. EU02 testing was performed on August 20, 2008 and PM was tested at 0.093 lb/ton and PM10 was tested at 0.585 lb/ton.
- The maximum capacity of the Tunnel Kiln is 29 tons of brick per hour; the permit capacity was previously incorrectly listed as 26 tons of brick per hour.
- Because uncontrolled/unlimited HAP emissions are greater than ten (10) tons per year for a single HAP and greater than twenty-five (25) tons per year for a combination of HAPs, the source is now considered a Major Source of HAPs under Section 112 of the Clean Air Act (CAA).
- Because the control device Dry Injection Fabric Filter has been removed, the requirements of CAM are no longer applicable for the tunnel kiln.

Enforcement Issues

There are no pending enforcement actions related to this modification.

Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.

Permit Level Determination – Part 70

This modification is not subject to the source modification requirements under 326 IAC 2-7-10.5. The changes will be incorporated into the permit as a Significant Permit Modification under 326 IAC 2-7-12(d)(1), because this modification involves a changes to an emission limitation. This modification also removes a control device and associated monitoring and record keeping requirements.

Permit Level Determination – PSD

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

	Potential to Emit Prior to Modification (ton/yr)							
Process/Emission Unit	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	VOC	CO	GHG
Material Receiving (EUG-01)	8.63	1.58	1.58	--	--	--	--	--
Clay Grinding and Screening Operations (EUG-02)	46.2	36.2	36.2	--	--	--	--	--
Processed Clay (EUG-03)	4.73	0.77	0.77	--	--	--	--	--
Sand Handling (EUG-04)	0.11	0.04	0.04	--	--	--	--	--
Brick Forming and Firing (EUG-05)	22.5	120.5	120.5	247.9	53.6	6.29	174.1	28,127
Total PTE of Entire Source	82.1	159.1	159.1	247.9	53.6	6.29	174.1	28,127
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO_2e
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000 CO_2e

	Potential to Emit After Modification (ton/yr)										
Process/Emission Unit	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_x	VOC	CO	GHG	HF	HCl	Total HAPs
Material Receiving (EUG-01)	8.63	1.58	1.58	0	0	0	0	0	0	0	0
Clay Grinding and Screening Operations (EUG-02)	46.2	36.2	36.2	0	0	0	0	0	0	0	0
Processed Clay (EUG-03)	4.73	0.77	0.77	0	0	0	0	0	0	0	0
Sand Handling (EUG-04)	0.11	0.04	0.04	0	0	0	0	0	0	0	0
Brick Forming and Firing (EUG-05)	~~22.5~~ **56.8**	~~120.5~~ **134.3**	~~120.5~~ **134.3**	~~247.9~~ **249.0**	~~53.6~~ **56.9**	~~6.29~~ **6.9**	~~174.1~~ **191.8**	~~28,127~~ **31,165**	~~4.81~~ **47.0**	~~3.18~~ **21.6**	~~9.05~~ **69.8**
Total PTE of Entire Source	~~82.1~~ **116.5**	~~159.1~~ **172.9**	~~159.1~~ **172.9**	~~247.9~~ **249.0**	~~53.6~~ **56.9**	~~6.29~~ **6.9**	~~174.1~~ **191.8**	~~28,127~~ **31,165**	~~4.81~~ **47.0**	~~3.18~~ **21.6**	~~9.05~~ **69.8**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO_2e	10	10	25
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000 CO_2e	NA	NA	NA

This modification to an existing minor stationary source is not major because the emissions increase is less than the PSD major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Due to this modification, EU02 PSD minor limits are modified as follows:

(a) ~~The amount of fired product from the tunnel kiln (EU02) shall not exceed 227,500 tons per twelve consecutive month period, with compliance determined at the end of each month.~~

(b) ~~The PM emissions from the tunnel kiln (EU02) shall not exceed 0.12 pounds per ton of fired product.~~

~~(c) The PM10 emissions from the tunnel kiln (EU02) shall not exceed 0.87 pounds per ton of fired product.~~

(d) The SO_2 emissions from the tunnel kiln (EU02) ~~when ducted through the Dry Injection Fabric Filter (DIFF) (CD01)~~, shall not exceed ~~2.11~~**1.96** pound per ton of fired product.

~~(e) The SO_2 emissions from the tunnel kiln (EU02), when bypassing the Dry Injection Fabric Filter (DIFF) (CD01), shall not exceed 4.69 pound per ton of fired product.~~

~~(f) The Dry Injection Fabric Filter (DIFF) (CD01) for SO_2 control shall be in operation and control emissions from the Tunnel Kiln at all times that the Tunnel Kiln is in operation, except for a maximum of 123 hours per 12 consecutive month period during which the DIFF may be bypassed (for routine maintenance).~~

Compliance with th~~ese~~**is** limit~~s~~, ~~in combination with compliance with Condition D.1.2 and emissions of PM and PM_{10} from all other emission units at this source,~~ shall limit source-wide ~~PM, PM_{10}, and~~ SO_2 emissions to less than 250 tons per year, ~~each,~~ rendering 326 IAC 2-2, PSD, not applicable.

Federal Rule Applicability Determination

The following federal rules are applicable to the source due to this modification:

NSPS:

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

NESHAP:

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) applicable to this proposed modification.

State Rule Applicability Determination

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

326 IAC 2-2 (PSD)

PSD applicability is discussed under the Permit Level Determination – PSD section.

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 Dry Injection Fabric Filter has been removed; therefore the associated compliance monitoring requirements have been removed. Since the EU02 PSD minor limits have been removed for PM and PM10, the associated testing requirements have been removed for PM and PM10.

Changes to the compliance determination and monitoring requirements are detailed in the Proposed Changes section of this document.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit Renewal No. T 167-31038-00139. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

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

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

.....

(e) Brick forming and firing emission unit group, identified as EUG-05, consisting of:

(1) Tunnel dryer, approved for construction in 2007, identified as EU01, with a maximum short term capacity of ~~26~~**29** tons of brick per hour, with a maximum supplemental heat rate of 5.943 million (MM) BTU per hour firing natural gas, without control, and exhausting through stack EU01.

(2) Landfill gas-fired Tunnel Kiln with natural gas as back up, approved for construction in 2007, identified as EU02, with a maximum firing rate of 55 million (MM) Btu per hour, with a maximum capacity of ~~26~~**29** tons of brick per hour, ~~with a dry lime injection fabric filter (DIFF)(CD01) for control,~~ and exhausting through stack CD01.

.....

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Brick forming and firing emission unit group

(e) Brick forming and firing emission unit group, identified as EUG-05, consisting of:

(1) Tunnel dryer, approved for construction in 2007, identified as EU01, with a maximum short term capacity of ~~26~~**29** tons of brick per hour, with a maximum supplemental heat rate of 5.943 million (MM) BTU per hour firing natural gas, without control, and exhausting through stack EU01.

(2) Landfill gas-fired Tunnel Kiln with natural gas as back up, approved for construction in 2007, identified as EU02, with a maximum firing rate of 55 million (MM) Btu per hour, with a maximum capacity of ~~26~~**29** tons of brick per hour~~, with a dry lime injection fabric filter (DIFF)(CD01) for control,~~ and exhausting through stack CD01.

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

.....

D.3.2 PSD Minor Source [326 IAC 2-2]

(a) The amount of fired product from the tunnel kiln (EU02) shall not exceed ~~227,500~~**254,040** tons per twelve consecutive month period, with compliance determined at the end of each month.

~~(b) The PM emissions from the tunnel kiln (EU02) shall not exceed 0.12 pounds per ton of fired product.~~

~~(c) The PM10 emissions from the tunnel kiln (EU02) shall not exceed 0.87 pounds per ton of fired product.~~

(b~~d~~) The SO_2 emissions from the tunnel kiln (EU02) ~~when ducted through the Dry Injection Fabric Filter (DIFF) (CD01),~~ shall not exceed ~~2.11~~**1.96** pound per ton of fired product.

~~(e) The SO2 emissions from the tunnel kiln (EU02), when bypassing the Dry Injection Fabric Filter (DIFF) (CD01), shall not exceed 4.69 pound per ton of fired product.~~

~~(f) The Dry Injection Fabric Filter (DIFF) (CD01) for SO2 control shall be in operation and control emissions from the Tunnel Kiln at all times that the Tunnel Kiln is in operation, except for a maximum of 123 hours per 12 consecutive month period during which the DIFF may be bypassed (for routine maintenance).~~

Compliance with these limits, ~~in combination with compliance with Condition D.1.2 and emissions of PM and PM_{10} from all other emission units at this source,~~ shall limit source-wide ~~PM, PM_{10}, and~~ SO_2 emissions to less than 250 tons per year, ~~each,~~ rendering 326 IAC 2-2, PSD, not applicable.

.....

D.3.4 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

~~(a)~~ In order to demonstrate compliance with Conditions D.3.2~~(c), (d), and (e)~~, the Permittee shall perform SO_2 testing ~~for the Dry Injection Fabric Filter (CD01) stack~~ utilizing methods as approved by the Commissioner~~. This test shall be repeated~~ at least once every five (5) years from the date of the ~~latest~~ **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.

~~(b) In order to demonstrate compliance with Condition D.3.1, the Permittee shall perform PM testing for the Dry Injection Fabric Filter (CD01) stack (before and after the control device) utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the latest valid compliance demonstration. 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 Condition D.3.2(b) and (c), the Permittee shall perform PM and PM10 testing for the Dry Injection Fabric Filter (CD01) stack utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the latest valid compliance demonstration. PM10 includes filterable and condensable PM10. Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.~~

~~D.3.5 SO2 Control [326 IAC 2-7-6(6)]~~

~~In order to comply with Condition D.3.2 and the limitations that make the source minor pursuant to 326 IAC 2-2 (PSD), the Dry Injection Fabric Filter (DIFF) for SO2 control shall be in operation and control emissions from the Tunnel Kiln at all times that the Tunnel Kiln is in operation, except for a maximum of 123 hours per 12 consecutive month period during which the DIFF may be bypassed (for routine maintenance).~~

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

~~D.3.6 Visible Emissions Notations~~

~~(a) Visible emission notations of the dry injection fabric filter (DIFF) stack (CD01) exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.~~

~~(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.~~

~~(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.~~

~~(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.~~

~~(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. 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.3.7 Parametric Monitoring [326 IAC 2-7-6(1)][326 IAC 2-7-5(1)]~~

~~(a) The Permittee shall record the pressure drop across the dry lime injection fabric filter (CD01) used in conjunction with the tunnel kiln (EU02) at least once per day when the tunnel kiln is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 14.5 and 17.5 mbar (equivalent to a range of 5.82 and 7.03 inches of water) or a range established during the latest stack test, 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. 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) The Permittee shall inspect the dry lime feed system and feeder setting on the dry lime injection baghouse once per day. If the lime feeder setting drops below the level established during the latest performance test, the switches and/or level sensors monitoring the interlock system on the limestone delivery systems, including the lime screw conveyor and holding bin, are not functioning properly, or the Permittee discovers cracks, holes or abnormal/excessive wear on the indicators for the screw conveyor and holding bin, the Permittee shall take reasonable response steps. Section C – Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A feeder setting that is below the level established during the latest performance test is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit~~

~~D.3.8 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 baghouses 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.3.9 Compliance Assurance Monitoring (CAM) [40 CFR Part 64]~~

~~Pursuant to 40 CFR Part 64, the Permittee shall comply with the following compliance assurance monitoring requirements for Dry Injection Fabric Filter (DIFF)(CD01):~~

~~(a) Monitoring Approach for Dry Lime Injection Fabric Filter (DIFF) used to control SO2 emissions from Tunnel Kiln EU01.~~

	~~Indicator #1~~	~~Indicator #2~~	~~Indicator #3~~	~~Indicator #4~~
~~I. Indicator~~	~~Free-flowing lime feed into DIFF~~	~~Monitor lime feeder setting to ensure within acceptable range determined from performance test~~	~~Visible emissions from DIFF stack~~	~~Performance test~~
~~Measurement Approach~~	~~Verify lime is free flowing via high/ low level sensor on "POD" feeding DIFF~~	~~Verify lime feeder setting to ensure adequate lime is available to achieve required emission reduction~~	~~Perform Method 22 for visible emissions from DIFF exhaust stack~~	~~Conduct emissions test to demonstrate compliance and establish lime feed rate and associated destruction efficiency~~
~~II. Indicator Range~~	~~An excursion is identified as either a high or low level alarm indicating improper lime flow~~	~~An excursion is identified as the lime feeder setting below the acceptable range established during performance test~~	~~An excursion is identified as observance of visible emissions~~	~~An excursion is identified when control efficiency is demonstrated through performance testing to be below effective levels~~

	Indicator #1	Indicator #2	Indicator #3	Indicator #4
Corrective Action	Each excursion triggers an assessment of the problem, corrective action in accordance with OM&M plan	Each excursion triggers an assessment of the problem, corrective action in accordance with OM&M plan	Each excursion triggers an assessment of the problem, corrective action in accordance with OM&M plan	Each excursion triggers an assessment of the problem, corrective action and a possible reporting and/or permitting requirement
III. Performance Criteria				
A. Data Representativeness	Pod is designed to feed lime from the lime silo into screw conveyor which flows into DIFF system. Measuring low/high levels in the pod ensure free flowing lime feed through system.	Maintain lime feeder setting above established compliance parameter ensures proper control removal will be achieved	Maintaining no visible emissions is an indicator of proper performance	A test protocol shall be prepared and approved by IDEM prior to conducting performance test
B. Verification of Operational Status	Inspection and maintenance records, absence of alarm signal	Records of lime feed setting	Not Applicable	Data collection at time of performance testing will verify operational status
C. QA/QC Practices and Criteria	Installation and calibration is done in accordance with the manufacturer's recommendations and OM&M plan	Installation and calibration is done in accordance with the manufacturer's recommendations and OM&M plan	Not Applicable	Test protocol will outline standard QA/QC procedures to be followed during performance test
D. Monitoring Frequency	Every 15 minutes or continuously	Every 15 minutes or continuously	Daily under normal operating conditions	Every 5 years

	Indicator #1	Indicator #2	Indicator #3	Indicator #4
Data Collection Procedure	Record any sensor output	Record feeder setting	Observe stack for 15 minutes daily and record if visible emissions are observed	Performance test report
Averaging Period	Not Applicable	Not Applicable	Not Applicable	Not Applicable
E. Recordkeeping	Maintain for a period of 5 years all records, logs, inspections and corrective actions taken in response to excursions	Maintain for a period of 5 years all records, logs, inspections and corrective actions taken in response to excursions	Maintain for a period of 5 years all records, logs, inspections and corrective actions taken in response to excursions	Maintain copy of test report for a period of 5 years or until another test is conducted; record of any corrective action taken in response to excursions
F. Reporting	Number, duration, cause of any excursion and any corrective action taken	Number, duration, cause of any excursion and any corrective action taken	Number, duration, cause of any excursion and any corrective action taken	Submit test protocol and notification of testing to IDEM at least 60 days prior to test date; Submit test report within 45 days of completing performance test
Frequency	Semiannually	Semiannually	Semiannually	For each performance test conducted

(b) Rationale for Selection of Performance Indicators

Monitoring of the free flow of lime and feeder setting of the DIFF control system ensures ongoing availability of reagent which is necessary to allow the reactions to occur which reduce SO2 emissions. The "POD" is equipped with a high and low level sensor which will provide a continuous indication the lime is free flowing. Bridging in the silo would be reflected by a low level alarm, and bridging in the screw would be reflected by a high level alarm. The minimum rate of feed will be established based on the rates during a successful performance test.

Observations of visible emissions (VE) is a parameter that can be readily monitored to ensure the fabric filters a re properly functioning. This will allow simple detection of any bag leaks or other conditions indicating improper operation.

(c) Rationale for Selection of Indicator Ranges

The selected indicator range which measures free flow of lime feed is a positive determination of proper operation rather than a specific range. This determination, combined with a minimum feeder setting for the lime feed rate, are indicative of proper SO2 control. Selection of the minimum lime feed rate will be established by performance testing. Therefore, the selected indicator range will be directly tied to actual measured emissions demonstrating compliance.

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

D.3.~~10~~**5** Record Keeping Requirements

(a) To document the compliance status with Condition D.3.2(a), the Permittee shall maintain monthly records of the amount of amount of fired product through the tunnel kiln (EU02).

~~(b) To document the compliance status with Condition D.3.2(f), the Permittee shall maintain monthly records of the amount time the Dry Injection Fabric Filter (DIFF) was bypassed.~~

~~(c) To document the compliance status with Condition D.3.6, the Permittee shall maintain records of visible emission notations of the dust collector stack, CD02, exhaust once per day. 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).~~

~~(d) To document the compliance status with Condition D.3.7(a) and (d), the Permittee shall maintain records once per day of the pressure drop and lime feeder setting. The Permittee shall include in its daily record when a pressure drop reading or lime feeder setting reading is not taken and the reason for the lack of pressure drop reading or lime feeder setting reading (e.g., the process did not operate that day).~~

~~(e) To document the compliance status with Condition D.3.7(c), the Permittee shall maintain continuous records of the dry lime feed rate as demonstrated using lime feeder setting established during the latest performance test.~~

(b~~f~~) Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the records required by this condition.

D.3.~~11~~**6** Reporting Requirements

~~(a)~~ A quarterly summary of the information to document **the** compliance **status** with Condition D.3.2(a) shall be submitted using the reporting form located at the end of this permit, or ~~their~~**its** equivalent, ~~within~~ not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation 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~~**35**).

~~(b) The natural gas certification 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 its equivalent, within thirty (30) days after the end of the six (6) month period being reported. The natural gas certification does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

.....

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance and Enforcement Branch

Part 70 Quarterly Report

Source Name: Boral Bricks Terre Haute Plant
Source Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Part 70 Permit No.: T167-31038-00139
Facility: Tunnel Kiln (EU02)

Parameter: Amount of fired product
Limit: Less than ~~227,500~~**254,040** tons per twelve (12) consecutive month period with compliance determined at the end of each month

YEAR: _____

Month	Amount of fired product (tons)	Amount of fired product (tons)	Amount of fired product (tons)
	This Month	**Previous 11 Months**	**12 Month Total**

☐ No deviation occurred in this month.

☐ Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

~~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: Boral Bricks, Inc.
Source Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Part 70 Permit No.: T167-31038-00139
Facility: Tunnel Kiln (EU02)
Parameter: Time DIFF bypassed
Limit: Less than 123 hours of DIFF bypass per twelve (12) consecutive month period with compliance determined at the end of each month

QUARTER : YEAR:

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

□ 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

~~**SEMI-ANNUAL NATURAL GAS CERTIFICATION FOR THE KILN (EU02)**~~

~~Source Name: Boral Bricks Terre Haute Plant~~
~~Source Address: 5601 E. Price Road, Terre Haute, Indiana 47802~~
~~Part 70 Permit No.: T167-31038-00139~~

☐ ~~Natural Gas Only~~ ☐ ~~Alternate Fuel burned~~ ~~From~~ _____ ~~To:~~ _____

~~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:~~

~~A certification by the responsible official as defined by 326 IAC 2-7-1(34) is required for this report.~~

.....

Other Changes

The changes listed below have been made to Part 70 Operating Permit Renewal No. T 167-31038-00139. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Change No. 1 On October 27, 2010, the Indiana Air Pollution Control Board issued revisions to 326 IAC 2. These revisions resulted in changes to the rule sites listed in the permit. These changes are not changes to the underlining provisions. The change is only to site of these rules in Section A - General Information, Section A - Emission Units and Pollution Control Equipment Summary, Section A - Specifically Regulated 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.

IDEM, OAQ has clarified the rule sites for the Preventive Maintenance Plan.

A.1 General Information [326 IAC 2-7-4(c)][326 IAC 2-7-5**(14)** ~~(15)~~][326 IAC 2-7-1(22)]

.....

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5**(14)** ~~(15)~~]

.....

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)] [326 IAC 2-7-5(**14)** ~~(15)~~]

.....

B.10 Preventive Maintenance Plan [326 IAC 2-7-5~~(1),(3) and (13)~~ **(12)**] [~~326 IAC 2-7-6(1) and (6)~~][326 IAC 1-6-3]

.....

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)~~(9)~~ **(8)** be revised in response to an emergency.

.....

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)~~, or (e)~~ 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)~~,~~ **or** (c)~~, or (e)~~. 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)~~, and (e)(2)~~.

.....

C.13 Risk Management Plan [326 IAC 2-7-5(**11**~~12~~)] [40 CFR 68]

.....

D.1.3 & D.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(**12**~~13~~)]

.....

Change No. 2 IDEM, OAQ has clarified the Permittee's responsibility with regards to record keeping.

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

(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 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.

.....

Change No. 3 IDEM, OAQ has clarified the interaction of the Quarterly Deviation and Compliance Monitoring Report and the Emergency Provisions.

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".

.....

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

(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~~**35**). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

Change No. 4 On November 3, 2011, the Indiana Air Pollution Control Board issued a revision to 326 IAC 2. The revision resulted in a change to the rule site of the “responsible official” definition. The rule site for responsible official has changed from 326 IAC 2-7-1(34) to 326 IAC 2-7-1(35).

Conclusion and Recommendation

The operation of this source shall be subject to the conditions of the attached proposed Part 70 Significant Permit Modification 167-33256-00139. The staff recommend to the Commissioner that this Part 70 Significant Permit Modification be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Heath Hartley 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) 232-8217 or toll free at 1-800-451-6027 extension 232-8217.

(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: Emissions Calculations

Emissions Summary

Company Name: Boral Brick Terre Haute Plant

Address: 5601 E. Price Road, Terre Haute, Indiana 47802

Permit Number: 167-33256-00139

Reviewer: Heath Hartley

Date: 05/29/13

Potential to Emit Summary (Criteria Pollutants, Before Control or Limitation)

	Pollutant										
Process Description	PM	PM10	PM2.5	SO2	NOx	VOC	CO	CO2e	HF	HCl	Total HAPs
Material Receiving (EUG-01)	60.4	11.1	11.1	0	0	0	0	0	0	0	0
Clay Grinding & Screening (EUG-02	7081.4	7011.2	7011.2	0	0	0	0	0	0	0	0
Processed Clay (EUG-03)	33.1	5.4	5.4	0	0	0	0	0	0	0	0
Sand Handling (EUG-04)	0.4	0.1	0.1	0	0	0	0	0	0	0	0
Tile Forming and Firing (EUG-05)	56.8	134.3	134.3	595.7	56.9	6.9	191.8	31,165	47.0	21.6	69.8
Total	7232.1	7162.1	7162.1	595.7	56.9	6.9	191.8	31,165	47.0	21.6	69.8

Potential to Emit Summary (After Limitations)

	Pollutant										
Process Description	PM	PM10	PM2.5	SO2	NOx	VOC	CO	CO2e	HF	HCl	Total HAPs
Material Receiving (EUG-01)	8.6	1.6	1.6	0	0	0	0	0	0	0	0
Clay Grinding & Screening (EUG-02	46.2	36.2	36.2	0	0	0	0	0	0	0	0
Processed Clay (EUG-03)	4.7	0.8	0.8	0	0	0	0	0	0	0	0
Sand Handling (EUG-04)	0.1	0.0	0.0	0	0	0	0	0	0	0	0
Tile Forming and Firing (EUG-05)	56.8	134.3	134.3	249.0	56.9	6.9	191.8	31,165	47.0	21.6	69.8
Total	116.5	172.9	172.9	249.0	56.9	6.9	191.8	31,165	47.0	21.6	69.8

Appendix A: Emissions Calculations
Brick Forming and Firing (EUG-05)

Company Name: Boral Brick Terre Haute Plant
Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Permit Number: 167-33256-00139
Reviewer: Heath Hartley
Date: 05/29/13

Summary - Before Control

	Pollutant (ton/yr)							
Process:	PM	PM10	PM2.5	SO2	NOx	VOC	CO	GHG (as CO2e)
Tunnel Dryer	9.78	23.75	23.75	0.00	12.45	3.81	39.38	3,037.7
Tunnel Kiln	47.00	110.51	110.51	595.72	44.46	3.05	152.42	28127.1
Total (EUG-05)	56.78	134.26	134.26	595.72	56.90	6.86	191.80	31164.8

Summary - Limited

	Pollutant (ton/yr)							
Process:	PM	PM10	PM2.5	SO2	NOx	VOC	CO	GHG (as CO2e)
Tunnel Dryer	9.78	23.75	23.75	0.00	12.45	3.81	39.38	3,037.7
Tunnel Kiln	47.00	110.51	110.51	248.96	44.46	3.05	152.42	28127.1
Total (EUG-05)	56.78	134.26	134.26	248.96	56.90	6.86	191.80	31164.8

Methodology
Summation of each pollutant (ton/yr) for each process to generate a total for the Emission Unit Group (EUG-05)

Appendix A: Emissions Calculations
Brick Forming and Firing (EUG-05) HAPs
Company Name: Boral Brick Terre Haute Plant
Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Permit Number: 167-33256-00139
Reviewer: Heath Hartley
Date: 05/29/13

Specific HAP	Tunnel Drye	Tunnel Kiln	Total (ton/yr)
Hydroflouric Acid		47.00	47.00
Hydrochloric Acid		21.59	21.59
1,1,1-Trichloroethane		5.97E-04	5.97E-04
1,4-Dichlorobenzene	neg.	6.10E-03	6.10E-03
2-butanone		2.79E-02	2.79E-02
Benzene	neg.	3.68E-01	3.68E-01
Bis(2-ethylhexy)phtalate		2.54E-01	2.54E-01
Carbon disulfide		5.46E-03	5.46E-03
Chlorine		1.65E-01	1.65E-01
Chloroethane		7.24E-02	7.24E-02
Chloromethane		8.51E-02	8.51E-02
Di-n-butylphtalate		1.78E-02	1.78E-02
Ethylbenzene		5.59E-03	5.59E-03
m-/p- Xylene		8.51E-03	8.51E-03
o-Xylene		7.37E-03	7.37E-03
lodomethane		1.18E-02	1.18E-02
Naphthalene		8.26E-03	8.26E-03
Phenol		1.09E-02	1.09E-02
Styrene		2.54E-03	2.54E-03
Tetrachloroethylene		3.56E-04	3.56E-04
Toluene	neg.	2.03E-02	2.03E-02
Antimony		3.43E-03	3.43E-03
Arsenic		3.94E-03	3.94E-03
Beryllium		5.33E-05	5.33E-05
Cadmium	neg.	1.91E-03	1.91E-03
Chromium	neg.	6.48E-03	6.48E-03
Cobalt		2.67E-04	2.67E-04
Lead	neg.	1.91E-02	1.91E-02
Manganese	neg.	3.68E-02	3.68E-02
Mercury		9.53E-04	9.53E-04
Nickel	neg.	9.15E-03	9.15E-03
Selenium		2.92E-02	2.92E-02
Formaldehyde	neg.		0.00E+00
Hexane	neg.		0.00E+00
Total HAPs	neg.	69.78	69.78

neg. - very small amounts are emitted from the tunnel dryer

Methodology

Summation of each pollutant (ton/yr) for each process to gernerate a total for the Emission Unit Group (EUG-05)

Appendix A: Emissions Calculations
Tunnel Kiln

Company Name: Boral Brick Terre Haute Plant
Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Permit Number: 167-33256-00139
Reviewer: Heath Hartley
Date: 05/29/13

Tunnel Kiln #1 (EU02) Natural Gas Scenario 29 maximum capacity (ton per hour)

Pollutant*	Uncontrolled Emission Factor (lb/ton)	PTE (ton/year)	Limited Emission Factor (lb/ton)	Limited PTE (ton/year)
PM	0.37	47.00	0.37	47.00
PM10	0.87	110.51	0.87	110.51
CO	1.2	152.4	1.2	152.4
NOx	0.35	44.46	0.35	44.46
SO2	4.69	595.72	1.96	248.96
VOC	0.024	3.05	0.024	3.05

HAPs

Hydroflouric Acid (HFl)	0.37	47.00
Hydrochloric Acid (HCl)	0.17	21.59
1,1,1-Trichloroethane	4.70E-06	5.97E-04
1,4-Dichlorobenzene	4.80E-05	6.10E-03
2-butanone	2.20E-04	2.79E-02
Benzene	2.90E-03	3.68E-01
Bis(2-ethylhexy)phtalate	2.00E-03	2.54E-01
Carbon disulfide	4.30E-05	5.46E-03
Chlorine	1.30E-03	1.65E-01
Chloroethane	5.70E-04	7.24E-02
Chloromethane	6.70E-04	8.51E-02
Di-n-butylphtalate	1.40E-04	1.78E-02
Ethylbenzene	4.40E-05	5.59E-03
m-/p- Xylene	6.70E-05	8.51E-03
o-Xylene	5.80E-05	7.37E-03
Iodomethane	9.30E-05	1.18E-02
Naphthalene	6.50E-05	8.26E-03
Phenol	8.60E-05	1.09E-02
Styrene	2.00E-05	2.54E-03
Tetrachloroethylene	2.80E-06	3.56E-04
Toluene	1.60E-04	2.03E-02
Antimony	2.70E-05	3.43E-03
Arsenic	3.10E-05	3.94E-03
Beryllium	4.20E-07	5.33E-05
Cadmium	1.50E-05	1.91E-03
Chromium	5.10E-05	6.48E-03
Cobalt	2.10E-06	2.67E-04
Lead	1.50E-04	1.91E-02
Manganese	2.90E-04	3.68E-02
Mercury	7.50E-06	9.53E-04
Nickel	7.20E-05	9.15E-03
Selenium	2.30E-04	2.92E-02
Total HAPs		69.78

Methodology
PM, PM10 Emission Factors from AP-42 Table 11.3-1 for a nat gas-fired kiln.
HCl, HF, and HAP Emission Factors from AP-42, Table 11.3-4, 11.3-6, 11.3-7.
SO2 emission factor based on Boral testing at a similar kiln
Uncontrolled PTE (ton/yr) = Emission Factor (lb/ton) * Max Capacity (ton/hr) * 8760 (hr/yr) / 2000 (lb/ton)
Limited Emissions (ton/yr) = Limited Emission Factor (lb/ton) * Limited Throughput (ton/yr) / 2000 (lb/ton)

Appendix A: Emissions Calculations
Tunnel Kiln

Company Name: Boral Brick Terre Haute Plant
Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Permit Number: 167-33256-00139
Reviewer: Heath Hartley
Date: 05/29/13

Tunnel Kiln #1 (EU02) Landfill Gas Scenario

29 maximum capacity (ton per hour)

Pollutant*	Uncontrolled Emission Factor (lb/ton)	PTE (ton/year)	Limited Emission Factor (lb/ton)	Limited PTE (ton/year)
PM	0.37	47.00	0.37	47.00
PM10	0.87	110.51	0.87	110.51
CO	1.2	152.4	1.2	152.4
NOx	0.35	44.46	0.35	44.46
SO2	4.69	595.72	1.96	248.96
VOC	0.024	3.05	0.024	3.05
HAPs				
Hydroflouric Acid	0.37	47.00		
Hydrochloric Acid	0.17	21.59		
1,1,1-Trichloroethane	4.70E-06	5.97E-04		
1,4-Dichlorobenzene	4.80E-05	6.10E-03		
2-butanone	2.20E-04	2.79E-02		
Benzene	2.90E-03	3.68E-01		
Bis(2-ethylhexy)phtalate	2.00E-03	2.54E-01		
Carbon disulfide	4.30E-05	5.46E-03		
Chlorine	1.30E-03	1.65E-01		
Chloroethane	5.70E-04	7.24E-02		
Chloromethane	6.70E-04	8.51E-02		
Di-n-butylphtalate	1.40E-04	1.78E-02		
Ethylbenzene	4.40E-05	5.59E-03		
m-/p- Xylene	6.70E-05	8.51E-03		
o-Xylene	5.80E-05	7.37E-03		
Iodomethane	9.30E-05	1.18E-02		
Naphthalene	6.50E-05	8.26E-03		
Phenol	8.60E-05	1.09E-02		
Styrene	2.00E-05	2.54E-03		
Tetrachloroethylene	2.80E-06	3.56E-04		
Toluene	1.60E-04	2.03E-02		
Antimony	2.70E-05	3.43E-03		
Arsenic	3.10E-05	3.94E-03		
Beryllium	4.20E-07	5.33E-05		
Cadmium	1.50E-05	1.91E-03		
Chromium	5.10E-05	6.48E-03		
Cobalt	2.10E-06	2.67E-04		
Lead	1.50E-04	1.91E-02		
Manganese	2.90E-04	3.68E-02		
Mercury	7.50E-06	9.53E-04		
Nickel	7.20E-05	9.15E-03		
Selenium	2.30E-04	2.92E-02		
Total HAPs		69.78		

Methodology
PM, PM10 Emission Factors from AP-42 Table 11.3-1 for a nat gas-fired kiln.
HCl, HF, and HAP Emission Factors from AP-42, Table 11.3-4, 11.3-6, 11.3-7.
SO2 emission factor based on Boral testing at a similar kiln
Uncontrolled PTE (ton/yr) = Emission Factor (lb/ton) * Max Capacity (ton/hr) * 8760 (hr/yr) / 2000 (lb/ton)
Limited Emissions (ton/yr) = Limited Emission Factor (lb/ton) * Limited Throughput (ton/yr) / 2000 (lb/ton)

Appendix A: Emissions Calculations
Emission Unit Group - Material Receiving (EUG-01)
Company Name: Boral Brick Terre Haute Plant
Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Permit Number: 167-33256-00139
Reviewer: Heath Hartley
Date: 05/29/13

Emission Unit Group - Material Receiving (EUG-01)

120 Short term maximum rate (tons per hour)

Potential Emissions (maximum rate, 8760 hours per year)			Before Control			After Control	
	PM Emission	PM10 Emissior	Potential PM	Potential PM10	Control Eff	Potential PM	Potential PM10
Process Description:	Factor (lb/ton)	Factor (lb/ton)	(ton/year)	(ton/year)		(ton/year)	(ton/year)
Dump Truck Unloading (MR01)	0.053	0.0089	27.86	4.68	70%	8.36	1.40
Receiving Material Apron Feeder (MR02)	0.053	0.0089	27.86	4.68	70%	8.36	1.40
Crude Material Belt Conveyors (3 units) (MR0	0.003	0.0011	4.73	1.73	70%	1.42	0.52
Total			60.44	11.09		18.13	3.33

Limited Emissions (using limited throughput of 500,000 tons per year)							After Control Limited	
	Limited Maximum	PM Emission	PM10 Emissior	Control	Limited PM	Limited PM10	PM	PM10
Process Description:	Throughput (ton/yr)	Factor (lb/ton)	Factor (lb/ton)	Efficiency	(ton/year)	(ton/year)	Limited (tpy)	imited (tpy
Dump Truck Unloading (MR01)	500,000	0.053	0.0089	70.0%	13.25	2.23	3.98	0.67
Receiving Material Apron Feeder (MR02)	500,000	0.053	0.0089	70.0%	13.25	2.23	3.98	0.67
Crude Material Belt Conveyors (3 units) (MR0	500,000	0.003	0.0011	70.0%	2.25	0.83	0.68	0.25
Total							8.63	1.58

Methodology
Emission Factors from AP-42, Table 11.9-1 (MR01 and MR02) and 11.24-2 (MR03)
Before Control Potential Emission (ton/year) = Emission Factor (lb/ton) * Max Short Term Rate (ton/hr) * 8760 (hr/yr) / 2000 (lb/ton)
After Control Potential Emission (ton/year) = Before Control Emission (ton/year) * (1 - Control Efficiency)
Limited Emissions (ton/yr) = Limited Maximum Throughput (ton/yr) * Emission Factor (lb/ton) * (1 - Control Efficiency) / 2000 (lb/ton)

Appendix A: Emissions Calculations
Emission Unit Group - Clay Grinding and Screening Operations (EUG-02)

Company Name: Boral Brick Terre Haute Plant
Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Permit Number: 167-33256-00139
Reviewer: Heath Hartley
Date: 05/29/13

Emission Unit Group - Clay Grinding and Screening Operations (EUG-02)

120 Short term maximum rate (tons per hour) Control is a dust collector (CD02) for those units which are actually controlled

Limited maximum throughput = 500,000

Potential Emissions (maximum rate, 8760 hours per year)			Before Control			After Control	
Process Description:	PM Emission Factor (lb/ton)	PM10 Emissior Factor (lb/ton)	Potential PM (ton/year)	Potential PM10 (ton/year)	Control Eff	Potential PM (ton/year)	Potential PM10 (ton/year)
Primary Crusher (GR01)	0.017	0.017	8.94	8.94	70.00%	2.68	2.68
Scalping Screen (GR02)							
Screens (bank of 3 units) (GR03)							
Processing Belt Conveyors (7 units) (GR04)	13.3	13.3	6990.48	6990.48	99.00%	69.90	69.90
Impact Crusher (GR05)							
Screw Conveyors (2 units) (GR06)							
Raw Material Bin (2 units) (GR07)	0.053	0.0089	55.71	9.36	70.00%	16.71	2.81
Raw Material Feeder (2 units) (GR08)	0.025	0.0023	26.28	2.42	70.00%	7.88	0.73
Total*			7081.41	7011.19		97.18	76.12

*** Total PM and PM-10 emissions were back-calculated assuming 99% control efficiency from a baghouse with an exit grain loading of 0.22 gr/dscf**

Limited Emissions (using limited throughput of 500,000 tons per year)					After Controls	
Process Description:	Limited Maximum Throughput (ton/yr)	PM Emission Factor (lb/ton)	PM10 Emissior Factor (lb/ton)	Control Efficiency	Limited PM (ton/year)	Limited PM10 (ton/year)
Primary Crusher (GR01)	500,000	0.017	0.017	70.0%	1.28	1.28
Scalping Screen (GR02)						
Screens (bank of 3 units) (GR03)						
Processing Belt Conveyors (7 units) (GR04)	500,000	13.3	13.3	99.00%	33.25	33.25
Impact Crusher (GR05)						
Screw Conveyors (2 units) (GR06)						
Raw Material Bin (2 units)(GR07)	500,000	0.053	0.0089	70.00%	7.95	1.34
Raw Material Feeder (2 units) (GR08)	500,000	0.025	0.0023	70.00%	3.75	0.35
Total					46.23	36.21

Methodology

Uncontrolled Efs from AP-42: Table 11.17-4 for GR01, Table 11.3-1 for GR08, and Table 11.9-1 for GR07

According to 11.9-1 for GR07, the PM EF = 1.16 / $(MC)^{1.2}$, where MC =13 as a percent. PM_{10} is 75% of PM_{15} (not 75% of PM); therefore PM_{10} EF = 75% * 0.119 / $(MC)^{0.9}$

Limited emission factors for the GR02, GR03, GR04, GR05, and GR06, which are all controlled by dust collector CD02, were calculated as follows.

0.022 gr/dscf * (40,345 dscf/min) stack exhaust flow rate * (1 lb/7000 gr) * (525,600 min/1 yr) * (1 yr/500,000 tons) limited throughput = 0.133 lbs/ton

Uncontrolled EF (PM) = 0.133 lb/ton/(1-0.99) = 13.3 lb/ton

Uncontrolled PM-10 = 0.133 lb/ton/(1-0.99) = 13.3 lb/ton (filterable only)

PM-10 condensibles assumed to be small for material handling (EF is limited for 326 IAC 2-2 to 0.14 lb/ton to include a buffer)

Appendix A: Emissions Calculations
Emission Unit Group - Processed Clay (EUG-03)
Company Name: Boral Brick Terre Haute Plant
Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Permit Number: 167-33256-00139
Reviewer: Heath Hartley
Date: 05/29/13

Emission Unit Group - Processed Clay (EUG-03)

120 Short term maximum rate (tons per hour)

Potential Emissions (maximum rate, 8760 hours per year)			Before Control			After Control	
	PM Emission	PM10 Emissior	Potential PM	Potential PM10	Control Eff	Potential PM	Potential PM10
Process Description:	Factor (lb/ton)	Factor (lb/ton)	(ton/year)	(ton/year)		(ton/year)	(ton/year)
Processed Clay Bunker Filling (PC01)	0.02	0.0014	10.51	0.74	70.00%	3.15	0.22
Reclaimer (PC02)	0.025	0.0023	13.14	1.21	70.00%	3.94	0.36
Processed Clay Feed Conveyors (5 units) (PC	0.003	0.0011	7.88	2.89	70.00%	2.37	0.87
Reclaimer by-pass chute (PC04)	0.003	0.0011	1.58	0.58	70.00%	0.47	0.17
Total			33.11	5.41		9.93	1.62

Limited Emissions (using limited throughput of 500,000 tons per year)					Controlled	
	Limited Maximum	PM Emission	PM10 Emissior	Control	Limited PM	Limited PM10
Process Description:	Throughput (ton/yr)	Factor (lb/ton)	Factor (lb/ton)	Efficiency	(ton/year)	(ton/year)
Processed Clay Bunker Filling (PC01)	500,000	0.02	0.0014	70.00%	1.50	0.11
Reclaimer (PC02)	500,000	0.025	0.0023	70.00%	1.88	0.17
Processed Clay Feed Conveyors (5 units) (PC	500,000	0.003	0.0011	70.00%	1.13	0.41
Reclaimer by-pass chute (PC04)	500,000	0.003	0.0011	70.00%	0.23	0.08
Total					4.73	0.77

Methodology
Emission Factors from AP-42, Table 11.19-2 (PC01), 11.3-2 (PC02), 11.19-2 (PC03 and PC04)
Before Control Potential Emission (ton/year) = Emission Factor (lb/ton) * Max Short Term Rate (ton/hr) * 8760 (hr/yr) / 2000 (lb/ton)
After Control Potential Emission (ton/year) = Before Control Emission (ton/year) * (1 - Control Efficiency)
Limited Emissions (ton/yr) = Limited Maximum Throughput (ton/yr) * Emission Factor (lb/ton) * (1 - Control Efficiency) / 2000 (lb/ton)

Appendix A: Emissions Calculations
Emission Unit Group - Processed Clay (EUG-03)
Company Name: Boral Brick Terre Haute Plant
Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Permit Number: 167-33256-00139
Reviewer: Heath Hartley
Date: 05/29/13

Emission Unit Group - Sand Handling (EUG-04)

1.25 Short term maximum rate (tons per hour)

Potential Emissions (maximum rate, 8760 hours per year)			Before Control			After Control	
	PM Emission	PM10 Emissior	Potential PM	Potential PM10	Control Eff	Potential PM	Potential PM10
Process Description:	Factor (lb/ton)	Factor (lb/ton)	(ton/year)	(ton/year)		(ton/year)	(ton/year)
Sand (supersack) (SD01) (max 30 ton per day	0.065	0.024	0.36	0.13	70.00%	0.11	0.04
Total			0.36	0.13		0.11	0.04

Limited Emissions (using limited throughput of 10,950 tons per year - same as max capacity of 30 tons per day)						
	Limited Maximum	PM Emission	PM10 Emissior	Control	Limited PM	Limited PM10
Process Description:	Throughput (ton/yr)	Factor (lb/ton)	Factor (lb/ton)	Efficiency	(ton/year)	(ton/year)
Sand (supersack) (SD01) (max 30 ton per day	10,950	0.065	0.024	70.00%	0.11	0.04
Total					0.11	0.04

Methodology
EF from AP-42, Table 11.19.1-1 for SD01 regarding "sand handling, transfer and storage" corrected to an uncontrolled basis assuming 98% control for a wet scrubbe
Before Control Potential Emission (ton/year) = Emission Factor (lb/ton) * Max Short Term Rate (ton/hr) * 8760 (hr/yr) / 2000 (lb/ton)
After Control Potential Emission (ton/year) = Before Control Emission (ton/year) * (1 - Control Efficiency)
Limited Emissions (ton/yr) = Limited Maximum Throughput (ton/yr) * Emission Factor (lb/ton) * (1 - Control Efficiency) / 2000 (lb/ton)

Appendix A: Emissions Calculations

Tunnel Dryer

Company Name: Boral Brick Terre Haute Plant
Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Permit Number: 167-33256-00139
Reviewer: Heath Hartley
Date: 05/29/13

Maximum throughput of raw materials= 29 tons/hr
254,040 tons/yr

5.9 Max Short-Term Heat Input Capacity of Kiln with NG Firing (mmBTU/hr)
52,034 Unrestricted Heat Input Capacity (mmBTU/yr)

	Pollutant						
	PM	PM10	direct PM2.5	SO2	NOx	VOC	CO
Emission Factor in lb/ton	0.077	0.187	0.187	0.000	0.098	0.030	0.310
Potential Emission in tons/yr	9.78	23.75	23.75	0.00	12.45	3.81	39.38

Emission factors from AP-42 Tables 11.3-1,11.3-3, and 11.3-5 for drying of raw materials
Uncontrolled PTE (ton/yr) = Emission Factor (lb/ton) * Max Capacity (ton/hr) * 8760 (hr/yr) / 2000 (lb/ton)

GHGs		
Pollutant	Emission Factor (kg/mmBTU)	PTE (ton/yr)
CO2 as CO2e	53.02	3034.8
CH4 as CO2e	0.021	1.2
N2O as CO2e	0.031	1.8
PTE (total, tpy		**3037.7**

Methodology

GHG factors for natural gas combustion from Tables C-1 and C-2 of EPA's GHG Mandatory Reporting Rule.
Converted each compound to CO2e based on Global Warming Potential (GWP). GWP factors based on Tabl1 A-1 of Subpart A to the GHG Mandatory Reporting Ru
PTE (tpy)= EF (kg/mmBTU)* Heat Capacity (mmBTU/yr) * 2.2 lb/Kg /2000 (lb/ton)

Appendix A: Emissions Calculations
Tunnel Dryer - Prior to Modification
Company Name: Boral Brick Terre Haute Plant
Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Permit Number: 167-33256-00139
Reviewer: Heath Hartley
Date: 05/29/13

Maximum throughput of raw materials= 227,500 tons/yr

	Pollutant							
	PM	PM10	direct PM2.5	SO2	NOx	VOC	CO	CO2e
Emission Factor in lb/ton	0.077	0.187	0.187	0.000	0.098	0.030	0.310	73.3
Potential Emission in tons/yr	8.76	21.27	21.27	0.00	11.15	3.41	35.26	8337.88

Emission factors from Tables 11.3-1,11.3-3, and 11.3-5 for drying of raw materials

Appendix A: Emissions Calculations
Natural Gas Combustion Only - Tunnel Dryer #1 (Prior to Modification)

Company Name: Boral Brick Terre Haute Plant
Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Permit Number: 167-33256-00139
Reviewer: Heath Hartley
Date: 05/29/13

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr
5.94	1000	52.1

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.0	0.2	0.2	0.0	2.6	0.1	2.2

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation

Methodology
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
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MM
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
See next page for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only - Tunnel Dryer #1
Company Name: Boral Brick Terre Haute Plant
Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Permit Number: 167-33256-00139
Reviewer: Heath Hartley
Date: 05/29/13

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	5.466E-05	3.124E-05	1.952E-03	4.685E-02	8.850E-05

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.302E-05	2.863E-05	3.644E-05	9.892E-06	5.466E-05

Methodology is the same as previous page.
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	3,124	0.1	0.1
Summed Potential Emissions in tons/yr	3,124		
CO2e Total in tons/yr	3,143		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
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.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP

Appendix A: Emissions Calculations
Tunnel Kiln - Prior to Modification

Company Name: Boral Brick Terre Haute Plant
Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Permit Number: 167-33256-00139
Reviewer: Heath Hartley
Date: 05/29/13

Emission Unit Group - Brick Forming and Firing (EUG-05)

Tunnel Kiln #1 (EU02) Natural Gas Scenario
123 hrs of control device bypass for SO2, HCl, and HF
26 maximum short term throughput (ton per hour)

Pollutant*	Emission Factor (lb/ton)	Pot. Emission (ton/year)	Control Efficiency	Pot. Emission After Control
PM	0.37	42.14	67.6%	13.65
PM10	2.683	305.54	67.6%	98.99
CO	1.2	136.66	0.0%	136.66
NOx	0.35	39.86	0.0%	39.86
SO2	4.69	534.10	55.0%	240.34
VOC	0.024	2.73	0.0%	2.73
SO2 (bypass) 123 hr	4.69	7.50	0.0%	7.50
* PM2.5 was not detected (AP-42, Table 11.3-1)				
Hydroflouric Acid	0.37	42.14	90.0%	4.21
HF Bypass	0.37	0.59	0.0%	0.59
Hydrochloric Acid	0.17	19.36	85.0%	2.90
HCl Bypass	0.17	0.27	0%	0.27
1,1,1-Trichloroethane	4.70E-06	5.35E-04	0.00%	5.35E-04
1,4-Dichlorobenzene	4.80E-05	5.47E-03	0.00%	5.47E-03
2-butanone	2.20E-04	2.51E-02	0.00%	2.51E-02
Benzene	2.90E-03	3.30E-01	0.00%	3.30E-01
Bis(2-ethylhexy)phtalate	2.00E-03	2.28E-01	0.00%	2.28E-01
Carbon disulfide	4.30E-05	4.90E-03	0.00%	4.90E-03
Chlorine	1.30E-03	1.48E-01	0.00%	1.48E-01
Chloroethane	5.70E-04	6.49E-02	0.00%	6.49E-02
Chloromethane	6.70E-04	7.63E-02	0.00%	7.63E-02
Di-n-butylphtalate	1.40E-04	1.59E-02	0.00%	1.59E-02
Ethylbenzene	4.40E-05	5.01E-03	0.00%	5.01E-03
m-/p- Xylene	6.70E-05	7.63E-03	0.00%	7.63E-03
o-Xylene	5.80E-05	6.61E-03	0.00%	6.61E-03
Iodomethane	9.30E-05	1.06E-02	0.00%	1.06E-02
Naphthalene	6.50E-05	7.40E-03	0.00%	7.40E-03
Phenol	8.60E-05	9.79E-03	0.00%	9.79E-03
Styrene	2.00E-05	2.28E-03	0.00%	2.28E-03
Tetrachloroethylene	2.80E-06	3.19E-04	0.00%	3.19E-04
Toluene	1.60E-04	1.82E-02	0.00%	1.82E-02
Antimony	2.70E-05	3.07E-03	0.00%	3.07E-03
Arsenic	3.10E-05	3.53E-03	0.00%	3.53E-03
Beryllium	4.20E-07	4.78E-05	0.00%	4.78E-05
Cadmium	1.50E-05	1.71E-03	0.00%	1.71E-03
Chromium	5.10E-05	5.81E-03	0.00%	5.81E-03
Cobalt	2.10E-06	2.39E-04	0.00%	2.39E-04
Lead	1.50E-04	1.71E-02	0.00%	1.71E-02
Manganese	2.90E-04	3.30E-02	0.00%	3.30E-02
Mercury	7.50E-06	8.54E-04	0.00%	8.54E-04
Nickel	7.20E-05	8.20E-03	0.00%	8.20E-03
Selenium	2.30E-04	2.62E-02	0.00%	2.62E-02
Total HAPs		63.43		9.05

Methodology

PM, PM10 Efs (controlled) from AP-42 Table 11.3-1 for a kiln with scrubber. The before control Efs were estimated using control efficiency based on manufacturer data

Kiln uses a dry lime injection fabric filter. PM-10 uncontrolled is a very conservative estimate since it assumes condensibles are controlled.

HCl, HF, and HAP Emission Factors from AP-42, Table 11.3-4, 11.3-6, 11.3-7, Control efficiencies based on manufacturer data

PM emission factor, and HF, HCl control efficiencies based on MACT limitation (Note: NESHAP Subpart JJJJJ has been vacated)

SO2 emission factor based on Boral testing at a similar kiln

Before Control Potential Emission (ton/year) = Emission Factor (lb/ton) * Max Short Term Rate (ton/hr) * 8760 (hr/yr) / 2000 (lb/ton)

Controlled Emissions based on 8760 minus bypass hours for SO2, HCl, and HF

After Control Potential Emission (ton/year) = Before Control Emission (ton/year) * (1 - Control Efficiency)

Appendix A: Emissions Calculations
Tunnel Kiln - Prior to Modification

Company Name: Boral Brick Terre Haute Plant
Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Permit Number: 167-33256-00139
Reviewer: Heath Hartley
Date: 05/29/13

Emission Unit Group - Brick Forming and Firing (EUG-05)

Tunnel Kiln #1 (EU02) Landfill Gas Scenario
123 hr of control device bypass
26 maximum short term throughput (ton per hour)

Pollutant	Emission Factor (lb/ton)	Pot. Emission (ton/year)	Control Efficiency	Pot. Emission After Control
PM	0.37	42.14	67.60%	13.65
PM10	2.683	305.54	67.60%	98.99
CO	1.2	136.66	0.00%	136.66
NOx	0.35	39.86	0.00%	39.86
SO2	4.69	534.10	55.00%	240.34
SO2 (bypass)	4.69	7.50	0.00%	7.50
VOC	0.024	2.73	0.00%	2.73
Hydroflouric Acid	0.37	42.14	90.00%	4.21
HF (bypass)	0.37	0.59	0.00%	0.59
Hydrochloric Acid	0.17	19.36	85.00%	2.90
HCl (bypass)	0.17	0.27	0.00%	0.27
1,1,1-Trichloroethane	4.70E-06	5.35E-04	0.00%	5.35E-04
1,4-Dichlorobenzene	4.80E-05	5.47E-03	0.00%	5.47E-03
2-butanone	2.20E-04	2.51E-02	0.00%	2.51E-02
Benzene	2.90E-03	3.30E-01	0.00%	3.30E-01
Bis(2-ethylhexy)phtalate	2.00E-03	2.28E-01	0.00%	2.28E-01
Carbon disulfide	4.30E-05	4.90E-03	0.00%	4.90E-03
Chlorine	1.30E-03	1.48E-01	0.00%	1.48E-01
Chloroethane	5.70E-04	6.49E-02	0.00%	6.49E-02
Chloromethane	6.70E-04	7.63E-02	0.00%	7.63E-02
Di-n-butylphtalate	1.40E-04	1.59E-02	0.00%	1.59E-02
Ethylbenzene	4.40E-05	5.01E-03	0.00%	5.01E-03
m-/p- Xylene	6.70E-05	7.63E-03	0.00%	7.63E-03
o-Xylene	5.80E-05	6.61E-03	0.00%	6.61E-03
Iodomethane	9.30E-05	1.06E-02	0.00%	1.06E-02
Naphthalene	6.50E-05	7.40E-03	0.00%	7.40E-03
Phenol	8.60E-05	9.79E-03	0.00%	9.79E-03
Styrene	2.00E-05	2.28E-03	0.00%	2.28E-03
Tetrachloroethylene	2.80E-06	3.19E-04	0.00%	3.19E-04
Toluene	1.60E-04	1.82E-02	0.00%	1.82E-02
Antimony	2.70E-05	3.07E-03	0.00%	3.07E-03
Arsenic	3.10E-05	3.53E-03	0.00%	3.53E-03
Beryllium	4.20E-07	4.78E-05	0.00%	4.78E-05
Cadmium	1.50E-05	1.71E-03	0.00%	1.71E-03
Chromium	5.10E-05	5.81E-03	0.00%	5.81E-03
Cobalt	2.10E-06	2.39E-04	0.00%	2.39E-04
Lead	1.50E-04	1.71E-02	0.00%	1.71E-02
Manganese	2.90E-04	3.30E-02	0.00%	3.30E-02
Mercury	7.50E-06	8.54E-04	0.00%	8.54E-04
Nickel	7.20E-05	8.20E-03	0.00%	8.20E-03
Selenium	2.30E-04	2.62E-02	0.00%	2.62E-02
Total HAPs		63.43		9.05

Methodology

PM, PM10 Efs (controlled) from AP-42 Table 11.3-1 for a kiln with scrubber. The before control Efs were estimated using control efficiency based on manufacturer data

Kiln uses a dry lime injection fabric filter. PM-10 uncontrolled is a very conservative estimate since it assumes condensibles are controlled.

Emission Factors from AP-42, Table 11.3-4, 11.3-6, 11.3-7, Control efficiencies based on manufacturer data

PM emission factor, and HF, HCl control efficiencies based on MACT limitation (Note: NESHAP Subpart JJJJJ has been vacated)

SO2 emission factor based on Boral testing at a similar kiln

Before Control Potential Emission (ton/year) = Emission Factor (lb/ton) * Max Short Term Rate (ton/hr) * 8760 (hr/yr) / 2000 (lb/ton)

After Control Potential Emission (ton/year) = Before Control Emission (ton/year) * (1 - Control Efficiency)

Appendix A: Emissions Calculations

Emission Unit Group - Brick Forming and Firing (EUG-05) GHG Emissions

Company Name: Boral Brick Terre Haute Plant
Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Permit Number: 167-33256-00139
Reviewer: Heath Hartley
Date: 05/29/13

Emission Unit Group - Brick Forming and Firing (EUG-05)

Tunnel Kiln #1 (EU02) - Greenhouse Gas Emissions from Raw Materials and Natural Gas Firing

1,000	Maximum Heat Inoput Capacity of Natural Gas (Btu/scf)
55.0	Maximum Short-Term Heat Input Cpacity of Kiln with NG Firing (mmBTU/hr)
481,800	Unrestricted Heat Input Capacity (mmBTU/yr)
481.8	Unrestricted Natural Gas Usage (mmcf/yr)

Pollutant	Emission Factor (kg/mmBTU)	Potential to Emit (uncontrolled) tpy	Control Efficiency (%)	Potential to Emit (controlled) tpy
CO2 as CO2e	53.02	28099.5	0%	28099.5
CH4 as CO2e	0.021	11.1	0%	11.1
N2O as CO2e	0.031	16.4	0%	16.4
	PTE (total, tpy) =	**28127.1**		**28127.1**

Tunnel Kiln #1 (EU02) - Greenhouse Gas Emissions from Raw Materials and Landfill Gas Firing

538.4	Maximum Heat Input Capacity of Landfill Gas (Btu/scf)
55.0	Maximum Short-Term Heat Input Capacity of Kiln with LFG Firing (mmBTU/l
481,800	Unrestricted Heat Input Capacity (mmBTU/yr)
894.9	Unrestricted Landfill Gas Usage (mmscf/yr)

Pollutant	Emission Factor (kg/mmBTU)	Potential to Emit (uncontrolled) tpy	Control Efficiency (%)	Potential to Emit (controlled) tpy
CO2 as CO2e	52.07	27596.1	0%	27596.1
CH4 as CO2e	0.067	35.5	0%	35.5
N2O as CO2e	0.195	103.3	0%	103.3
	PTE (total, tpy) =	**27734.9**		**27734.9**

Methodology

GHG factors for natural gas and landfill gas combustion from Tables C-1 and C-2 of EPA's GHG Mandatory Reporting Rule.
Converted each compound to CO2 e based on Global Warming Potential (GWP). GWP factors based on Tabl1 A-1 of Subpart A to the GHG Mandatory Reporting Rule
Potential Emissions (tpy)=EF (kg/mmBTU)* mmBTU/yr*2.2 lb/Kg /2000 (lb/ton)
Controlled PTE (tpy) = Potential emissions (1-control efficiency)

Appendix A: Emissions Calculations
Emission Unit Group - Brick Forming and Firing (EUG-05) - Prior to Modification
Company Name: Boral Brick Terre Haute Plant
Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Permit Number: 167-33256-00139
Reviewer: Heath Hartley
Date: 05/29/13

Emission Unit Group - Brick Forming and Firing (EUG-05)

Summary - Before Control

	Pollutant							
Process:	PM	PM10	PM2.5	SO2	NOx	VOC	CO	HG (as CO2e
Tunnel Dryer - Raw Materials	8.76	21.27	21.27	0.00	11.15	3.41	35.26	8337.9
Tunnel Dryer - NG Combustion	0.05	0.20	0.20	0.02	2.60	0.14	2.19	3,142.7
Tunnel Kiln*	42.14	305.54	0.00	534.10	39.86	2.73	136.66	28127.1
Total	50.94	327.01	21.47	534.11	53.61	6.29	174.11	39607.6

Summary - Limited

	Pollutant							
Process:	PM	PM10	PM2.5	SO2	NOx	VOC	CO	HG (as CO2e
Tunnel Dryer - Raw Materials	8.76	21.27	21.27	0.00	11.15	3.41	35.26	8337.9
Tunnel Dryer - NG Combustion	0.05	0.20	0.20	0.02	2.60	0.14	2.19	3142.65
Tunnel Kiln*	13.65	98.99	0.00	240.34	39.86	2.73	136.66	28127.1
Total	22.46	120.46	21.47	240.36	53.61	6.29	174.11	39607.6

* AP 42, Table 11.3-1 - PM2.5 was not detected

Methodology

Summation of each pollutant (ton/yr) for each process to gernerate a total for the Emission Unit Group (EUG-05)

Appendix A: Emissions Calculations
Emission Unit Group - Brick Forming and Firing (EUG-05)
Company Name: Boral Brick Terre Haute Plant
Address: 5601 E. Price Road, Terre Haute, Indiana 47802
Permit Number: 167-33256-00139
Reviewer: Heath Hartley
Date: 05/29/13

Emission Unit Group - Brick Forming and Firing (EUG-05)

Also equal to the sourcewide HAP emissions, since all HAPs come from this EUG

	Before Control			After Control		
Specific HAP	Tunnel Dryer	Tunnel Kiln	Total	Tunnel Dryer	Tunnel Kiln	Total
Hydroflouric Acid*		42.14	42.14		4.81	4.81
Hydrochloric Acid*		19.36	19.36		3.18	3.18
* HF and HCl bypass included in total						
1,1,1-Trichloroethane		5.35E-04	5.35E-04		5.35E-04	5.35E-04
1,4-Dichlorobenzene	neg.	5.47E-03	5.47E-03	neg.	5.47E-03	5.47E-03
2-butanone		2.51E-02	2.51E-02		2.51E-02	2.51E-02
Benzene	neg.	3.30E-01	3.30E-01	neg.	3.30E-01	3.30E-01
Bis(2-ethylhexy)phtalate		2.28E-01	2.28E-01		2.28E-01	2.28E-01
Carbon disulfide		4.90E-03	4.90E-03		4.90E-03	4.90E-03
Chlorine		1.48E-01	1.48E-01		1.48E-01	1.48E-01
Chloroethane		6.49E-02	6.49E-02		6.49E-02	6.49E-02
Chloromethane		7.63E-02	7.63E-02		7.63E-02	7.63E-02
Di-n-butylphtalate		1.59E-02	1.59E-02		1.59E-02	1.59E-02
Ethylbenzene		5.01E-03	5.01E-03		5.01E-03	5.01E-03
m-/p- Xylene		7.63E-03	7.63E-03		7.63E-03	7.63E-03
o-Xylene		6.61E-03	6.61E-03		6.61E-03	6.61E-03
Iodomethane		1.06E-02	1.06E-02		1.06E-02	1.06E-02
Naphthalene		7.40E-03	7.40E-03		7.40E-03	7.40E-03
Phenol		9.79E-03	9.79E-03		9.79E-03	9.79E-03
Styrene		2.28E-03	2.28E-03		2.28E-03	2.28E-03
Tetrachloroethylene		3.19E-04	3.19E-04		3.19E-04	3.19E-04
Toluene	neg.	1.82E-02	1.82E-02	neg.	1.82E-02	1.82E-02
Antimony		3.07E-03	3.07E-03		3.07E-03	3.07E-03
Arsenic		3.53E-03	3.53E-03		3.53E-03	3.53E-03
Beryllium		4.78E-05	4.78E-05		4.78E-05	4.78E-05
Cadmium	neg.	1.71E-03	1.71E-03	neg.	1.71E-03	1.71E-03
Chromium	neg.	5.81E-03	5.81E-03	neg.	5.81E-03	5.81E-03
Cobalt		2.39E-04	2.39E-04		2.39E-04	2.39E-04
Lead	neg.	1.71E-02	1.71E-02	neg.	1.71E-02	1.71E-02
Manganese	neg.	3.30E-02	3.30E-02	neg.	3.30E-02	3.30E-02
Mercury		8.54E-04	8.54E-04		8.54E-04	8.54E-04
Nickel	neg.	8.20E-03	8.20E-03	neg.	8.20E-03	8.20E-03
Selenium		2.62E-02	2.62E-02		2.62E-02	2.62E-02
Formaldehyde	neg.		0.00E+00	neg.		0.00E+00
Hexane	neg.		0.00E+00	neg.		0.00E+00
Total HAPs	neg.	62.56	62.56	neg.	9.05	9.05

neg. - very small amounts are emitted from the tunnel dryer

Methodology

Summation of each pollutant (ton/yr) for each process to gernerate a total for the Emission Unit Group (EUG-05)

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

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Mary Ann Keon
Boral Bricks, Inc.
200 Mansell Court East, Suite 310
Roswell, GA 30076

DATE: August 20, 2013

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Significant Permit Modification to a Part 70 Operating Permit
167-33256-00139

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:
William F Tudor, Regional Production Manager
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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
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(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

August 20, 2013

TO: Vigo County Public Library

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Boral Bricks, Inc.
Permit Number: 167-33256-00139

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	VHAUN 8/20/2013 Boral Bricks Terre Haute Plant 167-33256-00139 FINAL			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Mary Ann Keon Boral Bricks Terre Haute Plant 200 Mansell Court E, Ste 310 Roswell GA 30076 (Source CAATS) Confirmed Delivery									
2		William F Tudor Regional Production Mgr Boral Bricks Terre Haute Plant PO Box 517 Bessemer AL 35021 *(RO CAATS)*									
3		Vigo County Board of Commissioners County Annex, 121 Oak Street Terre Haute IN 47807 *(Local Official)*									
4		Terre Haute City Council and Mayors Office 17 Harding Ave Terre Haute IN 47807 *(Local Official)*									
5		Vigo County Health Department 147 Oak Street Terre Haute IN 47807 *(Health Department)*									
6		Vigo Co Public Library 1 Library Square Terre Haute IN 47807-3609 *(Library)*									
7		J.P. Roehm PO Box 303 Clinton IN 47842 *(Affected Party)*									
8											
9											
10											
11											
12											
13											
14											
15											

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
6			

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