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

Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

Preliminary Findings Regarding the Renewal of a
Part 70 Operating Permit

for Arcosa LW HPB, LLC in Morgan County

Part 70 Operating Permit Renewal No.: T 109-39783-00007

The Indiana Department of Environmental Management (IDEM) has received an application from Arcosa LW HPB, LLC located at 6618 N. Tidewater Road, Mooresville, Indiana 46158, for a new source reviewand renewal of its Part 70 Operating Permit issued on December 27, 2013. If approved by IDEM's Office of Air Quality (OAQ), this proposed modification would allow Arcosa LW HPB, LLC to make certain changes at its existing source. Arcosa LW HPB, LLC has applied to add a new portable screening plant and renew its operating permit.

A copy of the permit application and IDEM's preliminary findings are available at:

Morgan County Public Library
110 S. Jefferson St.
Martinsville, Indiana 46151

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

A copy of the preliminary findings is also available via IDEM's Virtual File Cabinet (VFC.) Please go to: http://www.in.gov/idem/ and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria.

How can you participate in this process?

The date that this notice is published in a newspaper marks the beginning of a 30-day public comment period. If the 30th day of the comment period falls on a day when IDEM offices are closed for business, all comments must be postmarked or delivered in person on the next business day that IDEM is open.

You may request that IDEM hold a public hearing about this draft permit. If adverse comments concerning the **air pollution impact** of this draft permit are received, with a request for a public hearing, IDEM will decide whether or not to hold a public hearing. IDEM could also decide to hold a public meeting instead of, or in addition to, a public hearing. If a public hearing or meeting is held, IDEM will make a separate announcement of the date, time, and location of that hearing or meeting. At a hearing, you would have an opportunity to submit written comments and make verbal comments. At a meeting, you would have an opportunity to submit written comments, ask questions, and discuss any air pollution concerns with IDEM staff.

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEM's mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEM at the address below. Please refer to permit number T 109-39783-00007 in all correspondence.

Comments should be sent to:

Wilfredo de la Rosa
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for Wilfredo de la Rosa or (317) 232-8422
Or dial directly: (317) 232-8422
Fax: (317) 232-6749 attn: Wilfredo de la Rosa
E-mail: wdelaros@idem.IN.gov

All comments will be considered by IDEM when we make a decision to issue or deny the permit. Comments that are most likely to affect final permit decisions are those based on the rules and laws governing this permitting process (326 IAC 2), air quality issues, and technical issues. IDEM does not have legal authority to regulate zoning, odor, or noise. For such issues, please contact your local officials.

For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: http://www.in.gov/idem/airquality/2356.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

Air Permit Legal Notices
On November 14, 2018, the State of Indiana Environmental Rules Board adopted rule amendments to 326 IAC 2-1.1-6, 326 IAC 2-7-13, 326 IAC 2-7-17, 326 IAC 2-8-13, 326 IAC 2-8-18, and 326 IAC 2-12-1 (LSA #17-395), concerning legal notice provisions for air permits issued under the NSR and Title V permit programs and other air permits for which newspaper notices are published by IDEM OAQ. The adopted rule amendments require that IDEM OAQ provide electronic public notices on IDEM's website as the primary and consistent method for communicating air permit notices to the public. IDEM anticipates that the final (effective) rule amendments will be promulgated on or about March 14, 2019. The status of these rule amendments (LSA #17-395) and the final effective date will be posted on the following website: https://www.in.gov/idem/legal/2351.htm.

Until the rule amendments to 326 IAC 2-1.1-6, 326 IAC 2-7-13, 326 IAC 2-7-17, 326 IAC 2-8-13, 326 IAC 2-8-18, and 326 IAC 2-12-1 are promulgated final (effective), IDEM OAQ will publish both newspaper public notices and electronic public notices on IDEM's website. Once the rule amendments are promulgated final (effective), IDEM OAQ will no longer publish newspaper public notices and will only publish electronic public notices on IDEM's website.

Electronic public notices, including permitting, rulemaking, meeting, and hearing notices, are posted on IDEM's website at: https://www.in.gov/idem/5474.htm. Public notices posted on IDEM's webpage will be accessible for the duration of the public comment period.

IDEM OAQ provides alternative methods for receiving public notices, such as the interested parties mailing list. The IDEM OAQ interested parties mailing list consists of people who have asked to be notified by email list or direct mail delivery of air permit actions related to a specific source or multiple sources, or for all air permit actions in a certain county or multiple counties. If you would like to be added to the IDEM OAQ interested parties mailing list, call Patty Pear at (317) 233-6875 or call (800) 451-6027, select option 4, and ask for the "Permits Administration Section".

Citizens and interested parties can also subscribe to IDEM's regional public notice pages and receive an e-mail or text message to your phone every time IDEM adds information to a subscribed region at the following website: https://public.govdelivery.com/accounts/INDEM/subscriber/new?qsp=INDEM_3

What will happen after IDEM makes a decision?

Following the end of the public comment period, IDEM will issue a Notice of Decision stating whether the permit has been issued or denied. If the permit is issued, it may be different than the draft permit because

of comments that were received during the public comment period. If comments are received during the public notice period, the final decision will include a document that summarizes the comments and IDEM's response to those comments. If you have submitted comments or have asked to be added to the mailing list, you will receive a Notice of the Decision. The notice will provide details on how you may appeal IDEM's decision, if you disagree with that decision. The final decision will also be available on the Internet at the address indicated above, at the local library indicated above, and the IDEM public file room on the 12th floor of the Indiana Government Center North, 100 N. Senate Avenue, Indianapolis, Indiana 46204-2251.

If you have any questions, please contact Wilfredo de la Rosa of my staff at the above address.

Josiah K. Balogun, Section Chief
Permits Branch
Office of Air Quality

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Eric J. Holcomb
Governor

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Commissioner

DRAFT

Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

Arcosa LW HPB, LLC
6618 N Tidewater Rd.
Mooresville, Indiana 46258

(herein known as the Permittee) is hereby authorized to construct and 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.: T109-39783-00007 Master Agency Interest ID: 14596	
Issued by: Josiah K. Balogun, Section Chief Permits Branch Office of Air Quality	Issuance Date: Expiration Date:

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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 Lightweight Expanded Shale Processing Plant.

Source Address:	6618 N Tidewater Rd., Mooresville, Indiana 46258
General Source Phone Number:	817-635-8556
SIC Code:	3295 (Minerals and Earths, Ground or Otherwise Treated)
County Location:	Morgan (Clay Township)
Source Location Status:	Nonattainment for SO_2 standard Attainment for all other criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD and Emission Offset Rules Major 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) One (1) pre-kiln shale processing operation, identified as pre-kiln, constructed in 1954, with a maximum capacity of 200 tons of raw shale per hour, using wet suppression of fugitive dust as control, and exhausting outside the building, and consisting of the following equipment:

(1) one (1) primary crusher, identified as PK1, with a maximum capacity of 200 tons of raw shale per hour,

(2) one (1) secondary crusher, identified as PK2, with a maximum capacity of 100 tons of raw shale per hour,

(3) six (6) conveyors, identified as PK3 through PK8, each with a maximum capacity of 200 tons of raw shale per hour;

(b) one (1) rotary kiln, identified as K4, constructed in 1962, with a maximum heat input of 100 million British Thermal Units (MMBtu) per hour burning natural gas or bituminous coal with a maximum capacity of 15 tons of raw shale per hour, using a Peabody wet scrubber as control, and exhausting to stack ST4;

(c) One (1) rotary kiln, identified as K5, constructed in 1966, with a maximum heat input of 100 MMBtu per hour burning natural gas or bituminous coal, with a maximum capacity of 30 tons of raw shale per hour, using a cloth baghouse as control, and exhausting to stack ST5;

(d) One (1) haydite crusher line, identified as HCR, constructed in 1962, with a maximum capacity of 100 tons of expanded shale per hour, using wet suppression of fugitive dust as control, exhausting outside the building, and consisting of the following equipment:

(1) one (1) primary haydite crusher, identified as HCR1, with a maximum capacity of 100 tons of expanded shale per hour,

(2) Two (2) conveyors, identified as HCR9 and HCR10, with a maximum capacity of 100 tons each of expanded shale per hour.

(e) One (1) reciprocating grate clinker cooler, identified as CLNKCOOL, constructed in 1966, with a maximum capacity of 40 tons of expanded shale per hour, using a multiclone as control, and exhausting to stack ST2;

(f) One (1) expanded shale aggregate crusher line, identified as ESA, constructed in 2000, with a maximum capacity of 30 tons of expanded shale per hour and consisting of the following equipment:

(1) one (1) expanded shale aggregate crusher, identified as ESA 1, utilizing a baghouse, identified as BH1, as particulate control, with a maximum capacity of 30 tons of expanded shale per hour and exhausting through stack ST6,

(2) one (1) screen, identified as ESA 2, utilizing a baghouse, identified as BH1, as particulate control, with a maximum capacity of 30 tons of expanded shale per hour and exhausting through stack ST6, and

(3) five (5) conveyors, identified as ESA 3 through ESA 7, each with a maximum capacity of 30 tons of expanded shale per hour, utilizing a water spray system on the feed conveyor as particulate control and exhausting fugitively.

[Under 40 CFR 60, Subpart OOO, the crusher, screen, and conveyors are considered affected facilities].

(g) One (1) sorbent injection system, identified as CE-K4, with maximum rated capacity of 4,000 pounds of sorbent per hour, constructed in 2016 to control SO2 emissions from the existing Kiln #4.

(h) One (1) sorbent injection system, identified as CE-K5 with maximum rated capacity of 4,000 pounds of sorbent per hour, constructed in 2016 to control SO2 emissions from the existing Kiln #5.

(i) Two (2) sorbent storage silos, #1 and #2, each with storage capacity of 120 tons, controlled by bin vent filters, constructed in 2016.

(j) One (1) portable screening plant approved in 2018 for construction consisting of the following:

(1) One (1) triple deck screen, identified as PS1 with a maximum capacity of 250 tons per hour

(2) Four (4) conveyors, identified as PS2 through PS5, each with a maximum capacity of 250 tons per hour.

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

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

(a) Paved and unpaved roads and parking lots with public access; [326 IAC 6-4]

(b) Other activities or categories with emissions below insignificant thresholds: [326 IAC 6-4]

(1) One coal silo, identified as silo 6, using no control and exhausting indoor

(2) One (1) coal unloading operation, with a maximum capacity of 280 tons of coal per hour, consisting of one (1) dump pit, one (1) hopper for coal unloading, and two (2) conveyors,

(3) Four (4) covered silos, identified as silos 3, 4, 5A, and 5B, each with a maximum capacity of 200 tons of raw shale,

(4) Three (3) hoppers, identified as HCR6 through HCR8, each with a maximum capacity of 100 tons of raw shale per hour,

(5) Two (2) chutes, identified as HCR16 and HCR17, each with a maximum capacity of 100 tons of expanded shale per hour.

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, T109-39783-00007, 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 T109-39783-00007 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised under 326 IAC 2-7-10.5, or

(3) deleted under 326 IAC 2-7-10.5.

(b) Provided that all terms and conditions are accurately reflected in this combined permit, all previous registrations and permits are superseded by this combined new source review and part 70 operating permit.

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

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

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

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that

meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(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(42). 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 5
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)(1) and (c)(1). 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(37)) 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 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

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

C.2 Opacity [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

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

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

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

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

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

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

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

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

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

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

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

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(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)][40 CFR 64][326 IAC 3-8]

(a) For new units:
Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.

(b) For existing units:
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 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, 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).

(c) For monitoring required by CAM, at all times, the Permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

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

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

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale. The analog instrument shall be capable of measuring values outside of the normal range.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

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

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

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

(a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

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

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

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

(I) Upon detecting an excursion where a response step is required by the D Section, or an exceedance of a limitation, not subject to CAM, in this permit:

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

(II)

(a) CAM *Response to excursions or exceedances.*

(1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized

distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(2) Determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

(b) If the Permittee identifies a failure to achieve compliance with an emission limitation, subject to CAM, or standard, subject to CAM, for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the Permittee shall promptly notify the IDEM, OAQ and, if necessary, submit a proposed significant permit modification to this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

(c) Based on the results of a determination made under paragraph (II)(a)(2) of this condition, the EPA or IDEM, OAQ may require the Permittee to develop and implement a Quality Improvement Plan (QIP). The Permittee shall develop and implement a QIP if notified to in writing by the EPA or IDEM, OAQ.

(d) Elements of a QIP:
The Permittee shall maintain a written QIP, if required, and have it available for inspection. The plan shall conform to 40 CFR 64.8 b (2).

(e) If a QIP is required, the Permittee shall develop and implement a QIP as expeditiously as practicable and shall notify the IDEM, OAQ if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined.

(f) Following implementation of a QIP, upon any subsequent determination pursuant to paragraph (II)(a)(2) of this condition the EPA or the IDEM, OAQ may require that the Permittee make reasonable changes to the QIP if the QIP is found to have:

(1) Failed to address the cause of the control device performance problems; or

(2) Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(g) Implementation of a QIP shall not excuse the Permittee from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the Act.

(h) CAM recordkeeping requirements.

(1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality

improvement plan required pursuant to paragraph (II)(c) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

(2) Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements

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

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(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(a)(1), the Permittee shall submit by July 1 of each year 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(33) (“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, where applicable:

(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, where applicable:

(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] [40 CFR 64][326 IAC 3-8]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

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

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

(1) Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;

(2) Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime

associated with zero and span or other daily calibration checks, if applicable); and

(3) A description of the actions taken to implement a QIP during the reporting period as specified in Section C-Response to Excursions or Exceedances. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

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

(b) The address for report submittal is:

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

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

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:

(b) one (1) rotary kiln, identified as K4, constructed in 1962, with a maximum heat input of 100 million British Thermal Units (MMBtu) per hour burning natural gas or bituminous coal, with a maximum capacity of 15 tons of raw shale per hour, using a Peabody wet scrubber as control, and exhausting to stack ST4;

(c) One (1) rotary kiln, identified as K5, constructed in 1966, with a maximum heat input of 100 MMBtu per hour burning natural gas or bituminous coal, with a maximum capacity of 30 tons of raw shale per hour, using a cloth baghouse as control, and exhausting to stack ST5;

(g) One (1) sorbent injection system, identified as CE-K4, with maximum rated capacity of 4,000 pounds of sorbent per hour, approved in 2016 for construction to control SO2 emissions from the existing Kiln #4.

(h) One (1) sorbent injection system, identified as CE-K5 with maximum rated capacity of 4,000 pounds of sorbent per hour, approved in 2016 for construction to control SO2 emissions from the existing Kiln #5.

(i) Two (2) sorbent storage silos, #1 and #2, each with storage capacity of 120 tons, controlled by bin vent filters, approved in 2016 for construction.

(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 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]

(a) In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the Permittee shall comply with the following:

(1) Sorbent throughput to the two (2) sorbent storage silos shall not exceed 24,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month period.

(2) The Particulate Matter (PM) emissions from the two (2) sorbent storage silos shall not exceed 1.4 pound per ton (lb/ton) of sorbent loaded.

(3) The PM10 emissions from the two (2) sorbent storage silos shall not exceed 0.60 pound per ton (lb/ton) of sorbent loaded.

(4) The PM2.5 emissions from the two (2) sorbent storage silos shall not exceed 0.20 pound per ton (lb/ton) of sorbent loaded.

Compliance with these limits from the two (2) sorbent storage silos shall ensure that PM emissions are less than 25 tons per year, PM10 are less than 15 tons per year and PM2.5 are less than 10 tons per year, which render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable to the 2016 modification .

D.1.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e), the manufacturing processes listed in the table below shall be limited by the following:

Process Description	Process Weight Rate (ton/hr)	326 IAC 6-3-2 Allowable (lb/hr)
Kiln K4	15	25.16
Kiln K5	30	40.04
Sorbent Silos #1 and #2	16.67 each	27.00 each

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

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

$E = 4.10\ P^{0.67}$

Where:

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

D.1.3 Sulfur Dioxide (SO_2) Emission Limitations [326 IAC 7-1.1-2] [326 IAC 7-4-11.1]

Pursuant 326 IAC 7-4-11.1(a)(2), (Morgan County Sulfur Dioxide (SO_2) Emissions Limitations), the Permittee shall comply with the following:

(1) The Sulfur dioxide emissions from kiln K4 shall be reduced by a minimum control efficiency of 50% or to 2.5 pounds per million British thermal units (lbs/MMBtu) of heat input, whichever is less stringent.

(2) The Sulfur dioxide emissions from kiln K5 shall be reduced by a minimum control efficiency of 50% or to 2.5 lbs/MMBtu of heat input, whichever is less stringent.

(3) The sulfur dioxide emissions from each of the two (2) rotary kilns (K4 and K5), shall not exceed six (6) pounds per MMBtu of heat input.

These emission limits apply to sulfur dioxide emissions from both the combustion of coal and the processing of shale.

D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.1.5 Testing Requirements [326 IAC 2-7-(1),(6)] [326 IAC 2-7-5(1)] [326 IAC 2-1.1-11]

(a) In order to determine compliance with Condition D.1.2, the Permittee shall perform PM testing on the two (2) rotary kilns (K4 and K5) when burning coal, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of a 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 obligations with regard to the performance testing required by this condition.

(b) In order to determine compliance with Condition D.1.3, the Permittee shall perform SO_2 testing on the two (2) rotary kilns (K4 and K5) when burning coal, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of a 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 obligations with regard to the performance testing required by this condition.

(c) Compliance with the control efficiency limits in Condition D.1.3 shall be based on measured sulfur content in the shale and fuel compared to the outlet sulfur dioxide concentration measured during SO_2 testing. The shale and fuel sulfur content measurements for this purpose shall reflect a representative sample of the material fed into each kiln during each run of the stack test.

D.1.6 Particulate Control [326 IAC 2-7-5(1)]

In order to comply with condition D.1.2:

(a) The wet scrubber for particulate control shall be in operation and control emissions from the rotary kiln K4 at all times that the rotary kiln K4 is in operation.

(b) The baghouse for particulate control shall be in operation and control emissions from the rotary kiln K5 at all times that the rotary kiln K5 is in operation.

(c) The bin vent filter for particulate control shall be in operation and control emissions from the two (2) sorbent storage silos all the time that sorbent is being loaded.

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

D.1.7 Broken or Failed Bag or Scrubber Detection [326 IAC 2-7-5(1)] [40 CFR 64]

(a) For a single compartment unit controlling emissions from a process operated continuously, a failed unit and the associated process will 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 unit 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 shutdown no later than the completion of the processing of the material in the emission unit. Operations may continue only if the event qualifies as an emergency provisions of this permit (Section B - Emergency Provisions).

Compliance with the above monitoring conditions shall also satisfy the requirements of 40 CFR 64, Compliance Assurance Monitoring for the two (2) rotary kilns (K4 and K5).

D.1.8 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 2-7-5(1)]

Pursuant to 326 IAC 7-2, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed six (6.0) pounds per MMBtu when burning coal. Compliance shall be determined utilizing the following options:

(a) Sampling and analyzing the coal using one of the following procedures:

(1) Minimum Coal Sampling Requirements and Analysis Methods:

(A) The coal sample acquisition point shall be at a location where representative samples of the total coal flow to be combusted by the facility or facilities may be obtained. A single as-bunkered or as-burned sampling station may be used to represent the coal to be combusted by multiple facilities using the same stockpile feed system;

(B) Coal shall be sampled at least one (1) time per day;

(C) Minimum sample size shall be five hundred (500) grams;

(D) Samples shall be composited and analyzed at the end of each calendar month;

(E) Preparation of the coal sample, heat content analysis, and sulfur content analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), (e); or

(2) Sample and analyze the coal pursuant to 326 IAC 3-7-3; or

(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the kiln, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, which is conducted with such frequency as to generate the amount of information required by (a) or (b) above. [326 IAC 7-2-1(b)]
A determination of noncompliance pursuant to any of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

D.1.9 Sulfur Dioxide Control [326 IAC 2-7-5(1)]

In order to demonstrate compliance with Condition D.1.3, the sorbent injection system for sulfur dioxide control shall be in operation and control emissions from the two (2) rotary kilns (K4 and K5) at all times that the two (2) rotary kilns (K4 and K5) are in operation unless the permittee can demonstrate that uncontrolled sulfur dioxide emissions (accounting for sulfur contained in the shale and sulfur contained in fuel burned in the kilns) is below 2.5 pounds per million Btu (MMBtu) of heat input.

D.1.10 Sulfur Content [326 IAC 2-7-5(1)]

Pursuant to 326 IAC 7-4.11.1, the Permittee shall perform monthly sampling and analysis according to 326 IAC 7-2-1 for the sulfur content of shale to be processed for each upcoming months. The sampling and analysis of shale shall be performed using one of the following procedures:

(a) Shale Sampling Requirements and Analysis Methods:

(1) A composite sample shall be collected of the shale derived from a gridded area of the mine where the extraction will take place over each calendar month.

(2) A minimum of six (6) evenly spaced samples shall be collected for each monthly sampling;

(3) Minimum sample size shall be five hundred (500) grams;

(4) Samples shall be composited and analyzed prior to processing the shale;

(5) Preparation of the shale sample and shale sulfur content analysis shall be determined pursuant to 326 IAC 3-7-2(c), (d), (e); and

(b) Sample and analyze the shale pursuant to 326 IAC 3-7-3.

D.1.11 Sorbent Injection Rate [326 IAC 2-7-5(1)]

(a) In order to demonstrate compliance with the SO2 emissions limits in Condition D.1.3, the sorbent used to control sulfur dioxide (SO2) emissions from kilns K4 and K5 shall be injected into these kilns at a feed rate established during the latest stack test.

(b) In order to demonstrate compliance with the SO2 emissions limits in Condition D.1.3, the sorbent shall be injected at the feed rate established during the latest stack test until a sorbent feed rate is established, based on the monthly testing of the sulfur content of the shale to be processed and vendor data on fuel to be combusted. The sorbent injection rate shall be calculated using the following equation when complying with SO2 limit through 50% control allowed in Condition D.1.3(a):

Lc = [(Cs*38*Cfr/2000) + (Ss/100*2000*(64/32)]*0.5*Lr*Sfr

Where
Lc = Calculated sorbent injection rate (lb/hour)
Cs = Coal sulfur content (%)
Cfr = Coal feed rate (lb coal/ton shale processed)
Ss = Shale sulfur content (%)
Lr = Sorbent injection rate (lb sorbent /lb SO2 removed based on compliance test)
Sfr = Shale feed rate (tons per hour)
Note: 38S lb/ton coal (AP-42 Table 1.1-3)
64 lb/lb-mole (molecular weight of SO2)
32 lb/lb-mole (molecular weight of sulfur)
0.5 is for achieving SO2 limit through 50% control

(c) In order to demonstrate compliance with the SO2 emission limits in Condition D.1.3, the sorbent shall be injected at the feed rate established during the latest stack test until a sorbent feed rate is established, based on the monthly testing of the sulfur content of the shale to be processed and vendor data on fuel to be combusted. The sorbent injection rate shall be calculated using the following equation when complying with SO2 emission limit of less than 2.5 lb/MMBtu allowed in Condition D.1.3(a):

Lc = [(Cs*38*Cfr/2000) + (Ss/100*2000*(64/32)]*[(Rs-2.5)/Rs]*Lr*Sfr

Where
Lc = Calculated sorbent injection rate (lb/hour)
Cs = Coal sulfur content (%)
Cfr = Coal feed rate (lb coal/ton shale processed)
Ss = Shale sulfur content (%)
Rs = Uncontrolled SO2 emission rate (lb/mmBtu)
Lr = Sorbent injection rate (lb sorbent /lb SO2 removed based on compliance test)
Sfr = Shale feed rate (tons per hour)
Note: 38S lb/ton coal (AP-42 Table 1.1-3)
64 lb/lb-mole (molecular weight of SO2)
32 lb/lb-mole (molecular weight of sulfur)

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

D.1.12 Visible Emissions Notations [326 IAC 2 7 5(1)] [326 IAC 2 7 6(1)] [40 CFR 64]

(a) Visible emission notations of rotary kiln K5, baghouse stack ST5 and the two (2) sorbent storage silos stack exhausts shall be performed once per day during normal daylight operations when exhausting to the atmosphere. 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. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

Compliance with the above monitoring conditions shall also satisfy the requirements of 40 CFR 64, Compliance Assurance Monitoring for rotary kiln K5.

D.1.13 Wet Scrubber Parametric Monitoring [326 IAC 2 7 5(1)] [326 IAC 2 7 6(1)] [40 CFR 64]

(a) The Permittee shall record the pressure drop across the wet scrubber and the liquid flow rate used in conjunction with the rotary kiln K4, at least once per day when the process is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the wet scrubber is outside the normal range, the Permittee shall take a reasonable response. The normal range is 6.0 to 10.0 inches of water and the flow rate for scrubbing liquid is 100 gallons per minute, unless a different upper-bound or lower-bound value for a range and liquid flow rate are determined during the latest compliant stack test. 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.

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

Compliance with the above monitoring conditions shall also satisfy the requirements of 40 CFR 64, Compliance Assurance Monitoring for rotary kiln K4.

D.1.14 Sorbent Injection System Parametric Monitoring 326 IAC 2 7 5(1)][326 IAC 2 7 6(1)] [40 CFR 64]

The Permittee shall record the shale process throughput rate, coal throughput rate and sorbent injection rate to the two (2) rotary kilns K4 and K5, continuously when the processes are in operation and sorbent injection is necessary to achieve the sulfur dioxide emission limits contained in Condition D.1.3. "Continuously" means one reading every fifteen (15) minutes. When for any one reading the sorbent injection rate is below the level determined necessary to comply with the sulfur dioxide emission limits contained in Condition D.1.3, pursuant to D.1.11,

the Permittee shall take reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

The instrument used for determining the feed rate shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once annually.

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

D.1.15 Record Keeping Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

(a) To document the compliance status with Conditions D.1.3 and D.1.8, the Permittee shall maintain records in accordance with (1) through (4) below when burning coal. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO_2 emission limits established in Conditions D.1.3 and D.1.8.

(1) Calendar dates covered in the compliance determination period;

(2) Actual coal usage since last compliance determination period;

(3) Sulfur content, heat content, and ash content; and

(4) Sulfur dioxide emission rates.

(b) Pursuant to 326 IAC 3-7-5(a) - Record Keeping Requirements, the owners or operators of sources with total coal-fired capacity greater than or equal one hundred (100) MMBtu per hour actual heat input shall develop a standard operating procedure (SOP) to be followed for sampling, handling, analysis, quality control, quality assurance, and data reporting of the information collected pursuant to 326 IAC 3-7-2 through 326 IAC 3-7-4. In addition any revision to the SOP shall be submitted to IDEM, OAQ.

(c) To document the compliance status with Condition D.1.12- Visible Emission Notation, the Permittee shall maintain records of visible emission notations of the rotary kiln K5, baghouse, stack ST 5 and the two (2) sorbent silos stack exhausts 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.1.13(a)- Wet Scrubber Parametric Monitoring, the Permittee shall maintain records once per day of the scrubber pressure drop and liquid flow rate. The Permittee shall include in its daily record when a pressure drop reading and liquid flow rate are not taken and the reason for the lack of a pressure drop and liquid flow rate readings (e.g. the process did not operate that day).

(e) To document the compliance status with Condition D.1.3 and Condition D.1.14, the Permittee shall record the following:

(1) Maintain records in accordance with (A) through (C). Records maintained for (A) through (C) shall be taken continuously and sufficient to establish compliance with the SO_2 emission limits established in Condition D.1.3(b).

(A) Quantity of shale processed;

(B) Coal throughput rate; and

(C) Injection feed rate of sorbent in pounds per hour.

(2) Maintain monthly records of the following

(A) Quantity of coal burned;

(B) Monthly composite sample analyses of coal sulfur content and heat content; and

(C) Monthly composite sample analysis of shale sulfur content.

(f) To document the compliance status with Condition D.1.1(a)(1), the Permittee shall maintain monthly records of the sorbent loaded into the two (2) sorbent storage silos.

(h) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

D.1.16 Reporting Requirements [326 IAC 2 7 5(3)] [326 IAC 2 7 19]

(a) A quarterly report of the information to document the compliance status with Condition D.1.1(a)(1) shall be submitted, using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days following the end of each calendar quarter. 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 C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(e) One (1) reciprocating grate clinker cooler, identified as CLNKCOOL, constructed in 1966, with a maximum capacity of 40 tons of expanded shale per hour, using a multiclone as control, and exhausting to stack ST2;

(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 Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the reciprocating grate clinker cooler, CLNKCOOL, shall not exceed 42.53 pounds per hour when operating at a process weight rate of 40 tons per hour (80,000 pounds per hour).

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

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

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

Where:

E = rate of emission in pounds per hour; and

P = process weight rate in tons per hour

D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan is required for this unit and its control device. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

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

D.2.3 Particulate Control

In order to comply with condition D.2.1, the multiclone for particulate control shall be in operation and control emissions from the reciprocating grate clinker cooler at all times that the reciprocating grate clinker cooler is in operation.

D.2.4 Multiclone Failure Detection

In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have 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). Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a violation of this permit.

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

D.2.5 Visible Emission Notation

(a) Once per day visible emission notations of the reciprocating grate clinker cooler stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere. 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. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

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

D.2.6 Record Keeping Requirement

(a) To document compliance with Condition D.2.5, the Permittee shall maintain once per day records of visible emission notations of the reciprocating grate clinker cooler stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

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

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(f) One (1) expanded shale aggregate crusher line, identified as ESA, constructed in 2000, with a maximum capacity of 30 tons of expanded shale per hour and consisting of the following equipment:

(1) one (1) expanded shale aggregate crusher, identified as ESA 1, utilizing a baghouse as particulate control, with a maximum capacity of 30 tons of expanded shale per hour and exhausting through stack ST6,

(2) one (1) screen, identified as ESA 2, utilizing a baghouse as particulate control, with a maximum capacity of 30 tons of expanded shale per hour and exhausting through stack ST6, and

(3) five (5) conveyors, identified as ESA 3 through ESA 7, each with a maximum capacity of 30 tons of expanded shale per hour, utilizing a water spray system on the feed

conveyor as particulate control and exhausting fugitively.

[Under 40 CFR 60, Subpart OOO, the crusher, screen, and conveyors are considered affected facilities].

(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 Prevention of Significant Deterioration (PSD) Minor Limit [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) not applicable, the particulate emissions from the expanded shale aggregate crushing line ESA shall comply with the following:

Process	Process ID	Stack ID	Emission Limitation (lb/hr)	
			PM	PM10
Crushing	ESA 1	ST6	2.70	2.01
Screening	ESA 2	ST6		
Conveying	ESA 3 to ESA7	NA	1.20	1.20

Compliance with these limits will limit the potential to emit of PM and PM_{10} emissions from the expanded shale aggregate crusher processes (Screening, Crushing and Conveying) to less than 25 and15 tons per year, respectively and render the requirements of 326 IAC 2-2 (PSD) not applicable to the April1999 modification (SSM 109-10383-00007 issued on April 29, 1999).

D.3.2 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e), the manufacturing processes listed in the table below shall be limited by the following:

Process Description	Process Weight Rate (ton/hr)	326 IAC 6-3-2 Allowable (lb/hr)
Crusher ESA1	30	40.04
Screen ESA2	30	40.04
Conveyors ESA3 to ESA7	30 each	40.04 each

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

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

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

D.3.3 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan is required for these facilities and any 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 2-7-5(1)]

D.3.4 Particulate Control

In order to comply with conditions D.3.1, and D.3.2:

(a) The baghouse for particulate control shall be in operation and control emissions from the one (1) expanded shale aggregate crusher ESA 1 and one (1) screen ESA 2 at all times that the processes are in operation.

(b) The water spray system for particulate control shall be in operation and control emissions from the five (5) conveyors ESA 3 through ESA 7 at all times that the processes are in operation, except when the ambient temperature is at or below the freezing point or the shale is surface-saturated with moisture.

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

D.3.5 Broken or Failed Bag Detection [40 CFR 64]

(a) For a single compartment units controlling emissions from a process operated continuously, a failed unit and the associated process will 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 shutdown no later than the completion of the processing of the material in the emission unit. Operations may continue only if the event qualifies as an emergency provisions of this permit (Section B - Emergency Provisions).

D.3.6 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

In order to determine compliance with Conditions D.3.1 and D.3.2, the Permittee shall perform PM and PM_{10} testing on Stack ST6, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

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

D.3.7 Visible Emission Notation [40 CFR 64]

(a) Once per day visible emission notations of the expanded shale aggregate crusher line stack exhausts shall be performed during normal daylight operations when exhausting to the atmosphere. 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. Failure to take response steps shall be considered a deviation from this permit. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition.

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

D.3.8 Record Keeping Requirement

(a) To document compliance with Condition D.3.7, the Permittee shall maintain once per day records of visible emission notations of the expanded shale aggregate crusher line stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).

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

SECTION E.1 NSPS

Emissions Unit Description:

(f) One (1) expanded shale aggregate crusher line, identified as ESA, constructed in 2000, with a maximum capacity of 30 tons of expanded shale per hour and consisting of the following equipment:

(1) one (1) expanded shale aggregate crusher, identified as ESA 1, utilizing a baghouse as particulate control, with a maximum capacity of 30 tons of expanded shale per hour and exhausting through stack ST6,

(2) one (1) screen, identified as ESA 2, utilizing a baghouse as particulate control, with a maximum capacity of 30 tons of expanded shale per hour and exhausting through stack ST6, and

(3) five (5) conveyors, identified as ESA 3 through ESA 7, each with a maximum capacity of 30 tons of expanded shale per hour, utilizing a water spray system on the feed conveyor as particulate control and exhausting fugitively.

[Under 40 CFR 60, Subpart OOO, the crusher, screen, and conveyors are considered affected facilities].

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 60, Subpart OOO.

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

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

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

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart OOO (included as Attachment A to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

(1) 40 CFR 60.670
(2) 40 CFR 60.671
(3) 40 CFR 60.672(a)
(4) 40 CFR 60.673
(5) 40 CFR 60.675(a), and (b)
(6) 40 CFR 60.676(a), and (k)

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

Source Name: Arcosa LW HPB, LLC
Source Address: 6618 N Tidewater Rd., Mooresville, Indiana 46258
Part 70 Permit No.: T109-39783-00007

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: Arcosa LW HPB, LLC
Source Address: 6618 N Tidewater Rd., Mooresville, Indiana 46258
Part 70 Permit No.: T109-39783-00007

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**) daytime 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: Arcosa LW HPB, LLC
Source Address: 6618 N Tidewater Rd., Mooresville, Indiana 46258
Part 70 Permit No.: T109-39783-00007
Facility: Sorbent Storage Silos #1 and #2
Parameter: Sorbent throughput in tons
Limit: The sorbent throughput to the sorbent silos #1 and #2 shall not exceed twenty-four thousand (24,000) tons per twelve (12) month consecutive period with compliance determined at the end of each month.

QUARTER : _____ YEAR: _____

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

☐ No deviation occurred in this quarter.

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

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

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

Source Name: Arcosa LW HPB, LLC
Source Address: 6618 N Tidewater Rd., Mooresville, Indiana 46258
Part 70 Permit No.: T109-39783-00007

Months: _____ to _____ Year: _____

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

□ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

□ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

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

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

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

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

Attachment A

Part 70 Operating Permit No: 109-39783-00007

[Downloaded from the eCFR on May 13, 2013]

Electronic Code of Federal Regulations

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.

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

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 of Part 60—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 of Part 60—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 of Part 60—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 Operating Permit Renewal

Source Description and Location

Source Name:	**Arcosa LW HPB LLC**
Source Location:	**6618 N. Tidewater Road, Mooresville, Indiana 46158**
County:	**Morgan (Clay Township)**
SIC Code:	**3295 (Minerals and Earth, Ground or Otherwise Treated)**
Permit Renewal No.:	**TV 109-39783-00007**
Permit Reviewer:	**Wilfredo de la Rosa**

On March 26, 2018, TRN LW HPB, LLC submitted an application to the Office of Air Quality (OAQ) requesting to add a new portable screening plant and renew its operating permit. On November 20, 2018, OAQ received a request to change the name of the source to Arcosa LW HBP, LLC to be incorporated in the renewal. On November 30, 2018, the source further requested to remove the use of No. 4 fuel oil in kiln K4 since they have not used fuel oil since the modification of 1999 and they have no plan of using it in the future. OAQ has reviewed the operating permit renewal application from Arcosa LW HPB, LLC relating to the operation of a stationary expanded shale processing plant. Arcosa LW HPB, LLC was issued its third Part 70 Operating Permit Renewal (T 109-33622-00007) on December 27, 2013.

This source was previously using the address, Centerton Road, Brooklyn, Indiana 46111 in its permit applications. The postal address was changed without relocating to 6618 N. Tidewater Road Mooresville, Indiana 46158 in the third renewal of the operating permit, T109-33622-00007. The USPS office in Mooresville confirmed on November 30, 2018 that the two postal addresses used are for the same plant location.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) One (1) pre-kiln shale processing operation, identified as pre-kiln, constructed in 1954, with a maximum capacity of 200 tons of raw shale per hour, using wet suppression of fugitive dust as control, and exhausting outside the building, and consisting of the following equipment:

  (1) one (1) primary crusher, identified as PK1, with a maximum capacity of 200 tons of raw shale per hour,

  (2) one (1) secondary crusher, identified as PK2, with a maximum capacity of 100 tons of raw shale per hour,

  (3) six (6) conveyors, identified as PK3 through PK8, each with a maximum capacity of 200 tons of raw shale per hour;

(b) one (1) rotary kiln, identified as K4, constructed in 1962, with a maximum heat input of 100 million British Thermal Units (MMBtu) per hour burning natural gas or bituminous coal, with a maximum capacity of 15 tons of raw shale per hour, using a Peabody wet scrubber as control, and exhausting to stack ST4;

(c) One (1) rotary kiln, identified as K5, constructed in 1966, with a maximum heat input of 100 MMBtu per hour burning natural gas or bituminous coal, with a maximum capacity of 30 tons of raw shale per hour, using a cloth baghouse as control, and exhausting to stack ST5;

(d) One (1) haydite crusher line, identified as HCR, constructed in 1962, with a maximum capacity of 100 tons of expanded shale per hour, using wet suppression of fugitive dust as control, exhausting outside the building, and consisting of the following equipment:

(1) one (1) primary haydite crusher, identified as HCR1, with a maximum capacity of 100 tons of expanded shale per hour,

(2) Two (2) conveyors, identified as HCR9 and HCR10, with a maximum capacity of 100 tons each of expanded shale per hour.

(e) One (1) reciprocating grate clinker cooler, identified as CLNKCOOL, constructed in 1966, with a maximum capacity of 40 tons of expanded shale per hour, using a multiclone as control, and exhausting to stack ST2;

(f) One (1) expanded shale aggregate crusher line, identified as ESA, constructed in 2000, with a maximum capacity of 30 tons of expanded shale per hour and consisting of the following equipment:

(1) one (1) expanded shale aggregate crusher, identified as ESA 1, utilizing a baghouse, identified as BH1, as particulate control, with a maximum capacity of 30 tons of expanded shale per hour and exhausting through stack ST6,

(2) one (1) screen, identified as ESA 2, utilizing a baghouse, identified as BH1, as particulate control, with a maximum capacity of 30 tons of expanded shale per hour and exhausting through stack ST6, and

(3) five (5) conveyors, identified as ESA 3 through ESA 7, each with a maximum capacity of 30 tons of expanded shale per hour, utilizing a water spray system on the feed conveyor as particulate control and exhausting fugitively.

[Under 40 CFR 60, Subpart OOO, the crusher, screen, and conveyors are considered affected facilities].

(g) One (1) sorbent injection system, identified as CE-K4, with maximum rated capacity of 4,000 pounds of sorbent per hour, constructed in 2016 to control SO2 emissions from the existing Kiln #4.

(h) One (1) sorbent injection system, identified as CE-K5 with maximum rated capacity of 4,000 pounds of sorbent per hour, constructed in 2016 to control SO2 emissions from the existing Kiln #5.

(i) Two (2) sorbent storage silos, #1 and #2, each with storage capacity of 120 tons, controlled by bin vent filters, constructed in 2016.

(j) One (1) portable screening plant approved in 2018 for construction consisting of the following:

(1) One (1) triple deck screen, identified as PS1 with a maximum capacity of 250 tons per hour

(2) Four (4) conveyors, identified as PS2 through PS5, each with a maximum capacity of 250 tons per hour.

Emission Units and Pollution Control Equipment Removed From the Source

The source has removed the following emission units:

(a) One (1) secondary haydite crusher, identified as HCR2, with a maximum capacity of 100 tons of expanded shale per hour,

(b) Three (3) screens, identified as HCR3 through HCR5, each with a maximum capacity of 100 tons of expanded shale per hour, and

(c) Five (5) conveyors, identified as HCR11 through HCR15, each with a maximum capacity of 100 tons of expanded shale per hour

Insignificant Activities

The source also consists of the following insignificant activities:

(a) Paved and unpaved roads and parking lots with public access; [326 IAC 6-4]

(b) Other activities or categories with emissions below insignificant thresholds: [326 IAC 6-4]

(1) One coal silo, identified as silo 6, using no control and exhausting indoor,

(2) One (1) coal unloading operation, with a maximum capacity of 280 tons of coal per hour, consisting of one (1) dump pit, one (1) hopper for coal unloading, and two (2) conveyors,

(3) Four (4) covered silos, identified as silos 3, 4, 5A, and 5B, each with a maximum capacity of 200 tons of raw shale,

(4) Three (3) hoppers, identified as HCR6 through HCR8, each with a maximum capacity of 100 tons of raw shale per hour,

(5) Two (2) chutes, identified as HCR16 and HCR17, each with a maximum capacity of 100 tons of expanded shale per hour.

Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. T109-33622-00007 on December 27, 2013. The source has since received the following approval:

Permit Type	Permit Number	Issuance Date
TV Interim Significant Source Modification	109-36721I-00007	March 30, 2016
TV Significant Source Modification (Minor PSD/EO)	109-36721-00007	June 2, 2016
TV Significant Permit Modification	109-36723-00007	June 21, 2016
TV Administrative Amendment	109-37881-00007	December 20, 2016
TV Administrative Amendment	109-39223-00007	November 6, 2017

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Morgan County.

Pollutant	Designation
SO_2	Non-attainment effective October 4, 2013, for the 2010 SO_2 standard for Clay and Washington Townships. Better than national standards for the remainder of county..
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard.[1]
$PM_{2.5}$	Unclassifiable or attainment effective April 15, 2015, for the 2012 annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour $PM_{2.5}$ standard.
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Unclassifiable or attainment effective January 29, 2012, for the 2010 NO_2 standard.
Pb	Unclassifiable or attainment effective December 31, 2011 for the 2008 lead standard..
[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 (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Morgan County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Morgan County has been classified as attainment for $PM_{2.5}$. Therefore, direct $PM_{2.5}$, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) SO_2
U.S. EPA, in the Federal Register Notice 78 FR 47191 dated August 5, 2013, designated Morgan County Clay Township as nonattainment for SO_2. Therefore, SO_2 emissions were reviewed pursuant to the requirements of Emission Offset, 326 IAC 2-3.

(d) Other Criteria Pollutants
Morgan County has been classified as attainment or unclassifiable in Indiana for all the other criteria pollutants (PM, PM_{10} and CO). 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 (1) of the twenty-eight (28) listed source categories under 326 IAC 2-2-1(ff)(1), 326 IAC 2-3-2(g), or 326 IAC 2-7-1(22)(B), and there is no applicable New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants 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.

Greenhouse Gas (GHG) Emissions

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHG emissions to determine operating permit applicability or PSD applicability to a source or modification.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	24484.73
PM_{10}	5322.52
$PM_{2.5}$	5319.91
SO_2	18447.43
NO_x	769.41
VOC	158.46
CO	188.43
Single HAP	43.08
Total HAP	43.08

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(30)) of PM10, PM2.5, SO2, NOx, VOC and CO are equal to or greater than one hundred (100) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(30)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(30)) of a

combination of HAPs is equal to or greater than twenty-five (25) tons per year. The source will be issued a Part 70 Operating Permit Renewal.

Actual Emissions

The following table shows the actual emissions as reported by the source. This information reflects the 2016 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	-
PM_{10}	42.07
SO_2	14.63
NO_x	168.86
VOC	69.05
CO	52.83
HCL	8.54-

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Potential to Emit After Issuance

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

	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)									
Process/ Emission Unit	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	Total HAPs	Worst Single HAP	
PRE-KILN PROCESSING										
Primary Crushing, PK1	0.05	0.02	0.004	-	-	-	-	-	-	-
Secondary Crushing, PK2	0.05	0.02	0.004	-	-	-	-	-	-	-
Conveyor Transfer, PK3-PK8	0.74	0.24	0.05	-	-	-	-	-	-	-
HAYDITE CRUSHER LINE, HCR										
Primary Crushing, HCR1	0.13	0.06	0.01	-	-	-	-	-	-	-

	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)									
Process/ Emission Unit	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	Total HAPs	Worst Single HAP	
Conveyor Transfer, HCR9-HCR10	0.31	0.10	0.02	-	-	-	-	-	-	-
PORTABLE SCREENING										
Triple-deck Screening	2.41	0.81	0.05	-	-	-	-	-	-	-
Conveyors, PS2-PS5	0.61	0.20	0.04	-	-	-	-	-	-	-
ROTARY KILNS										
Rotary Kiln, K4	19.76	7.26	7.26	2150.08	322.29	53.61	74.83	21.54	21.54	HCL
Rotary Kiln, K5	1.46	0.54	0.54	2628.00	447.12	104.85	113.60	21.54	21.54	HCL
CLINKER COOLER, CLNKCOOL	52.56	21.02	21.02	-	-	-	-	-	-	-
EXPANDED SHALE CRUSHER, ESA										
Expanded Shale Crusher, ESA1	131.40	9.20	9.20	-	-	-	-	-	-	-
Expanded Shale Screen, ESA2	499.32	34.95	34.95	-	-	-	-	-	-	-
Conveyors, ESA3-ESA7	157.68	78.84	78.84	-	-	-	-	-	-	-
SORBENT HANDLING										
Sorbent Silos #1 & #2	16.80	7.20	2.40	-	-	-	-	-	-	-
COAL HANDLING										
Coal Unloading	0.60	0.21	0.03	-	-	-	-	-	-	-
Total PTE of Entire Source (excluding fugitives)	**883.89**	**160.69**	**154.44**	**4778.08**	**769.41**	**158.46**	**188.43**	**43.08**	**43.08**	**HCL**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10	
PSD Major Source Thresholds	250	250	250	NA	250	250	250	NA	NA	
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	NA	100	NA	NA	NA	NA	NA	
FUGITIVE EMISSIONS										
Stockpile, Loading/Unloading and Unpaved Roads	22.75	9.44	1.33	-	-	-	-	-	-	

	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)									
Process/ Emission Unit	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	Total HAPs	Worst Single HAP	
negl. = negligible * Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a "regulated air pollutant". **$PM_{2.5}$ listed is direct $PM_{2.5}$.										

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because the emissions of at least one regulated pollutant are greater than two hundred fifty (250) tons 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 a major stationary source, under Emission Offset (326 IAC 2-3), because SO2, a nonattainment regulated pollutant, is emitted at a rate of 100 tons per year or more.

(c) This source is a major source of HAP, as defined in 40 CFR 63.2, because HAP emissions are equal to or greater than ten (10) tons per year for a single HAP and equal to or greater than twenty-five (25) tons per year for a combination of HAPs. Therefore, this source is a major source under Section 112 of the Clean Air Act (CAA).

Federal Rule Applicability

Compliance Assurance Monitoring (CAM):

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each existing pollutant-specific emission unit that meets the following criteria:

(1) has a potential to emit before controls equal to or greater than the major source threshold for the regulated pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant (or a surrogate thereof); and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

(b) Pursuant to 40 CFR 64.2(b)(1)(i), emission limitations or standards proposed after November 15, 1990 pursuant to a NSPS or NESHAP under Section 111 or 112 of the Clean Air Act are exempt from the requirements of CAM. Therefore, an evaluation was not conducted for any emission limitations or standards proposed after November 15, 1990 pursuant to a NSPS or NESHAP under Section 111 or 112 of the Clean Air Act.

(c) Pursuant to 40 CFR 64.2(b)(1)(iii), Acid Rain requirements pursuant to Sections 404, 405, 406, 407(a), 407(b), or 410 of the Clean Air Act are exempt emission limitations or standards. Therefore, CAM was not evaluated for emission limitations or standards for SO_2 and NO_X under the Acid Rain Program.

(d) Pursuant to 40 CFR 64.3(d), if a continuous emission monitoring system (CEMS) is required pursuant to other federal or state authority, the owner or operator shall use the CEMS to satisfy the requirements of CAM according to the criteria contained in 40 CFR 64.3(d).

The following table is used to identify the applicability of CAM to each existing emission unit and each emission limitation or standard for a specified pollutant based on the criteria specified under 40 CFR 64.2:

Emission Unit/Pollutant	Control Device	Applicable Emission Limitation	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Kiln K4 - PM*	WS	Y	> 100	19.76	Y	N
Kiln K4 - PM10	WS	Y	> 100	7.26	Y	N
Kiln K4 - SO2	Sorbent	Y	> 100	> 100	Y	Y
Kiln K5 - PM*	BH	Y	> 100	1.46	Y	N
Kiln K5 - PM10	BH	Y	> 100	0.54	Y	N
Kiln K5 - SO2	Sorbent	Y	> 100	> 100	Y	Y
ESA 1 PM*	BH	Y	> 100	> 100	Y	N
ESA 1- PM10	BH	Y	> 100	34.95	Y	N
ESA 2 PM*	BH	Y	> 100	> 100	Y	N
ESA 2- PM10	BH	Y	> 100	9.20	Y	N

Uncontrolled PTE (tpy) and controlled PTE (tpy) are evaluated against the Major Source Threshold for each pollutant. Major Source Threshold for criteria pollutants (PM10, PM2.5, SO2, NOX, VOC and CO) is 100 tpy, for a single HAP ten (10) tpy, and for total HAPs twenty-five (25) tpy.
Under the Part 70 Permit program (40 CFR 70), PM is not a regulated pollutant.

PM* For limitations under 326 IAC 6-3-2, 326 IAC 6.5, and 326 IAC 6.8, IDEM OAQ uses PM as a surrogate for the regulated air pollutant PM10. Therefore, uncontrolled PTE and controlled PTE reflect the emissions of the regulated air pollutant PM10.

Controls: BH = Baghouse, C = Cyclone, DC = Dust Collection System, RTO = Regenerative or Recuperative Thermal Oxidizer, WS = Wet Scrubber, ESP = Electrostatic Preciptator

Emission units without air pollution controls are not subject to CAM. Therefore, they are not listed.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM, are applicable to Kilns K4 & K5, ESA 1 & ESA 2 for PM/PM10 and Kilns K4 & K5 for SO2. A CAM plan was submitted as part of a previous permit application and the Compliance Determination and Monitoring Requirements section includes a detailed description of the CAM requirements.

New Source Performance Standards (NSPS)

(a) The expanded shale crusher line identified as ESA is subject to the New Source Performance Standard for Nonmetallic Mineral Processing Plants (40 CFR 60.670, Subpart OOO) which is incorporated by reference as 326 IAC 12 because it was constructed after the applicability date of August 31, 1983 and it has the required components in processing nonmetallic minerals. The emission units subject to theis rule is as follows:

(1) One (1) expanded shale aggregate crusher line, identified as ESA, constructed in 2000, with a maximum capacity of 30 tons of expanded shale per hour and consisting of the following equipment:

(A) one (1) expanded shale aggregate crusher, identified as ESA 1, utilizing a baghouse as particulate control, with a maximum capacity of 30 tons of expanded shale per hour and exhausting through stack ST6,

(B) one (1) screen, identified as ESA 2, utilizing a baghouse as particulate control, with a maximum capacity of 30 tons of expanded shale per hour and exhausting through stack ST6, and

(C) five (5) conveyors, identified as ESA 3 through ESA 7, each with a maximum capacity of 30 tons of expanded shale per hour, utilizing a water spray system on the feed conveyor as particulate control and exhausting fugitively.

[Under 40 CFR 60, Subpart OOO, the crusher, screen, and conveyors are considered affected facilities].

The expanded shale crusher line, identified as ESA is subject to the following portion of 40 CFR 63, Subpart OOO:

(1) 40 CFR 60.670
(2) 40 CFR 60.671
(3) 40 CFR 60.672(a)
(4) 40 CFR 60.673
(5) 40 CFR 60.675(a) and (b)
(6) 40 CFR 60.676(a), and (k)

National Emission Standards for Hazardous Air Pollutants (NESHAPs)

(b) This major source is not subject to the requirements of 40 CFR 63, Subpart JJJJJ because it is not a Brick and Structural Clay Product (BSCP) Manufacturing facility that produces brick, clay pipe, roof tile, extruded floor and wall tile and/or other extruded dimensional clay products.

(b) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in this permit renewal.

State Rule Applicability - Entire Source

326 IAC 1-6-3 (Preventive Maintenance Plan)
The source is subject to 326 IAC 1-6-3.

326 IAC 1-5-2 (Emergency Reduction Plans)
The source is subject to 326 IAC 1-5-2. The permittee prepared and submitted an emergency reduction plan (ERP) on May 2, 1999.

326 IAC 2-2 (Preventiion of Significant Deterioration (PSD))
The source has been in operation prior to the promulgation of the PSD Rules (326 IAC 2-2) on August 7, 1977. Arcosa LW HPB, LLC is not one of the twenty-eight (28) listed source categories with PSD major source threshold level of 250 tons per year. The source is an existing major PSD source. Therefore, all modifications made after August 7, 1977 were evaluated under the PSD Rules.

April 1999 Modification
The expanded shale aggregate crusher line, identified as ESA, constructed in 2000 has uncontrolled PM emissions greater than 25 tons per year. Pursuant to the Significant Source Modification No. 109-10383-00007 issued on April 29, 1999, the PM emissions from the expanded shale aggregate crusher line ESA shall be less than 3.90 pounds per hour. Compliance with the limit will keep the PM emissions to less than 25 tons per year and render 326 IAC 2-2 not applicable to the 1999 modification.

The expanded shale aggregate crusher line, identified as ESA, constructed in 2000 has uncontrolled PM10 emissions greater than 15 tons per year. Pursuant to the Significant Source Modification No. 109-10383-00007 issued on April 29, 1999, the PM10 emissions from the expanded shale aggregate crusher line ESA shall be less than 3.21 pounds per hour. Compliance with the limit will keep the PM10 emissions to less than 15 tons per year and render 326 IAC 2-2 not applicable to the 1999 modification.

Note: Based on the comment and recommendation of the Compliance section, to facilitate testing, the emission limitations on ESA1 and ESA2 have been aggregated since both units exhaust to a common stack, ST6.

December 1999 Modification
The rotary kiln identified as K4, constructed in 1962 and modified in 1999, has uncontrolled PM10 emissions greater than 15 tons per year. Pursuant to the Significant Source Modification No. 109-11087-00007 issued on December 7, 1999, the PM10 emissions from the use of #4 fuel oil at K4 shall be less

than 3.42 pounds per hour. Compliance with the limit will keep the PM10 emissions to less than 15 tons per year and render 326 IAC 2-2, not applicable to this modification.

The rotary kiln identified as K4, constructed in 1962 and modified in 1999 has uncontrolled SO2 and NOx emissions greater than 40 tons per year each. Pursuant to the Significant Source Modification No. 109-11087-00007 issued on December 7, 1999, the use of No. 4 fuel oil in rotary kiln K4 shall be limited to less than 990 kilo gallons per twelve (12) consecutive month period. The SO_2 emissions shall not exceed 75 pounds per kilo gallon of fuel oil and the NOx emissions shall not exceed 20 pounds per kilo gallon of fuel oil. Compliance with this limit will keep the SO2 and NOx potential to emit to less than 40 tons per year and render 326 IAC 2-2 not applicable to the December 1999 modification.

2016 Modification
The two (2) Sorbent silos, constructed in 2016 have uncontrolled PM, PM10, and PM2.5 emissions greater than 25, 15 and 10 tons per year, respectively. Pursuant to the Significant Source Modification No. 109-36721-00007, issued on June 2, 2016, the sorbent throughput to the two (2) sorbent silos shall not exceed 24,000 tons per twelve (12) consecutive month period, each, with compliance determined at the end of the month. The PM, PM10 and PM2.5 emissions from the two (2) sorbent silos shall not exceed 1.40, 0.60 and 0.20 pounds per ton of sorbent throughput, respectively. Compliance with these limits above will limit PM, PM10 and PM2.5 emissions to less than 25, 15, and 10 tons per year respectively and render 326 IAC 2-2 (PSD) not applicable to the 2016 modification.

2018 Modification
The new portable screening plant consisting of one (1) triple deck screen, identified as PS1 and four (4) conveyors, identified as PS2 through PS5, approved in 2018 for construction has uncontrolled PM emissions less than 5 tons per year. Therefore, the requirements of 326 IAC 2-2 are not applicable to the 2018 modification.

On November 30, 2018, the source requested to remove the use of No. 4 fuel oil in kiln K4 since they have not used fuel oil since the 1999 modification and they have no plan of using it in the future. The corresponding limits associated with the use of the No. 4 fuel have been deleted from the permit.

326 IAC 2-3 (Emission Offset)
The source has been in operation prior to the promulgation of the Emission Offset Rules (326 IAC 2-3) on December 21,1976. At that time of operation, Morgan county was on attainment source location status for all pollutants. The source was emitting greater than 250 tons per year for all the criteria pollutants regulated at that time. On October 4, 2013, Morgan country Clay township was designated to nonattainment status for SO2. Since SO2 was emitted greater than 100 tons per year, it is considered a major source for Emission Offset (EO) for SO2 only.

326 IAC 2-6 (Emission Reporting)
This source is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit pursuant to 326 IAC 2-7 (Part 70). The potential to emit of SO2 is greater than 2,500 tons per year. Therefore, pursuant to 326 IAC 2-6-3(a)(1), annual reporting is required. An emission statement shall be submitted in accordance with the compliance schedule in 326 IAC 2-6-3 and every year thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 2-7-6(5) (Annual Compliance Certification)
The U.S. EPA Federal Register 79 FR 54978 notice does not exempt Title V Permittees from the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D), but the submittal of the Title V annual compliance certification to IDEM satisfies the requirement to submit the Title V annual compliance certifications to EPA. IDEM does not intend to revise any permits since the requirements of 40 CFR 70.6(c)(5)(iv) or 326 IAC 2-7-6(5)(D) still apply, but Permittees can note on their Title V annual compliance certification that submission to IDEM has satisfied reporting to EPA per Federal Register 79 FR 54978. This only applies to Title V Permittees and Title V compliance certifications.

326 IAC 5-1 (Opacity Limitations)

This source is subject to the opacity limitations specified in 326 IAC 5-1-2(1)

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

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is not subject to the requirements of 326 IAC 6-5 because the source has potential fugitive emissions less than 25 tons per year.

326 IAC 6.5 PM Limitations Except Lake County
This source is not subject to 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

State Rule Applicability – Individual Facilities

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

(a) Pursuant to 326 IAC 6-3-2(b)(14), the pre-kiln crushers and conveyors, the haydite crusher and conveyors, the portable screen and conveyors and the coal unloading operation have the potential to emit less than 0.551 lbs per hour. Therefore 326 IAC 6-3-2 does not apply.

(b) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) shall not exceed the following limits as specified in the table below when operating at the listed process weight rate:

Operation	process weight rate of each emission unit (ton/hr)	emission limit for each emission unit (lb/hr)
Kiln K4	15	25.16
Kiln K5	30	40.04
Sorbent Silos #1 and #2	16.67, each	27.00 each
Crusher ESA1	30	40.04
Screen ESA2	30	40.04
Conveyors ESA3 to ESA7	30, each	40.04 each

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

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

The control equipment shall be in operation at all times the facility is in operation, in order to comply with this limit.

(c) Pursuant to 326 IAC 6-3-2, the particulate emissions from the reciprocating grate clinker cooler, identified as CLNKCOOL shall not exceed 42.53 pounds per hour when operating at a process weight rate of 40 tons per hour (80,000 pounds per hour).

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

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

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

The multiclone shall be in operation at all times the grate clinker cooler is in operation, in order to comply with this limit.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)
The rotary kilns identified as K4 and K5 are subject to 326 IAC 7-1.1 because its SO_2 PTE is equal to or greater than 25 tons/year or 10 pounds/hour. The sulfur dioxide emissions from the rotary kilns K4 and K5 when burning coal shall be limited to 6 pounds per million BTU of heat input..

326 IAC 7-4-11.1 (Morgan County sulfur dioxide emission limitations)
The kilns identified as K4 and K5 are subject to 326 IAC 7-4-11.1 because they are located in Morgan County and are listed facilties with specific emission limits and other requirements. Kiln #4 and Kiln #5 are currently limited to a minimum control efficiency of 50% or 2.5 lbs per million Btu, whichever is less stringent but shall not exceed 6.0 lbs per million Btu.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to assure 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.

(a) The Compliance Determination Requirements applicable to this source are as follows:

Summary of Testing Requirements					
Emission Unit	**Control Device**	**Timeframe for Testing**	**Pollutant**	**Frequency of Testing**	**Authority**
Rotary Kilns (K4 and- K5)	Baghouse/Scrubber	N/A when burning coal	PM	5 years	326 IAC 6-3-2
Rotary Kiln K4	Lime Injection	N/A	SO2	5 years	326 IAC 2-2 326 IAC 7-1.1-2 326 IAC 7-4-11.1
Rotary Kiln K5	Lime Injection	N/A	SO2	5 years	326 IAC 2-2 326 IAC 7-1.1-2 326 IAC 7-4-11.1
Stack ST6	Baghouse	N/A	PM and PM10	5 years	326 IAC 2-2 and 326 IAC 6-3-2

(b) The Compliance Monitoring Requirements applicable to this source are as follows:

Control	Parameter	Frequency	Range	Excursions and Exceedances
Multiclone (Reciprocating Grate Clinker Cooler)	Visible Emissions	Daily	Normal-Abnormal	Response Steps
Baghouse, BH1 (ESA1 - ESA 2)	Visible Emissions	Daily	Normal-Abnormal	Response Steps
Baghouse (K5)	Visible Emissions	Daily	Normal-Abnormal	Response Steps
Wet Scrubber (K4)	Water Pressure Drop,	Daily	6.0 to 10.0 inches	Response Steps
Wet Scrubber (K4)	Flow Rate	Daily	< 100 gallons/min	Response Steps
Bin Vent Filters (Sorbent Silos #1 and #2)	Visible Emissions	Daily	Normal - Abnormal	Response Steps

Conclusion and Recommendation

The staff recommends to the Commissioner that the Part 70 Operating Permit Renewal be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on March 26, 2018. Additional information was received on November 20, 2018 for the change of name and on November 30, 2018 for the removal of the use of No. 4 fuel oil in kiln K4..

The operation of this expanded shale processing plant shall be subject to the conditions of the attached Part 70 Operating Permit Renewal No. 109-39783-00007.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Wilfredo de la Rosa 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) 232-8422or toll free at 1-800-451-6027 extension 232-8422.

(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 Air Permits page on the Internet at: http://www.in.gov/idem/airquality/2356.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

Appendix A: Emissions Calculations
Source Summary

Company Name: Arcosa LW HPB, LLC
Address City IN Zip: 6618 N Tidewater Road, Mooresville, Indiana 46158
TV Renewal No.: 109-39783-00007
Reviewer: Wilfredo de la Rosa

	Uncontrolled Potential to Emit, tons/year									
Emission Units	PM	PM_{10}	$PM_{2.5}$	SO_2	NOx	VOC	CO	Total HAP	Single HAP	
PRE-KILN PROCESSING										
Primary Crushing, PK1	1.05	0.47	0.09	-	-	-	-	-	-	
Secondary Crushing, PK2	1.05	0.47	0.09	-	-	-	-	-	-	
Conveyor Transfer, PK3-PK8	0.74	0.24	0.05	-	-	-	-	-	-	
HAYDITE CRUSHER LINE, HCR										
Primary Crushing, HCR1	1.31	0.59	0.11	-	-	-	-	-	-	
Conveyor Transfer, HCR9-HCR10	0.31	0.10	0.02	-	-	-	-	-	-	
PORTABLE SCREENING										
Triple-deck Screening	2.41	0.81	0.05	-	-	-	-	-	-	
4 Conveyors, PS2-PS5	0.61	0.20	0.04	-	-	-	-	-	-	
ROTARY KILNS										
Rotary Kiln, K4	3952.91	1452.90	1452.90	4300.15	322.29	53.61	74.83	21.54	21.54	HCL
Rotary Kiln, K5	7316.75	2694.63	2694.63	14147.27	447.12	104.85	113.60	21.54	21.54	HCL
Clinker Cooler, CLNKCOOL	52.56	21.02	21.02	-	-	-	-	-	-	
EXPANDED SHALE CRUSHER, ESA										
Expanded Shale Crusher, ESA1	9986.40	699.05	699.048	-	-	-	-	-	-	
Expanded Shale Screen, ESA2	2628.00	183.96	183.96	-	-	-	-	-	-	
5 Conveyors, ESA3-ESA7	525.60	262.80	262.80	-	-	-	-	-	-	
SORBENT HANDLING										
Sorbent Silos #1 & #2	14.42	5.05	5.05	-	-	-	-	-	-	
COAL HANDLING										
Coal Unloading	0.60	0.21	0.03	-	-	-	-	-	-	
PRODUCT HANDLING										
Stockpile	11.93	5.97	0.90	-	-	-	-	-	-	
Loading/Unloading	3.28	1.55	0.24	-	-	-	-	-	-	
Unpaved Roads	7.54	1.92	0.19	-	-	-	-	-	-	
Total Fugitive Emissions	22.75	9.44	1.33							
TOTAL EMISSIONS excluding fugitives	24484.73	5322.52	5319.91	18447.43	769.41	158.46	188.43	43.08	43.08	HCL

	Controlled Potential to Emit, tons/year									
Emission Units	PM	PM_{10}	$PM_{2.5}$	SO_2[1]	NOx	VOC	CO	Total HAP	Single HAP	
PRE-KILN PROCESSING										
Primary Crushing, PK1	0.05	0.02	0.004	-	-	-	-	-	-	
Secondary Crushing, PK2	0.05	0.02	0.004	-	-	-	-	-	-	
Conveyor Transfer, PK3-PK8	0.74	0.24	0.05	-	-	-	-	-	-	
HAYDITE CRUSHER LINE, HCR										
Primary Crushing, HCR1	0.13	0.06	0.01	-	-	-	-	-	-	
Conveyor Transfer, HCR9-HCR10	0.31	0.10	0.02	-	-	-	-	-	-	
PORTABLE SCREENING										
Triple-deck Screening	2.41	0.81	0.05	-	-	-	-	-	-	
4 Conveyors, PS2-PS5	0.61	0.20	0.04	-	-	-	-	-	-	
ROTARY KILNS										
Rotary Kiln, K4	19.76	7.26	7.26	2150.08	322.29	53.61	74.83	0.11	0.11	HCL
Rotary Kiln, K5	1.46	0.54	0.54	7073.64	447.12	104.85	113.60	0.004	0.004	HCL
Clinker Cooler, CLNKCOOL	52.56	21.02	21.02	-	-	-	-	-	-	
EXPANDED SHALE CRUSHER, ESA										
Expanded Shale Crusher, ESA1	499.32	34.95	34.95	-	-	-	-	-	-	
Expanded Shale Screen, ESA2	131.40	9.20	9.20	-	-	-	-	-	-	
5 Conveyors, ESA3-ESA7	157.68	78.84	78.84	-	-	-	-	-	-	
SORBENT HANDLING										
Sorbent Silos #1 & #2	14.42	5.05	5.05	-	-	-	-	-	-	
COAL HANDLING										
Coal Unloading	0.60	0.21	0.03	-	-	-	-	-	-	
PRODUCT HANDLING										
Stockpile	11.93	5.97	0.90	-	-	-	-	-	-	
Loading/Unloading	3.28	1.55	0.24	-	-	-	-	-	-	
Unpaved Road	7.54	1.92	0.19	-	-	-	-	-	-	
Total Fugitive Emissions	22.75	9.44	1.33							
TOTAL EMISSIONS excluding fugitives	881.51	158.54	157.09	9223.71	769.41	158.46	188.43	0.11	0.11	HCL

[1]the least stringent limit than 2.5 lb per MMBtu is 50% control efficiency

	Limited Potential to Emit, tons/year									
Emission Units	PM	PM_{10}	$PM_{2.5}$	SO_2[2]	NOx	VOC	CO	Total HAP[*]	Single HAP[*]	
PRE-KILN PROCESSING										
Primary Crushing, PK1	0.05	0.02	0.004	-	-	-	-	-	-	
Secondary Crushing, PK2	0.05	0.02	0.004	-	-	-	-	-	-	
Conveyor Transfer, PK3-PK8	0.74	0.24	0.05	-	-	-	-	-	-	
HAYDITE CRUSHER LINE, HCR										
Primary Crushing, HCR1	0.13	0.06	0.01	-	-	-	-	-	-	
Conveyor Transfer, HCR9-HCR10	0.31	0.10	0.02	-	-	-	-	-	-	
PORTABLE SCREENING										
Triple-deck Screening	2.41	0.81	0.05	-	-	-	-	-	-	
4 Conveyors, PS2-PS5	0.61	0.20	0.04	-	-	-	-	-	-	
ROTARY KILNS										
Rotary Kiln, K4	19.76	7.26	7.26	2150.08	322.29	53.61	74.83	21.54	21.54	HCL
Rotary Kiln, K5	1.46	0.54	0.54	2628.00	447.12	104.85	113.60	21.54	21.54	HCL
Clinker Cooler, CLNKCOOL	52.56	21.02	21.02	-	-	-	-	-	-	
EXPANDED SHALE CRUSHER, ESA										
Expanded Shale Crusher, ESA1	131.40	9.20	9.20	-	-	-	-	-	-	
Expanded Shale Screen, ESA2	499.32	34.95	34.95	-	-	-	-	-	-	
5 Conveyors, ESA3-ESA7	157.68	78.84	78.84	-	-	-	-	-	-	
SORBENT HANDLING										
Sorbent Silos #1 & #2	16.80	7.20	2.40	-	-	-	-	-	-	
COAL HANDLING										
Coal Unloading	0.60	0.21	0.03	-	-	-	-	-	-	
PRODUCT HANDLING (Fugitive Emission)										
Stockpile	11.93	5.97	0.90	-	-	-	-	-	-	
Loading/Unloading	3.28	1.55	0.24	-	-	-	-	-	-	
Unpaved Road	7.54	1.92	0.19	-	-	-	-	-	-	
Total Fugitive Emissions	22.75	9.44	1.33							
TOTAL EMISSIONS excluding fugitives	**883.89**	**160.69**	**154.44**	**4778.08**	**769.41**	**158.46**	**188.43**	**43.08**	**43.08**	HCL

[2]Per 326 IAC 7-4-11.1, the sulfur dioxide emission shall not exceed 6 lbs per MMBtu. At 100 MMBtu/hr. the limit is equal to 6*100*8760/2000 or 2628 tpy.
[*]There is no enforceable limit and condition for the controls to limit the HAPs to less than 10 tpy for single HAP and 25 tpy for total HAP.

Appendix A: Emissions Calculations
Updated Material Handling Summary

Company Name: Arcosa LW HPB, LLC
Address City IN Zip: 6618 N Tidewater Road, Mooresville, Indiana 46158
TV Renewal No.: 109-39783-00007
Reviewer: Wilfredo de la Rosa

Emissions Before Controls

	Unit ID	No. of Units	Maximum Capacity tons per hour	PM Emission Factor lbs per ton	PM10 Emission Factor lbs per ton	PM2.5 Emission Factor lbs per ton	PM Emissions tons per year	PM10 Emissions tons per year	PM2.5 Emissions tons per year
	Storage	N/A	N/A	N/A	N/A	N/A	11.93	5.97	0.90
	Transporting	N/A	N/A	N/A	N/A	N/A	7.54	1.92	0.19
	Loading and Unloading	N/A	N/A	N/A	N/A	N/A	3.28	1.55	0.24
	Limestone Silo	N/A	N/A	N/A	N/A	N/A	14.42	5.05	5.05
				Total Fugitive Emissions:			**37.17**	**14.49**	**6.38**
PK1	Crushing (primary)	1	200	0.0012	0.00054	0.0001	1.05	0.47	0.09
PK2	Crushing (secondary)	1	200	0.0012	0.00054	0.0001	1.05	0.47	0.09
HCR1	Crushing (primary)	1	250	0.0012	0.00054	0.0001	1.31	0.59	0.11
CLNKCOOL	Clinker Cooler[1]	1	40	0.30	0.12	0.12	52.56	21.02	21.02
PK3-PK8	Conveyor Transfer	6	200	0.00014	0.00005	0.00001	0.74	0.24	0.05
HCR9-HCR10	Conveyor Transfer	2	250	0.00014	0.00005	0.00001	0.31	0.10	0.02
PS1	Screening	1	250	0.0022	0.0007	0.00005	2.41	0.81	0.05
PS2-PS5	Conveyor Transfer	4	250	0.00014	0.00005	0.00001	0.61	0.20	0.04
ESA1	Crushing (primary)[2]	1	30	76.00	5.32	5.32	9986.40	699.05	699.048
ESA2	Screening[3]	1	30	20.00	1.40	1.40	2628.00	183.96	183.96
ESA3-ESA7	Conveyor Transfer[4]	5	30	0.80	0.40	0.40	525.60	262.80	262.80
				Total Non-fugitive Emissions Before Controls:			**13200.04**	**1169.72**	**1167.29**
				Total Emissions Before Controls:			**13237.21**	**1184.21**	**1173.67**

Emissions After Controls

Unit ID		PM Emissions Before Controls tons per year	PM10 Emissions Before Controls tons per year	Percent Emitted After Controls %	PM Emissions After Controls tons per year	PM10 Emissions After Controls	PM2.5 Emissions After Controls tons per year
	Storage	11.93	5.97	100%	11.93	5.97	0.90
	Transporting	7.54	1.92	100%	7.54	1.92	0.19
	Loading and Unloading	3.28	1.55	100%	3.28	1.55	0.24
	Limestone Silo	14.42	5.05	100%	14.42	5.05	5.05
				Total Fugitive Emissions:	**37.17**	**14.49**	**6.38**
PK1	Crushing (primary)	1.05	0.47	5%	0.05	0.02	0.004
PK2	Crushing (secondary)	1.05	0.47	5%	0.05	0.02	0.004
HCR1	Crushing (primary)	1.31	0.59	10%	0.13	0.06	0.01
CLNKCOOL	Clinker Cooler	52.56	21.02	100%	52.56	21.02	21.02
PK3-PK8	Conveyor Transfer	0.74	0.24	100%	0.74	0.24	0.05
HCR9-HCR10	Conveyor Transfer	0.31	0.10	100%	0.31	0.10	0.02
PS1	Screening	2.41	0.81	100%	2.41	0.81	0.05
PS2-PS5	Conveyor Transfer	0.61	0.20	100%	0.61	0.20	0.04
ESA1	Crushing (primary)	9986.40	699.05	5%	499.32	34.952	34.952
ESA2	Screening	2628.00	183.96	5%	131.40	9.198	9.1980
ESA3-ESA7	Conveyor Transfer	525.60	262.80	30%	157.68	78.84	78.84
				Total Non-fugitive Emissions After Controls:	**845.26**	**145.48**	**144.21**
				Total Emissions After Controls:	**882.43**	**159.97**	**150.59**

New emissions from portable screening plant

Emission Factors for the crushing, screening and conveyor transfer are from AP-42 Ch. 11.19.2, Table 11.19.2-2
[1]Emission Factors for the Clinker Cooler are from AP-42 Ch. 11.20.2, Table 11.20-2
[2]Emission Factors for ESA crushing are from EPA's AIRS Facility Subsystem, March 1990 - SCC 3-05-003-02
[3]Emission Factors for ESA screening are from EPA's AIRS Facility Subsystem, March 1990 - SCC 3-05-003-08
[4]Emission Factors for ESA conveying are from EPA's AIRS Facility Subsystem, March 1990 - SCC 3-05-009-05

Appendix A: Emissions Calculations
Material Handling Summary submitted by Source

Company Name: **Arcosa LW HPB, LLC**
Address City IN Zip: **6618 N Tidewater Road, Mooresville, Indiana 46158**
TV Renewal No.: **109-39783-00007**
Reviewer: **Wilfredo de la Rosa**

Emissions Before Controls

	Unit ID	No. of Units	Maximum Capacity tons per hour	PM Emission Factor lbs per ton	PM10 Emission Factor lbs per ton	PM2.5 Emission Factor lbs per ton	PM Emissions tons per year	PM10 Emissions tons per year	PM2.5 Emissions tons per year
	Storage	N/A	N/A	N/A	N/A	N/A	11.93	5.97	0.90
	Transporting	N/A	N/A	N/A	N/A	N/A	7.54	1.92	0.19
	Loading and Unloading	N/A	N/A	N/A	N/A	N/A	3.28	1.55	0.24
	Limestone Silo	N/A	N/A	N/A	N/A	N/A	14.42	5.05	5.05
					Total Fugitive Emissions:		**37.17**	**14.49**	**6.38**
PK1	Crushing (primary)	1	200	0.0012	0.00054	0.0001	1.05	0.47	0.09
PK2	Crushing (secondary)	1	200	0.0012	0.00054	0.0001	1.05	0.47	0.09
HCR1	Crushing (primary)	1	250	0.0012	0.00054	0.0001	1.31	0.59	0.11
HCR2	Crushing (secondary)	0	100	0.0012	0.00054	0.0001	0.00	0	0
CLNKCOOL	Clinker Cooler[1]	1	40	0.30	0.12	0.12	52.56	21.02	21.02
PK3-PK8	Conveyor Transfer	6	200	0.00014	0.00005	0.00001	0.74	0.24	0.05
HCR9-HCR15	Conveyor Transfer	2	250	0.00014	0.00005	0.00001	0.31	0.10	0.02
HCR3-HCR5	Screening	0	100	0.0022	0.0007	0.00005	0.00	0	0
PS1	Screening	1	250	0.0022	0.0007	0.00005	2.41	0.81	0.05
PS2-PS5	Conveyor Transfer	4	250	0.00014	0.00005	0.00001	0.61	0.20	0.04
ESA1	Crushing (primary)	1	30	7.6	5.32000	5.32000	998.64	699.05	699.048
ESA2	Screening	1	30	1.4	1.40000	1.40000	183.96	183.96	183.96
ESA3-ESA7	Conveyor Transfer	5	30	0.4	0.40000	0.40000	262.80	262.80	262.80
					Total Non-fugitive Emissions Before Controls:		**1505.44**	**1169.72**	**1167.29**
					Total Emissions Before Controls:		**1542.61**	**1184.21**	**1173.67**

Emissions After Controls

Unit ID		PM Emissions Before Controls tons per year	PM10 Emissions Before Controls tons per year	Percent Emitted After Controls %	PM Emissions After Controls tons per year	PM10 Emissions After Controls	PM2.5 Emissions After Controls tons per year
	Storage	11.93	5.97	100%	11.93	5.97	0.90
	Transporting	7.54	1.92	100%	7.54	1.92	0.19
	Loading and Unloading	3.28	1.55	100%	3.28	1.55	0.24
	Limestone Silo	14.42	5.05	100%	14.42	5.05	5.05
				Total Fugitive Emissions:	**37.17**	**14.49**	**6.38**
PK1	Crushing (primary)	1.05	0.47	5%	0.05	0.02	0.004
PK2	Crushing (secondary)	1.05	0.47	5%	0.05	0.02	0.004
HCR1	Crushing (primary)	1.31	0.59	10%	0.13	0.06	0.01
HCR2	Crushing (secondary)	0	0	10%	0.00	0.00	0
CLNKCOOL	Clinker Cooler	52.56	21.02	100%	52.56	21.02	21.02
PK3-PK8	Conveyor Transfer	0.74	0.24	100%	0.74	0.24	0.05
HCR9-HCR15	Conveyor Transfer	0.31	0.10	100%	0.31	0.10	0.02
HCR3-HCR5	Screening	0	0	100%	0.00	0.00	0
PS1	Screening	2.41	0.81	100%	2.41	0.81	0.05
PS2-PS5	Conveyor Transfer	0.61	0.20	100%	0.61	0.20	0.04
ESA1	Crushing (primary)	998.64	699.05	5%	49.93	34.952	34.952
ESA2	Screening	183.96	183.96	5%	9.20	9.198	9.1980
ESA3-ESA7	Conveyor Transfer	262.80	262.80	30%	78.84	78.84	78.84
				Total Non-fugitive Emissions After Controls:	**194.83**	**145.48**	**144.21**
				Total Emissions After Controls:	**232.00**	**159.97**	**150.59**

Will no longer be used
Only one of the conveyors will be used (2 will be used 10/22/18 (HCR 9 & 10))
New emissions from portable screening plant
ESA Units
Storage emissions, which result from wind erosion, are determined by the following calculations:

Emission Factors for the crushing, screening and conveyor transfer are from AP-42 Ch. 11.19.2, Table 11.19.2-2
[1]Emission Factors for the Clinker Cooler afre from AP-42 Ch. 11.20.2, Table 11.20-2

Appendix A: Emissions Calculations
Storage

Company Name: **Arcosa LW HPB, LLC**
Address City IN Zip: **6618 N Tidewater Road, Mooresville, Indiana 46158**
TV Renewal No.: **109-39783-00007**
Reviewer: **Wilfredo de la Rosa**

PM/PM-10/PM-2.5 Emissions from Aggregate Stockpile Storage

Stockpile Area (acres)	7.38
Control Factor	1
Number of active days per year	365
Days w/ <0.01 of precipitation	245
PM inactive emissions (ton/yr)	0.00
PM10 inactive emissions (ton/yr)	0.00
PM2.5 inactive emissions (ton/yr)	0.00
PM active emissions (ton/yr)	11.93
PM10 active emissions (ton/yr)	5.97
PM2.5 active emissions (ton/yr)	0.90
Total PM emissions (ton/yr)	11.93
Total PM10 emissions (ton/yr)	5.97
Total PM2.5 emissions (ton/yr)	0.90

Emission Factors for the stockpiles have the following units: lb of pollutant per acre per day

The PM active and inactive emission factors are from "Cowherd, Jr., C. *Development Of Emission Factors For Fugitive Dust Sources* . EPA document Number. EPA-450/3-74-037. Research Triangle Park: U. S. Environmental Protection, 1974"

PM10 is estimated as 50% of PM based on the "k" factors listed in Aggregate Handling and Storage Piles AP-42 Ch. 13.2.4.

The PM2.5 factor is derived from a ratio listed in the Background Document for Revisions to Fine Fraction Ratios Used for AP-42 Fugitive Dust Emission Factors (Ch. 13.2) and "k" factors listed in Aggregate Handling and Storage Piles AP-42 Ch. 13.2.4.

Company Name: Arcosa LW HPB, LLC
Address City IN Zip: 6618 N Tidewater Road, Mooresville, Indiana 46158
TV Renewal No.: 109-39783-00007
Reviewer: Wilfredo de la Rosa

Unpaved Roads

The following calculations determine the amount of emissions created by unpaved roads, based on 8760 hours of use and AP-42, Ch 13.2.2 (1a)

	4	trip/hr		
times	0.075758	mile/trip		
times	2	(round trip)		
times	8760	hr/yr =	5309.086	miles per year

Ef = k*[(s/12)^a]*[(W/3)^b]*((365-p)/365) (lb/Mile)
= 2.83933 (PM)
= 0.723641 (PM10)
= 0.072364 (PM2.5)

where k =	4.9	(size multiplier-PM)	1.5	(PM10)	0.15	(PM2.5)
s =	4.8	% silt content of unpaved roads				
p =	120	days of rain greater than or equal to 0.01 inches				
b =	0.45	constant for PM from Table 13.2.2-2 AP42				
W =	9	tons average vehicle weight				
w =	6	wheels				
a =	0.7	(PM)	0.9	(PM10/PM2.5)		

Loading/Unloading

Ef = k*(0.0032)*(U/5)^1.3/(M/2)^1.4 AP-42 Ch 13.2.4 (1b)
= 0.001874 lb/ton(PM) Material Transferred= 3504000 tons/year
= 0.000886 lb/ton(PM10)
= 0.000134 lb/ton(PM2.5)

where k =	0.74	(multiplier-PM)	0.35	(PM10)	0.053	(PM2.5)
U =	10	mile/hr mean wind speed				
M =	4.5	% material moisture content				

	Emissions in tons/year		
Pollutants	PM	PM10	PM2.5
Unpaved Road Emissions	7.537123	1.920935	0.192094
Loading/Unloading Emissions	3.282459	1.552514	0.235095

Appendix A: Emissions Calculations
Sorbent Storage Silos

Company Name: Arcosa LW HPB, LLC
Address City IN Zip: 6618 N Tidewater Road, Mooresville, Indiana 46158
TV Renewal No.: 109-39783-00007
Reviewer: Wilfredo de la Rosa

Silo Capacity 120 tons each (two identical silos)
Silo Loading Rate 16.67 tons/hr

Limestone Unloading Into Silos PTE

	PM Emission Factors (lb/ton)		PM10 Emission Factors (lb/ton)		Throughput	Unloading Time	Uncontrolled Emissions		Controlled Emissions	
Facility/ID	Uncontrolled	Controlled	Uncontrolled	Controlled	(t/hr)	hr/yr	PM (t/yr)	PM10/2.5 (t/yr)	PM (t/yr)	PM10/2.5 (t/yr)
Limestone Silo 1	3.14	0.0089	1.1	0.0049	16.67	8760	229.27	80.32	0.65	0.36
Limestone Silo 2	3.14	0.0089	1.1	0.0049	16.67	8760	229.27	80.32	0.65	0.36
TOTAL PTE							**458.53**	**160.63**	**1.30**	**0.72**
Limestone Silos (expected throughput of 9,183 t/yr)	3.14	0.0089	1.1	0.0049	16.67	551	14.42	5.05	0.04	0.02

Projected Annual Limestone Throughput:

Nov 2014 pilot testing required 2250 lb/hr to control SO2 emissions from shale at 21 t/hr
Pilot testing equates to 107 lb limestone per ton of shale fed
Average shale production over 2010-2014 = 167,498 t/yr for Kiln #5 and 3924 t/yr for Kiln #4
Total throughput = 171,422 tons per year, which would require 9,183 tons per year of limestone

Limestone unloading assumed comparable to cement unloading to storage silo (pneumatic), SCC 3-05-011-17
Emission factors are from AP-42, Table 11.12-2

Limited PTE - Limestone Unloading Into Silos

Facility / ID	Throughput L	PM Emissions Limit		PM10 Emissions Limit		PM2.5 Emissions Limit	
	tons/year	lb/ton	ton/year	lb/ton	tons/yr	lb/ton	tons/year
Limestone Silo 1	24,000	1.40	16.80	0.60	7.20	0.20	2.4
Limestone Silo 2							
		Limited PTE	16.8		7.2		2.4

Appendix A: Emission Calculations
Kiln Process

Kiln #4

Company Name: Arcosa LW HPB, LLC
Source Address: 6618 N Tidewater Road, Mooresville, Indiana 46158
Permit Number: 109-39783-00007
Reviewer: Wilfredo de la Rosa

Maximum Capacity tons per hour	Maximum Throughput, tpy	SO2 Control Efficiency	Scrubber Control Efficiency
15.0	131400	50.00%	99.50%

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	Nox**	VOC**	CO**
Emission Factor in lb/ton	58.8	21.8	21.8	34.2	1.9	0.78	0.59
Potential Emission in tons/yr	3863.16	1432.26	1432.26	2246.94	124.83	51.25	38.76
Controlled Emissions in tons/yr	19.32	7.16	7.16	1123.47	124.83	51.25	38.76

The particulate & SO2 emission factors are taken from the stack tests (December 16, 2016)
*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.
PM2.5 emission factor is condensable and filterable PM2.5 combined.
**Emission Factors are taken from AP-42 Tables 11.20-4 & 11.20-5 (Lightweight Aggregate Manufacturing)

December 15, 2016 Stacke Test Results using Coal as fuel:
Kiln 4
Pollutants tested : PM, SO2 and Opacity
Average Operating Rates: 14 tons of raw shale per hour
1.2 tons coal per hour
28.29 MMBtu/hr heat input
200 lb/hr sorbent injection
Emission Rates: PM Emission Rate = 4.11 lb/hr
SO2 Emission Rate = 1.45 lb/MMBtu
Opacity = 0%

For Kiln 4, the ration of 0.97 lb. sorbent/lb SO@ removed was established.

Appendix A: Emission Calculations
Kiln Process

Kiln #5

Company Name: Arcosa LW HPB, LLC
Source Address: 6618 N Tidewater Road, Mooresville, Indiana 46158
Permit Number: 109-39783-00007
Reviewer: Wilfredo de la Rosa

Maximum Capacity tons per hour	Potential Throughput tons per year	Filter Control Efficiency	SO2 Control Efficiency
30.0	262800.00	99.98%	50.00%

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	Nox**	VOC**	CO**
Emission Factor in lb/ton	55.00	20.35	20.35	92.04	1.90	0.78	0.59
Potential Emission in tons/yr	7227.00	2673.99	2673.99	12094.06	249.66	102.49	77.53
Controlled Emissions in tons/yr	1.45	0.53	0.535	6047.03	249.66	102.49	77.53

The particulate and SO2 emission factors are taken from the stack tests
*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.
PM2.5 emission factor is condensable and filterable PM2.5 combined.
**Emission Factors are taken from AP-42 Tables 11.20-4 & 11.20-5 (Lightweight Aggregate Manufacturing)

December 15, 2016 Stacke Test Results using Coal as fuel:
Kiln 5
Pollutants tested : PM, SO2 and Opacity
Average Operating Rates: 28 tons of raw shale per hour
2.0 tons coal per hour
46.82 MMBtu/hr heat input
300 lb/hr sorbent injection
Emission Rates: PM Emission Rate = 0.31 lb/hr
SO2 Emission Rate = 3.93 lb/MMBtu
Opacity = 0%

For Kiln 5, the ration of 1.04 lb sorbent/lb SO2 was established.

Appendix A: Emission Calculations
Natural Gas Combustion Only for K4 & K5
MMBTU/HR >100
Utility Boiler

Company Name: Arcosa LW HPB, LLC
Source Address: 6618 N Tidewater Road, Mooresville, Indiana 46158
Permit Number: 109-39783-00007
Reviewer: Wilfredo de la Rosa

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr		SO2 Control Efficiency
100.0	1020	858.8	Scrubber Control Efficiency	99.50%
			Filter Control Efficiency	99.98% / 50.00%

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	280.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.82	3.26	3.26	0.26	120.24	2.36	36.07
Controlled Emissions in tons/yr.-K4	0.004	0.02	0.02	0.13	120.24	2.36	36.07
Controlled Emissions in tons/yr. - K5	0.0002	0.001	0.001	0.13	120.24	2.36	36.07

*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.
PM2.5 emission factor is condensable and filterable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 280 (pre-NSPS) or 190 (post-NSPS), Low NOx Burner = 140, Flue gas recirculation = 100 (See Table 1.4-1)

Methodology
All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-01-006-01, 1-01-006-04 (AP-42 Supplement D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutants (HAPs)

	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	9.02E-04	5.15E-04	3.22E-02	7.73E-01	1.46E-03	2.7E+00

	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	2.15E-04	4.72E-04	6.01E-04	1.63E-04	9.02E-04	2.35E-03
					Total HAPs	2.7E+00

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

Appendix A: Emissions Calculations
Coal Combustion: Bituminous Coal for Boilers (Pulverized Dry Bottom)
K4 & K5

Company Name: Arcosa LW HPB, LLC
Source Address: 6618 N Tidewater Road, Mooresville, Indiana 46158
Permit Number: 109-39783-00007
Reviewer: Wilfredo de la Rosa

Heat Input Capacity MMBtu/hr		Heat Content of Coal Btu/lb of Coal	Potential Throughput of Coal tons/year
100	#4	12200	35901.63934
100	#5	12200	35901.63934

	Weight % Sulfur in Fuel	
S =	3.01	%
A =	0.5	%

		SO2 Control (Limestone Injection)
Scrubber Control Efficiency	99.50%	Efficiency
Filter Control Efficiency	99.98%	50.00%

	Pollutant						HAP
	PM*	PM10*	SO2	NOx	VOC	CO	HCL
Emission Factor in lb/ton	5.0 (10A)	1.15 (2.3A)	114.4 (38S)	11.0	0.05	0.05	1.2
Potential Emission in tons/yr #4	89.75409836	20.64344262	2053.2148	197.4590164	0.897540984	0.897541	21.54098
Potential Emission in tons/yr #5	89.75409836	20.64344262	2053.2148	197.4590164	0.897540984	0.897541	21.54098
Total Potential Emission in tons/yr	**179.51**	**41.29**	**4106.43**	**394.92**	**1.80**	**1.80**	**43.08**
Controlled Emission in tons/year #4	0.448770492	0.103217213	1026.6074	197.4590164	0.897540984	0.897541	0.107705
Controlled Emission in tons/year #5	0.01795082	0.004128689	1026.6074	197.4590164	0.897540984	0.897541	0.004308
Total Controlled Emission in tons/yr	**0.47**	**0.11**	**2053.21**	**394.92**	**1.80**	**1.80**	**0.11**
Equivalent Controlled Emissions in lb/mmBtu	0.001065574						

*PM10=PM2.5

Methodology

Emission Factors are from AP 42 (Update 9/98), Tables 1.1-4 and 1.1-3 (SCC 1-01-002-02/22, 1-02-002-02/22-06/2.
Potential Throughput (tons/year) = Heat Input Capacity (MMBtu/hr) x 10^6 Btu/MMBtu / Heat Content of Coal (Btu/lb) / 2,000 lb/ton x 8,760 hrs/yr.
Heat Content of theCoal is taken from the application.
Additional emission factors for commerical/institutional and electric generation boilers are available in AP-42, Chapter 1.1.
Emission (tons/yr) = Throughput tons per year x Emission Factor (lb/ton) / 2,000 lb/ton.
Emissions (lb/MMBtu) = 10^6 Btu/MMBtu / Heat Content of Coal (Btu/lb) / 2,000 lb/ton x Emission Factor (lb/ton).

Company Name: Arcosa LW HPB, LLC
Source Address: 6618 Tidewater Road, Mooresville, Indiana 46158
TV Renewal No.: 109-39783-00007
Reviewer: Wilfredo de la Rosa

Kilns SO2 Potential to Emit

Unit	Uncontrolled SO2 Emission Rate (lb/hour)*	Uncontrolled SO2 Emission Rate (tons/year)	Uncontrolled SO2 Emission Rate (lb/mmBtu)*	Control Efficiency Required (% Control)	Alternative Emission Limit (lb/mmBtu)	Control Efficiency Needed to Meet Alternative Limit (% Control)	Least Stringent Control Efficiency (% Control)	Controlled SO2 Emissions (lb/hr)	Potential Controlled Emissions (t/yr)
Kiln #4	250	1,095.0	9.21	50%	2.5	72.86%	50%	125	547.50
Kiln #5	593	2,597.3	9.21	50%	2.5	72.86%	50%	297	1298.67

* Based on June 2014 Stack Test at shale feed rate of 22 tons/hr for both kilns (Kiln #4 was not tested but assumed 22 tons/hr shale feed rate)

Particulate Emission Calculations

Company Name: Arcosa LW HPB, LLC

Address City IN Zip: 6618 Tidewater Road, Mooresville IN 46158

TV Renewal No.: 109-39783-00007

Reviewer: Wilfredo de la Rosa

One (1) coal unloading operation, with a maximum capacity of 280 tons of coal per hour, consisting of one (1) dump pit, one (1) hopper for coal unloading, and two (2) conveyors. The maximum coal usage is 119,455 tons per year, or 13.64 tons per hour. Therefore, potential emissions for the coal operation were based on a maximum capacity of 119,455 tons of coal per year because of bottlenecking.

Potential emissions were calculated using AP-42, Section 13.2.4 for Aggregate Handling and Storage Piles based on the following formula:

$$E = k(0.0032)*(U/5)^{1.3}/(M/2)^{1.4}$$

where E = emission factor, pound per ton (lb/ton)
k = particulate size multiplier (dimensionless) This value is 1.0 for total particulate matter, 0.35 for particulate matter less than 10 and 0.053 for less than 2.5.
U = mean wind speed, miles per hour (mph), (assumed to be 10 mph)
M = material moisture content (%), (This value is assumed to be 4.5 based on typical moisture content data provided in Table 13.2.4-1 of AP-42)

Uncontrolled Potential to Emit:

PM	$E = 1.0*(0.0032)*[((10/5)^{1.3})/((4.5/2)^{1.4})] = 0.00253$ lb/ton		
	0.00253*119,455*4(transfer points)/2000 =	0.604	tons/yr
PM10	$E = 0.35*(0.0032)*[((10/5)^{1.3})/((4.5/2)^{1.4})] = 0.000886$ lb/ton		
	0.000886*119,455*4(transfer points)/2000 =	0.211	tons/yr
PM2.5	$E = 0.053*(0.0032)*[((10/5)^{1.3})/((4.5/2)^{1.4})] = 0.00013$ lb/ton		
	0.00013*119,455*4(transfer points)/2000 =	0.031	tons/yr

Company Name: Arcosa LW HPB, LLC
Address City IN Zip: 6618 Tidewater Road, Mooresville IN 46158
Part 70 Permit No.: 109-39783-00007
Reviewer: Wilfredo de la Rosa

SCC# 3-05-003-08
expanded shale aggregate screening

TYPE OF MATERIAL	Throughput LBS/HR	Throughput TON/HR	Control Device: Baghouse (and moisture from water spray system on feed conveyor) Control Efficiency: 95.00%
Shale	60000	30	

	PM lbs/ton metal charged	**PM10** lbs/ton metal charged	**SOx** lbs/ton metal charged	**NOx** lbs/ton metal charged	**VOC** lbs/ton metal charged	**CO** lbs/ton metal charged	**Lead** lbs/ton metal charged
	20	1.4	0.00	0.00	0.00	0.00	0.00
Potential Uncontrolled Emissions lbs/hr	600.0	42.0	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions lbs/day	14400.0	1008.0	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**2628.0**	**184.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Potential Controlled Emissions lbs/hr	30.00	2.10	0.00	0.00	0.00	0.00	0.00
Potential Controlled Emissions lbs/day	720.0	50.4	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions tons/year	**131.40**	**9.20**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Note: Emission factors from USEPA's AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants (AIRS), March 1990.

SCC# 3-05-003-02
expanded shale aggregate crushing

TYPE OF MATERIAL	Throughput LBS/HR	Throughput TON/HR	Control Device: Baghouse (and moisture from water spray system on feed conveyor) Control Efficiency: 95.00%
Shale	60000	30	

	PM lbs/ton metal charged	**PM10** lbs/ton metal charged	**SOx** lbs/ton metal charged	**NOx** lbs/ton metal charged	**VOC** lbs/ton metal charged	**CO** lbs/ton metal charged	**Lead** lbs/ton metal charged
	76	5.32	0.00	0.00	0.00	0.00	0.00
Potential Uncontrolled Emissions lbs/hr	2280.0	159.6	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions lbs/day	54720.0	3830.4	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**9986.4**	**699.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Potential Controlled Emissions lbs/hr	114.00	7.98	0.00	0.00	0.00	0.00	0.00
Potential Controlled Emissions lbs/day	2736.0	191.5	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions tons/year	**499.32**	**34.95**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Note: Emission factors from USEPA's AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants (AIRS), March 1990.

Hydraulic Press Brick Company
Mooresville, IN 46158

SCC# 3-05-009-05
expanded shale aggregate transfer/conveying

TYPE OF MATERIAL	Throughput LBS/HR	TON/HR	Control Device: Water Spray System on feed conveyor Control Efficiency: 70.00%
Shale	60000	30	

	PM **lbs/ton metal charged**	**PM10** **lbs/ton metal charged**	**SOx** **lbs/ton metal charged**	**NOx** **lbs/ton metal charged**	**VOC** **lbs/ton metal charged**	**CO** **lbs/ton metal charged**	**Lead** **lbs/ton metal charged**
	0.8	0.4	0.00	0.00	0.00	0.00	0.00
Potential Uncontrolled Emissions lbs/hr	120.0	60.0	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions lbs/day	2880.0	1440.0	0.0	0.0	0.0	0.0	0.0
Potential Uncontrolled Emissions tons/year	**525.6**	**262.8**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Potential Controlled Emissions lbs/hr	36.00	18.00	0.00	0.00	0.00	0.00	0.00
Potential Controlled Emissions lbs/day	864.0	432.0	0.0	0.0	0.0	0.0	0.0
Potential Controlled Emissions tons/year	**157.68**	**78.84**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Note: Emission factors from USEPA's AIRS Facility Subsystem Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants (AIRS), March 1990.

Totals (uncontrolled)	**13,140.00**	**1,145.81**	**0**	**0**	**0**	**0**	**0**
Totals (controlled)	**788.40**	**122.99**	**0**	**0**	**0**	**0**	**0**

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

December 20, 2018

Michael Ragsdale
Arcosa LW HPB, LLC
1112 E Copeland Rd
Arlington, TX 76011

Re: Public Notice
Arcosa LW HPB, LLC
Permit Level: Title V Renewal
Permit Number: 109-39783-00007

Dear Mr. Ragsdale:

Enclosed is a copy of your draft Title V Operating Permit Renewal, Technical Support Document, emission calculations, and the Public Notice which will be printed in your local newspaper.

The Office of Air Quality (OAQ) has prepared two versions of the Public Notice Document. The abbreviated version will be published in the newspaper, and the more detailed version will be made available on the IDEM's website and provided to interested parties. Both versions are included for your reference. The OAQ has requested that The Times in Mooresville, IN publish the abbreviated version of the public notice no later than December 26, 2018. You will not be responsible for collecting any comments, nor are you responsible for having the notice published in the newspaper.

OAQ has submitted the draft permit package to the Morgan County Public Library, 110 S Jefferson Street in Martinsville, IN. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Wilfredo de la Rosa, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 2-8422 or dial (317) 232-8422.

Sincerely,

Theresa Weaver

Theresa Weaver
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover Letter 1/9/2017

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Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

ATTENTION: PUBLIC NOTICES, LEGAL ADVERTISING

December 20, 2018

The Times
P.O. Box 308
Mooresville, IN 46158

Enclosed, please find one Indiana Department of Environmental Management Notice of Public Comment for Arcosa LW HPB, LLC, Morgan County, Indiana.

Since our agency must comply with requirements which call for a Notice of Public Comment, we request that you print this notice one time, no later than December 26, 2018.

Please send the invoice, notarized form, clippings showing the date of publication to Bo Liu, at the Indiana Department of Environmental Management, Accounting, Room N1340, 100 North Senate Avenue, Indianapolis, Indiana, 46204.

To ensure proper payment, please reference account # 100174737.

We are required by the Auditor's Office to request that you place the Federal ID Number on all claims. If you have any conflicts, questions, or problems with the publishing of this notice or if you do not receive complete public notice information for this notice, please call Theresa Weaver at 800-451-6027 and ask for extension 4-5256 or dial 317-234-5256.

Sincerely,

Theresa Weaver

Theresa Weaver
Permit Branch
Office of Air Quality

Permit Level: Title V Operating Permit Renewal
Permit Number: 109-39783-00007

Enclosure

PN Newspaper Letter 8/22/2018

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Eric J. Holcomb
Governor
Bruno L. Pigott
Commissioner

December 20, 2018

To: Morgan County Public Library

From: Jenny Acker, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information to Display Regarding a Public Notice for an Air Permit**

Applicant Name: Arcosa LW HPB, LLC
Permit Number: 109-39783-00007

Enclosed is a copy of important information to make available to the public. This proposed project is regarding a source that may have the potential to significantly impact air quality. Librarians are encouraged to educate the public to make them aware of the availability of this information. The following information is enclosed for public reference at your library:

- Notice of a 30-day Period for Public Comment
- Request to publish the Notice of 30-day Period for Public Comment
- Draft Permit and Technical Support Document

You will not be responsible for collecting any comments from the citizens. Please refer all questions and request for the copies of any pertinent information to the person named below.

Members of your community could be very concerned in how these projects might affect them and their families. **Please make this information readily available until you receive a copy of the final package.**

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. Questions pertaining to the permit itself should be directed to the contact listed on the notice.

Enclosures
PN Library 1/9/2017

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Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

Notice of Public Comment

December 20, 2018
Arcosa LW HBP, LLC
109-39783-00007,

Dear Concerned Citizen(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has been placed in the Legal Advertising section of your local newspaper. The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana's Air Permitting Program.

Please Note: *If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.*

Enclosure
PN AAA Cover Letter 1/9/2017

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Governor

Bruno L. Pigott
Commissioner

AFFECTED STATE NOTIFICATION OF PUBLIC COMMENT PERIOD
DRAFT INDIANA AIR PERMIT

December 20, 2018

A 30-day public comment period has been initiated for:

Permit Number: **109-39783-00007**
Applicant Name: **Arcosa LW HPB, LLC**
Location: **Mooresville, Morgan County, Indiana**

The public notice, draft permit and technical support documents can be accessed via the **IDEM Air Permits Online** site at:
http://www.in.gov/ai/appfiles/idem-caats/

Questions or comments on this draft permit should be directed to the person identified in the public notice by telephone or in writing to:

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

Questions or comments regarding this email notification or access to this information from the EPA Internet site can be directed to Chris Hammack at chammack@idem.IN.gov or (317) 233-2414.

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IDEM Staff	TAWEAVER 12/20/2018 Arcosa LW HPB LLC 109-39783-00007 (draft)		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		Michael Ragsdale Arcosa LW HPB LLC 1112 E Copeland Rd Arlington TX 76011 (Source CAATS)									
2		Matthew Hallmark Vice President Arcosa LW HPB LLC 1112 E Copeland Road, Suite 500 Arlington TX 76011 *(RO CAATS)*									
3		Morgan County Commissioners 180 South Main Street Martinsville IN 46151 *(Local Official)*									
4		Morgan County Public Library 110 S Jefferson St Martinsville IN 46151-1999 *(Library)*									
5		Mooresville Town Council 4 E Harrison Street Mooresville IN 46158 *(Local Official)*									
6		Brooklyn Town Council P.O. Box 159 Brooklyn IN 46111 *(Local Official)*									
7		Clayton D. & Patricia A. Arthur 5178 Brenda Boulvard Greenwood IN 46143 *(Affected Party)*									
8		Morgan County Health Department 180 S Main Street, Suite 252 Martinsville IN 46151-1988 *(Health Department)*									
9		David Jones 7977 N. Taylors Rd. Mooresville IN 46158 *(Affected Party)*									
10		Claudia Parker 6761 Centenary Rd. Mooresville IN 46158 *(Affected Party)*									
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