INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: June 22, 2012

RE: Wabash Valley Asphalt Co., LLC/005-31033-03274

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

Notice of Decision: Approval - Effective Immediately

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

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot12/03/07

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Mr. Daniel Conley
Wabash Valley Asphalt Co., LLC
P.O. Box 9778
Terre Haute, IN 47808

June 22, 2012

Re: F005-31033-03274
First Significant Revision to
FESOP No.: F153-22594-03274

Dear Mr. Conley:

Wabash Valley Asphalt Co., LLC was issued a Federally Enforceable State Operating Permit (FESOP) Renewal No. 153-22594-03274 issued on March 15, 2007 for a portable hot mix asphalt plant located at 937 South Section Street, Sullivan, Indiana, in Sullivan County. On October 17, 2011, the Office of Air Quality (OAQ) received an application from the source requesting to increase the operational flexibility of the existing portable drum hot mix asphalt plant through the addition of blast furnace and electric arc furnace steel mill slag, and recycled shingles to the aggregate mix, and natural gas as a back-up fuel for each of the combustion units onsite. During the review, IDEM determined that the for the source to remain in compliance with Prevention of Significant Deterioration (PSD) requirements for PM2.5 emissions, PM2.5 limits would need to be added to the permit. Additionally, Greenhouse gas emissions were calculated, and the applicability of several new NESHAPs reviewed. The attached Technical Support Document (TSD) provides additional explanation of the changes to the source/permit. Pursuant to the provisions of 326 IAC 2-8-11.1, these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-8-11.1(f). Pursuant to the provisions of 326 IAC 2-8-11.1, a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Attached please find the entire revised permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions concerning this relocation site approval and permit revision, please contact Hannah Desrosiers, of my staff, at 317-234-5374 or 1-800-451-6027, and ask for extension 4-5374.

Sincerely,

Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

Attachments: Technical Support Documents and revised permit

IC/hd

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

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FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) RENEWAL OFFICE OF AIR QUALITY

Wabash Valley Asphalt Company, LLC (Portable)

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

The Permittee must comply with all conditions of this permit. Noncompliance with any provision of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; and denial of a permit renewal application. 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.

Indiana statutes from IC 13 and rules from 326 IAC, quoted 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 FESOP under 326 IAC 2-8.

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 2-8 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.: F153-22594-03274	
Issued by: Original signed by: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: March 15, 2007 Expiration Date: March 15, 2017

First Relocation No. 133-26465-03274, issued May 2, 2008
Second Relocation No. 055-27642-03274, issued April 1, 2009
Third Relocation No. 167-29136-03274, issued May 7, 2010
Fourth Relocation No. 005-29430-03274, issued August 3, 2010

First Significant Permit Revision No.: F005-31033-03274	
Issued by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: June 22, 2012 Expiration Date: March 15, 2017

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SECTION A SOURCE SUMMARY

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

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a portable hot mix asphalt plant and cold-mix asphalt production operation. Blast furnace, electric arc furnace steel mill slag, and/or asbestos-free recycled shingles are processed in the aggregate mix. This source does not crush any recycled asphalt pavement (RAP) or grind any shingles on-site.

Initial Source Address:	937 S. Section Street, Sullivan, Indiana 47882
General Source Phone Number:	(812) 232-6094
SIC Code:	2951
Initial County Location:	Sullivan
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

(a) One (1) drum hot mix asphalt plant consisting of the following units:

(1) One (1) aggregate dryer/mixer, constructed in 1984, with a maximum throughput capacity of 320 tons of raw material per hour, processing blast furnace slag, steel slag, and recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) in the aggregate mix, having a burner with a maximum heat input rate of 97 million British thermal units per hour, primarily firing waste oil and using No. 2 distillate fuel oil and natural gas as a backup fuels, equipped with a baghouse for particulate control, and exhausting to one (1) stack;

(2) One (1) material conveying and handling operation.

(3) Aggregate storage piles, including:

(A) Blast furnace and/or electric arc steel slag storage piles, with a maximum anticipated pile size of 1.00 acres.

(B) Recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) storage piles, with a maximum anticipated pile size of 0.40 acres.

Under NSPS 40 CFR Part 60, Subpart I, New Source Performance Standards for Hot-mix Asphalt Plants, this drum hot mix asphalt facility is considered an affected facility.

(b) One (1) 670.0 hp diesel fuel-fired "large" genset generator, identified as ES(a), manufactured in 1982 and initially constructed in 1982, then moved onsite in 1984, uncontrolled and exhausting at one (1) stack (ES-1).

Under 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines, this is considered an affected facility.

(c) One (1) 54.0 hp diesel fuel-fired "small" generator, identified as ES(b), manufactured in 1982 and initially constructed in 1982, then moved onsite in 1984, uncontrolled and exhausting at one (1) stack (ES-2).

Under 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines, this is considered an affected facility.

(d) Cold-mix (stockpile mix) asphalt manufacturing operations and storage piles.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

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

(a) One (1) No. 2 distillate fuel oil fired hot oil heater, constructed in 1984, with a maximum heat input rate of 2.54 million British thermal units per hour, using natural gas as a backup fuel, uncontrolled and exhausting to the atmosphere. [326 IAC 6-2, 326 IAC 6.5]

(b) Emission units with PM and PM10 emissions less than five (5) tons per year; SO2, NOx, and VOC emissions less than ten (10) tons per year; CO emissions less than twenty-five (25) tons per year; lead emissions less than two-tenths (0.2) tons per year; single HAP emissions less than one (1) ton per year; and combination of HAPs emissions less than two and a half (2.5) tons per year:

(1) One (1) 10,000 gallon storage tank for No. 2 distillate fuel oil.

(2) One (1) 20,000 gallon storage tank for liquid asphalt AC-20, constructed in 1984.

(c) A laboratory as defined in 326 IAC 2-7-1(21)(D).

(d) Application of oils, greases, lubricants, or other nonvolatile materials applied as temporary protective coatings.

(e) Paved and unpaved roads and parking lots with public access. [326 IAC 2-8, 326 IAC 6-4, 326 IAC 6-5]

A.4 FESOP Applicability [326 IAC 2-8-2]

This portable source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

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 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

(a) This permit, F153-22594-03274, is issued for a fixed term of ten (10) 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, 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 Reserved

B.5 Enforceability [326 IAC 2-8-6] [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.6 Severability [326 IAC 2-8-4(4)]

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.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

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

B.8 Duty to Provide Information [326 IAC 2-8-4(5)(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.9 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.10 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

(a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

(i) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and

(ii) the certification is 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) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.11 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

(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

(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 2-8-4(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.12 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]

(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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.13 Emergency Provisions [326 IAC 2-8-12]

(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 except as provided in 326 IAC 2-8-12.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or 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 2-8-4(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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 2-8-3(c)(6) 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 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) 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.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

B.14 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to F153-22594-03274 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

(b) All previous registrations and permits are superseded by this permit.

B.15 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

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 2-8-3(h) and 326 IAC 2-8-9.

B.16 Reserved

B.17 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State 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 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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 2-8-8(a)]

(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 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(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 2-8-8(c)]

B.18 Permit Renewal [326 IAC 2-8-3(h)]

(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 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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 2-8 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 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.19 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.20 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) and (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 approval required by 326 IAC 2-8-11.1 has been obtained;

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

(4) The Permittee notifies the:

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

and

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

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

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b)(1) and (c). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)(1) and (c).

(b) Emission Trades [326 IAC 2-8-15(b)]
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 2-8-15(b).

(c) Alternative Operating Scenarios [326 IAC 2-8-15(c)]
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 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(d) 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.21 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.22 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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 FESOP 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, at reasonable times, 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, at reasonable times, 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, at reasonable times, 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.23 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ no later than 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) 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.25 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][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 2-8-4(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 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM) and greenhouse gases (GHGs), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(4) The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO2 equivalent emissions (CO2e) per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

(c) Pursuant to 326 IAC 2-3 (Emission Offset), the potential to emit particulate matter (PM) from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period

(d) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(e) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.3 Opacity [326 IAC 5-1]

(a) 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 when operating in areas not listed in 326 IAC 5-1-1(c), unless otherwise stated in this permit:

(1) 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.

(2) 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.

(b) 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 when operating in areas listed in 326 IAC 5-1-1(c), except any areas listed for Clark County, unless otherwise stated in this permit:

(1) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(2) 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.4 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.5 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.6 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).

C.7 Fugitive Particulate Emissions Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the attached plan submitted on June 3, 1996 when operating in the areas described in 326 IAC 6-5-1(a). The Fugitive Dust Control Plan is as follows: Roadways and stockpiles shall be watered on an as-needed basis to control fugitive dust emissions at this source. This source received all the necessary preconstruction approvals before December 13, 1985, the applicability date for this rule. Therefore, 326 IAC 6-5 does not apply when the source is operating in areas not listed in 326 IAC 6-5-1(a).

C.8 Reserved

C.9 Reserved

C.10 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 by using ambient air quality modeling pursuant to 326 IAC 1-7-4.

C.11 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 demolitions 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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.

Testing Requirements [326 IAC 2-8-4(3)]

C.12 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(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.13 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 2-8-4][326 IAC 2-8-5(a)(1)]

C.14 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

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

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

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

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.15 Reserved

C.16 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

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

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

Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.17 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.18 Risk Management Plan [326 IAC 2-8-4] [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.19 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

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

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

(1) initial inspection and evaluation;

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

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

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

(1) monitoring results;

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

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

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

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

C.20 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

(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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.21 Reserved

C.22 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

(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.

(1) Support information includes the following:

(A) All calibration and maintenance records.

(B) All original strip chart recordings for continuous monitoring instrumentation.

(C) Copies of all reports required by the FESOP.

(2) Records of required monitoring information include the following:

(A) The date, place, as defined in this permit, and time of sampling or measurements.

(B) The dates analyses were performed.

(C) The company or entity that performed the analyses.

(D) The analytical techniques or methods used.

(E) The results of such analyses.

(F) 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.23 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

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

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

(d) Reserved

(e) 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.

Portable Source Requirement

C.24 Relocation of Portable Sources [326 IAC 2-14-4]

(a) This permit is approved for operation in all areas of Indiana except Clark, Floyd, Lake, LaPorte, or Porter Counties, or severe nonattainment areas for ozone. This determination is based on the requirements of Prevention of Significant Deterioration in 326 IAC 2-2, and Emission Offset requirements in 326 IAC 2-3. Prior to locating in any severe nonattainment area, the Permittee must submit a request and obtain a permit modification.

(b) A request to relocate shall be submitted to IDEM, OAQ at least thirty (30) days prior to the intended date of relocation. This submittal shall include the following:

(1) A list of governmental officials entitled to receive notice of application to relocate. IC 13-15-3-1

(2) A list of adjacent landowners that the Permittee will send written notice to not more than ten (10) days after submission of the request to relocate. IC 13-15-8

(3) The new location address of the portable source.

(4) Whether or not this portable source will be relocated to another source.

(5) If relocating to another source:

(A) Name, location address, and permit number of the source this portable source is relocating to.

(B) Whether or not the sources will be considered as one source. See Non Rule Policy (NRP) Air-005 and Air-006.

(6) If the sources will be considered as one source, whether or not the source to be relocated to has received the necessary approvals from IDEM to allow the relocation.

The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) A “Relocation Site Approval” letter shall be obtained prior to relocating.

(d) A valid operation permit consists of this document and any subsequent “Relocation Site Approval” letter specifying the current location of the portable plant.

Stratospheric Ozone Protection

C.25 Compliance with 40 CFR 82 and 326 IAC 22-1

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-8-4(10)]: HMA Plant, Generators, HOH

(a) One (1) drum hot mix asphalt plant consisting of the following units:

(1) One (1) aggregate dryer/mixer, constructed in 1984, with a maximum throughput capacity of 320 tons of raw material per hour, processing blast furnace slag, steel slag, and recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) in the aggregate mix, having a burner with a maximum heat input rate of 97 million British thermal units per hour, primarily firing waste oil and using No. 2 distillate fuel oil and natural gas as a backup fuels, equipped with a baghouse for particulate control, and exhausting to one (1) stack;

(2) One (1) material conveying and handling operation.

(3) Aggregate storage piles, including:

(A) Blast furnace and/or electric arc steel slag storage piles, with a maximum anticipated pile size of 1.00 acres.

(B) Recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) storage piles, with a maximum anticipated pile size of 0.40 acres.

Under NSPS 40 CFR Part 60, Subpart I, New Source Performance Standards for Hot-mix Asphalt Plants, this drum hot mix asphalt facility is considered an affected facility.

(b) One (1) 670.0 hp diesel fuel-fired "large" genset generator, identified as ES(a), manufactured in 1982 and initially constructed in 2009, then moved onsite in 1984, uncontrolled and exhausting at one (1) stack (ES-1).

Under 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines, this is considered an affected facility.

(c) One (1) 54.0 hp diesel fuel-fired "small" generator, identified as ES(b), manufactured in 1982 and initially constructed in 2009, then moved onsite in 1984, uncontrolled and exhausting at one (1) stack (ES-2).

Under 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines, this is considered an affected facility.

Insignificant Activities: Boilers

(a) One (1) No. 2 distillate fuel oil fired hot oil heater, constructed in 1984, with a maximum heat input rate of 2.54 million British thermal units per hour, using natural gas as a backup fuel, uncontrolled and exhausting to the atmosphere. [326 IAC 6-2, 326 IAC 6.5]

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 PSD Minor Limit [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable;

(a) The amount of asphalt processed shall not exceed 1,325,277 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The PM emissions from the dryer/mixer shall not exceed 0.264 pounds per ton of asphalt processed.

Compliance with these limitations, combined with the limited potential to emit from other emission units at this source, shall limit the source-wide total potential to emit PM to less than 250 tons per 12 consecutive month period and shall render 326 IAC 2-2 (PSD) not applicable.

D.1.2 FESOP Limits: PM10, PM2.5, SO2, NOx, VOC, and CO [326 IAC 2-8-4][326 IAC 2-2] [326 IAC 2-3][326 IAC 2-1.1-5][326 IAC 8-1-6]

Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following:

(a) The amount of asphalt processed shall not exceed 1,325,277 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The PM10 emissions from the dryer/mixer shall not exceed 0.115 pounds per ton of asphalt processed.

(c) The PM2.5 emissions from the dryer/mixer shall not exceed 0.134 pounds of PM2.5 per ton of asphalt produced.

(d) The SO2 emissions from the dryer/mixer shall not exceed 0.058 pounds per ton of asphalt processed.

(e) The NOx emissions from the dryer/mixer shall not exceed 0.055 pounds per ton of asphalt processed.

(f) The VOC emissions from the dryer/mixer shall not exceed 0.032 pounds per ton of asphalt processed.

(g) The CO emissions from the dryer/mixer shall not exceed 0.130 pounds per ton of asphalt processed.

Compliance with these limits, combined with the potential to emit PM10, PM2.5, SO2, NOx, VOC, and CO from all other emission units at this source, shall limit the source-wide total potential to emit of PM10, PM2.5, SO2, NOx, VOC, and CO to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-1.1-5 (Nonattainment New Source Review) not applicable.

Additionally, compliance with the limit in condition D.1.2(f) shall limit the VOC emissions from the dryer/mixer to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities) not applicable.

D.1.3 FESOP Limits: SO2, NOX, and HAPs [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-4.1]

Pursuant to 326 IAC 2-8-4, and in order to render 326 IAC 2-2 and 326 IAC 2-4.1 not applicable, the Permittee shall comply with the following:

(a) Fuel and Slag Specifications

(1) The sulfur content of the No. 2 distillate fuel oil combusted in the dryer/mixer and hot oil heater shall not exceed 0.50% by weight.

(2) The sulfur content of the diesel fuel oil combusted in the large generator shall not exceed 0.50% by weight.

(3) The sulfur content of the waste oil combusted in the dryer/mixer shall not exceed 0.75% by weight.

(4) The waste oil combusted in the dryer/mixer shall not contain more than 0.20% chlorine, 1.02% ash, and 0.010% lead.

(5) The hydrogen chloride (HCl) emissions from the dryer/mixer shall not exceed 13.2 pounds of HCl per 1,000 gallons of waste oil burned.

(6) The sulfur content of the blast furnace slag shall not exceed 1.50% by weight.

(7) The SO2 emissions from the dryer/mixer shall not exceed 0.740 pounds per ton of blast furnace slag processed in the aggregate mix.

(8) The sulfur content of the steel slag shall not exceed 0.66% by weight.

(9) The SO2 emissions from the dryer/mixer shall not exceed 0.0014 pounds per ton of steel slag processed in the aggregate mix.

(b) Single Fuel and Slag Usage Limitations:

(1) When combusting only one type of fuel per twelve (12) consecutive month period in the dryer/mixer burner, the usage of fuel and slag shall be limited as follows:

(A) Natural gas usage in the dryer/mixer burner shall not exceed 850 million cubic feet (MMCF) per twelve (12) consecutive month period, with compliance determined at the end of each month.

(B) No. 2 fuel oil usage in the dryer/mixer burner shall not exceed 1,799,935 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(C) Waste oil usage in the dryer/mixer burner shall not exceed 1,159,142 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month; and

(D) The blast furnace slag usage shall not exceed 60,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) When combusting only one type of fuel per twelve (12) consecutive month period in the large generator, the usage of fuel shall be limited as follows:

(A) Diesel fuel usage in the large generator burner shall not exceed 171,130 gallons per consecutive twelve (12) month period, with compliance to be determined at the end of each month;

Note: The source is only permitted to burn the above-mentioned fuels in the associated emission units.

(c) Multiple Fuel and Slag Usage Limitation:
When combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer and the large generator, in conjunction with the use of slag in the aggregate mix, emissions from the dryer/mixer and the large generator shall be limited as follows:

(1) SO_2 emissions from the dryer/mixer and the large generator, combined, shall not exceed 92.87 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) NOx emissions from the dryer/mixer and the large generator, combined, shall not exceed 82.69 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(3) HCl emissions from the dryer/mixer shall not exceed 9.90 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) Asphalt Shingle Usage Limitation
Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAPs)) not applicable, the Permittee shall not grind recycled asphalt shingles on-site and shall only use certified asbestos-free recycled shingles, post consumer waste and/or factory seconds, as an additive in its aggregate mix.

Compliance with these limits, combined with the potential to emit SO2, NOx, and HAPs from all other emission units at this source, shall limit the source-wide total potential to emit of SO2 and NOx to less than 100 tons per twelve (12) consecutive month period, each, any single HAP to less than ten (10) tons per twelve (12) consecutive month period, and total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable.

D.1.4 Particulate Emission Limits [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the dryer/mixer, large generator, small generator, hot oil heater, and any enclosed material handling, screening, and/or conveying systems, each, shall not exceed 0.03 grain per dry standard cubic foot of exhaust air when operating in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.

D.1.5 Particulate Emission Limits [326 IAC 6-2]

Pursuant to 326 IAC 6-2-4, the particulate emissions from the hot oil heater shall not exceed six tenths (0.6) pounds of particulate matter per MMBtu heat input.

D.1.6 Sulfur Dioxide (SO2) [326 IAC 7-1.1-1] [326 IAC 7-2-1]

(a) Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), the Permittee shall comply with the following:

(1) The sulfur dioxide (SO2) emissions from the dryer/mixer burner shall not exceed five tenths (0.5) pounds per MMBtu when using distillate oil.

(2) The sulfur dioxide (SO2) emissions from the dryer/mixer burner shall not exceed one and six tenths (1.6) pounds per MMBtu heat input when using residual oil.

Note: No. 2 distillate fuel oil is considered distillate oil, and waste oil is considered residual oil.

(b) Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

D.1.7 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements

D.1.8 Particulate Control (PM/PM10/PM2.5)

(a) In order to comply with Conditions D.1.1(b), D.1.2(b), D.1.2(c), and D.1.4, the baghouse for particulate control shall be in operation and control emissions from the dryer/mixer at all times when the dryer/mixer is in operation.

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

D.1.9 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.1.1(b), D.1.2(b), D.1.2(c), and D.1.4, the Permittee shall perform PM, PM10, and PM2.5 testing of the dryer/mixer not later than 180 days after the startup of the dryer/mixer, utilizing methods approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable particulate matter.

(b) In order to demonstrate compliance with Condition D.1.3(a)(7), when using blast furnace slag, the Permittee shall perform SO2 testing for the aggregate dryer within one hundred eighty (180) days of initial use of blast furnace slag in the aggregate mix, utilizing methods as approved by the Commissioner. Testing shall only be performed if the company has not previously performed SO2 testing while using blast furnace slag in the aggregate mix at one of their other Indiana facilities. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.1.10 Sulfur Dioxide (SO_2) Emissions and Sulfur Content

Fuel Oil

(a) Compliance with the fuel limitations established in Conditions D.1.3(a)(1), D.1.3(a)(2), D.1.3(a)(3), and D.1.6, shall be determined utilizing one of the following options. Pursuant to 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements) and 326 IAC 3-7-4 (Fuel oil sampling; analysis methods), compliance shall be demonstrated on a thirty (30) day calendar-month average.

(1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or

(2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

(3) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 97 MMBtu/hr burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (1) or (2) above shall not be refuted by evidence of compliance pursuant to the other method.

Blast Furnace Slag

(b) Compliance with the blast furnace slag limitation established in Condition D.1.3(a)(6) shall be determined utilizing one of the following options. Pursuant to 326 IAC 2-8-4 (FESOP), compliance shall be demonstrated on a thirty (30) day calendar-month average.

(1) Maintaining all records of vendor analyses or certifications of blast furnace slag delivered; or

(2) Analyzing a sample of each blast furnace slag delivery, if no vendor analyses or certifications are available, to determine the sulfur content of the blast furnace slag, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 97 MMBtu/hr burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, or other procedures approved by IDEM, OAQ.

A determination of noncompliance pursuant to any of the methods specified in (1) or (2) above shall not be refuted by evidence of compliance pursuant to the other method.

Steel Slag

(c) Compliance with the steel slag limitations established in Condition D.1.3(a)(8) shall be determined utilizing one of the following options. Pursuant to 326 IAC 2-8-4 (FESOP), compliance shall be demonstrated on a thirty (30) day calendar-month average.

(1) Maintaining all records of vendor analyses or certifications of steel slag delivered; or

(2) Analyzing a sample of the steel slag delivery if no vendor analyses or certifications are available, at least once per quarter, to determine the sulfur content of the steel slag, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 97 MMBtu/hr burner, using 40 CFR 60, Appendix A, Method 6 in

accordance with the procedures in 326 IAC 3-6, or other procedures approved by IDEM, OAQ.

A determination of noncompliance pursuant to any of the methods specified in (1) or (2) above shall not be refuted by evidence of compliance pursuant to the other method.

D.1.11 Hydrogen Chloride (HCl) Emissions and Ash, Chlorine, and Lead Content

The Permittee shall demonstrate compliance with the waste oil chlorine, ash, and lead content limits established in Condition D.1.3(a)(4), by providing a vendor analysis of each fuel delivery accompanied by a vendor certification.

D.1.12 Multiple Fuel and Slag Usage

In order to comply with the Condition D.1.3(c) when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer, in conjunction with the use of slag in the aggregate mix, emissions from the dryer/mixer and large generator shall be limited as follows:

(a) Sulfur Dioxide (SO2) Emission Calculation

$$S = \frac{G(E_G) + O(E_O) + W(E_W) + D(E_D) + B(E_B) + T(E_T)}{2{,}000 \text{ lbs/ton}}$$

where:
S = tons of sulfur dioxide emissions for a 12-month consecutive period
G = million cubic feet of natural gas used in the in the dryer/mixer last 12 months;
O = gallons of No. 2 fuel oil used in the dryer/mixer in the last 12 months
W = gallons of waste oil used in the dryer/mixer in the last 12 months
D = gallons of diesel fuel oil used in the large generator in the last 12 months
B = tons of blast furnace slag used in the dryer/mixer in the last 12 months
T = tons of steel slag used in the in the dryer/mixer last 12 months
E_G = 0.60 lb/million cubic feet of natural gas
E_O = 71.0 lb/1000 gallons of No. 2 fuel oil
E_W = 110.3 lb/1000 gallons of waste oil
E_D = 79.18 lb/1000 gallons of diesel fuel oil
E_B = 0.74 lb/ton of blast furnace slag used
E_T = 0.0014 lb/ton of steel slag used

(b) Nitrogen Oxides (NOx) Emission Calculation

$$N = \frac{G(E_G) + O(E_O) + W(E_W) + D(E_D)}{2{,}000 \text{ lbs/ton}}$$

where:
N = tons of nitrogen oxide emissions for a 12-month consecutive period;
G = million cubic feet of natural gas used in the in the dryer/mixer last 12 months;
O = gallons of No. 2 fuel oil used in the in the dryer/mixer last 12 months;
W = gallons of reclaimed/waste oil used in the in the dryer/mixer last 12 months.
D = gallons of diesel fuel oil used in the large generator in the last 12 months
E_G = 190 lb/million cubic feet of natural gas;
E_O = 24.0 lb/1000 gallons of No. 2 fuel oil;
E_W = 19.0 lb/1000 gallons of waste oil.
E_D = 469.82 lb/1000 gallons of diesel fuel oil.

(c) Hydrogen Chloride (HCL) Emission Calculation

$$HCL = \frac{W(E_W)}{2000 \text{ lbs/ton}}$$

where:
HCl = tons of hydrogen chloride emissions for a 12-month consecutive period
W = gallons of waste oil used in the in the dryer/mixer in the last 12 months.
E_W = 13.2 lb/1000 gallons of waste oil.

D.1.13 Shingle Asbestos Content

Pursuant to 326 IAC 2-8-4, compliance with Condition D.1.3(d) shall be determined utilizing one of the following options:

(1) Providing shingle supplier certification that the factory second shingles do not contain asbestos; or

(2) Analyzing a sample of the recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) delivery to determine the asbestos content of the recycled asphalt shingles, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A determination of noncompliance pursuant to any of the methods specified above shall not be refuted by evidence of compliance pursuant to the other method.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.1.14 Visible Emissions Notations

(a) Visible emission notations from the conveyors, screens, material transfer points, and dryer/mixer stack exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. An abnormal visible emission notation is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.1.15 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouse used in conjunction with the dryer/mixer, at least once per day when the dryer/mixer is in operation. When, for any one reading, the pressure drop across the baghouse is outside of the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between one (1.0) and eight (8.0) inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest 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. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months, or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer specifications, if used.

D.1.16 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

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

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.1.17 Record Keeping Requirements

(a) To document the compliance status with Conditions D.1.1(a), and D.1.2(a), the Permittee shall keep monthly records of the amount of asphalt processed through the dryer/mixer.

(b) To document the compliance status with Conditions D.1.3 and D.1.6, the Permittee shall maintain records in accordance with (1) through (10) below. Records maintained for (1) through (10) below shall be taken monthly and shall be complete and sufficient to establish compliance with the limits established in Conditions D.1.3 and D.1.6.

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

(2) Actual fuel usage, sulfur content, heat content, and equivalent sulfur dioxide (SO2) and nitrogen oxides (NOx) emission rates for each fuel used at the source since the last compliance determination period;

(3) Actual waste oil usage, ash, chlorine, and lead content, and equivalent hydrogen chloride (HCl) emission rate for waste oil used at the source since the last compliance determination period;

(4) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

(5) If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(A) Fuel supplier certifications;

(B) The name of the fuel supplier; and

(C) A statement from the fuel supplier that certifies the sulfur content of the No. 2, fuel oil, diesel fuel oil, and waste oil, and the ash, chlorine, and lead content of waste oil.

(6) Actual blast furnace and steel slag usage, sulfur content and equivalent sulfur dioxide emission rates for all blast furnace and steel slag used at the source since the last compliance determination period;

(7) A certification, signed by the owner or operator, that the records of the blast furnace and steel slag supplier certifications represent all of the blast furnace and steel slag used during the period; and

(8) If the slag supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(A) Blast furnace and steel slag supplier certifications;

(B) The name of the blast furnace and steel slag supplier; and

(C) A statement from the blast furnace and steel slag supplier that certifies the sulfur content of the blast furnace and steel slag.

(9) A certification, signed by the owner or operator, that the records of the shingle supplier certifications represent all of the shingles used during the period; and

(10) If the shingle supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(A) Shingle supplier certifications;

(B) The name of the shingle supplier(s); and

(C) A statement from the shingle supplier(s) that certifies the asbestos content of the shingles from their company.

(d) To document the compliance status with Condition D.1.14, the Permittee shall maintain records once per day of the visible emission notations. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

(e) To document the compliance status with Condition D.1.15, the Permittee shall maintain records once per day of the pressure drop during normal operation. The Permittee shall include in its daily record when the pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g., the process did not operate that day).

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

D.1.18 Reporting Requirements

A quarterly summary of the information to document compliance status with Conditions D.1.1(a), D.1.2(a), and D.1.3, shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee’s obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1)by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-8-4(10)]: CMA Production & Storage

(h) Cold-mix (stockpile mix) asphalt manufacturing operations and storage piles.

(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 2-8-4(1)]

D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-5-2]

Pursuant to 326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving), the use of cutback asphalt or asphalt emulsion shall not contain more than seven percent (7%) oil distillate by volume of emulsion for any paving application except the following purposes:

(a) Penetrating prime coating

(b) Stockpile storage

(c) Application during the months of November, December, January, February, and March.

D.2.2 Volatile Organic Compounds (VOC) [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-4.1]

(a) Pursuant to 326 IAC 2-8-4, the VOC emissions from the sum of the liquid binders (asphalt emulsions) shall not exceed 60.70 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) Liquid binders used in the production of cold mix asphalt shall be defined as follows:

(1) Cut back asphalt rapid cure, containing a maximum of 25.3% of the liquid binder by weight of VOC solvent and 95.0% by weight of VOC solvent evaporating.

(2) Cut back asphalt medium cure, containing a maximum of 28.6% of the liquid binder by weight of VOC solvent and 70.0% by weight of VOC solvent evaporating.

(3) Cut back asphalt slow cure, containing a maximum of 20.0% of the liquid binder by weight of VOC solvent and 25.0% by weight of VOC solvent evaporating.

(4) Emulsified asphalt with solvent, containing a maximum of 15.0% of liquid binder by weight of VOC solvent and 46.4% by weight of the VOC solvent in the liquid blend evaporating. The percent oil distillate in emulsified asphalt with solvent liquid, as determined by ASTM, must be seven percent (7%) or less of the total emulsion by volume.

(5) Other asphalt with solvent binder, containing a maximum 25.9% of the liquid binder of VOC solvent and 2.5% by weight of the VOC solvent evaporating.

(c) When using only one type of liquid binder (asphalt emulsion) per twelve (12) consecutive month period, the usage of liquid binder shall be limited as follows:

(1) The amount of VOC solvent used in rapid cure cutback asphalt shall not exceed 63.89 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) The amount of VOC solvent used in medium cure cutback asphalt shall not exceed 86.71 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(3) The amount of VOC solvent used in slow cure cutback asphalt shall not exceed 242.79 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(4) The amount of VOC solvent used in emulsified asphalt shall not exceed 130.82 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(5) The amount of VOC solvent used in all other asphalt shall not exceed 2,427.93 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) When using more than one liquid binder (asphalt emulsion) per twelve (12) consecutive month period, VOC emissions shall be limited as follows:

(1) The VOC solvent allotments in (1) through (5) above shall be adjusted when more than one type of binder is used per twelve (12) consecutive month period with compliance determined at the end of each month. In order to determine the tons of VOC emitted per each type of binder, use the following formula and divide the tons of VOC solvent used for each type of binder by the corresponding adjustment factor listed in the table that follows.

$$\text{VOC emitted (tons/yr)} = \frac{\text{VOC solvent used for each binder (tons/yr)}}{\text{Adjustment factor}}$$

Type of binder	adjustment factor
cutback asphalt rapid cure	1.053
cutback asphalt medium cure	1.429
cutback asphalt slow cure	4.000
emulsified asphalt	2.155
other asphalt	40.0

Compliance with these limits, combined with the potential to emit VOCs and HAPs from all other emission units at this source, will limit source-wide VOC emissions to less than one hundred (100) tons per twelve (12) consecutive month period, any single HAP to less than ten (10) tons per twelve (12) consecutive month period, and total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period, and render 326 IAC 2-7 (Part 70 Permit Program), 326 IAC 2-2 (PSD)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.2.3 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.2(c)(1) through (5), the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.2.2(c)(1) through (5).

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

(2) Actual asphalt binder usage in the production of cold mix asphalt since the last compliance determination period;

(3) Actual VOC solvent content by weight of the asphalt binder used in the production of cold mix asphalt since the last compliance determination period; and

(4) Actual amount of VOC solvent used in the production of cold mix asphalt, and the amount of VOC emitted since the last compliance determination period.

Records may include: delivery tickets, manufacturer's data, material safety data sheets (MSDS), and other documents necessary to verify the type and amount used. Test results of ASTM tests for asphalt cutback and asphalt emulsion may be used to document volatilization.

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

D.2.4 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.2.2 shall be submitted no later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-8-4(10)]: Roads

(e) Paved and unpaved roads and parking lots with public access. [326 IAC 2-8, 326 IAC 6-4, 326 IAC 6-5]

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.3.1 Particulate Emissions [326 IAC 2-8]

Pursuant to 326 IAC 2-8, particulate emissions (PM/PM10) from the unpaved roads shall be controlled according to the Fugitive Dust Control Plan submitted by the Permittee on June 3, 1996, which is included as Attachment A to the permit.

SECTION E.1 NSPS REQUIREMENTS

Emissions Unit Description [326 IAC 2-8-4(10)]: HMA Plant

(a) One (1) drum hot mix asphalt plant consisting of the following units:

(1) One (1) aggregate dryer/mixer, constructed in 1984, with a maximum throughput capacity of 320 tons of raw material per hour, processing blast furnace slag, steel slag, and recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) in the aggregate mix, having a burner with a maximum heat input rate of 97 million British thermal units per hour, primarily firing waste oil and using No. 2 distillate fuel oil and natural gas as a backup fuels, equipped with a baghouse for particulate control, and exhausting to one (1) stack;

(2) One (1) material conveying and handling operation.

(3) Aggregate storage piles, including:

(A) Blast furnace and/or electric arc steel slag storage piles, with a maximum anticipated pile size of 1.00 acres.

(B) Recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) storage piles, with a maximum anticipated pile size of 0.40 acres.

Under NSPS 40 CFR Part 60, Subpart I, New Source Performance Standards for Hot-mix Asphalt Plants, this drum hot mix asphalt facility is considered an affected facility.

(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 2-8-4(1)]

E.1.1 General Provisions Relating to the New Source Performance Standards (NSPS) for Hot-mix Asphalt Facilities (40 CFR 60, Subpart I), [326 IAC 12] [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, except as otherwise specified in 40 CFR 60, Subpart I.

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

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

E.1.2 New Source Performance Standards (NSPS) for Hot-mix Asphalt Facilities [40 CFR Part 60, Subpart I] [326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart I (included as Attachment B of this permit), which are incorporated by reference as 326 IAC 12, except as otherwise specified in 40 CFR Part 60, Subpart I:

(a) 40 CFR 60.90

(b) 40 CFR 60.91

(c) 40 CFR 60.92

(d) 40 CFR 60.93

E.1.3 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

The Permittee shall perform the stack testing required under NSPS 40 CFR 60, Subpart I, utilizing methods as approved by the Commissioner to document compliance with Condition E.1.2. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

SECTION E.2 NESHAP REQUIREMENTS

Emissions Unit Description [326 IAC 2-8-4(10)]: Generators

(b) One (1) 670.0 hp diesel fuel-fired "large" genset generator, identified as ES(a), manufactured in 1982 and initially constructed in 2009, then moved onsite in 1984, uncontrolled and exhausting at one (1) stack (ES-1).

Under 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines, this is considered an affected facility.

(c) One (1) 54.0 hp diesel fuel-fired "small" generator, identified as ES(b), manufactured in 1982 and initially constructed in 2009, then moved onsite in 1984, uncontrolled and exhausting at one (1) stack (ES-2).

Under 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines, this is considered an affected facility.

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

National Emission Standards for Hazardous Air Pollutants (NESHAPs) Requirements [326 IAC 2-8-4(1)]

E.2.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.5925, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, as specified in Table 8 of 40 CFR Part 63, Subpart ZZZZ, and in accordance with schedule in 40 CFR 63 Subpart ZZZZ.

(b) Pursuant to 40 CFR 63.12, 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.2.2 National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ] [326 IAC 20-82]

The Permittee which owns or operates an existing stationary compression ignition (CI) reciprocating internal combustion engine (RICE) at an area source of HAP emissions shall comply with the provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment C of this permit), which are incorporated by reference as 326 IAC 20-82, with a compliance date of May 3, 2013, as follows:

(a) The 670 horsepower "large" genset generator (>500 HP, 10< x ≤30 liter/cylinder, constructed in 1982) is subject the following applicable portions of the NESHAP:

(1)	40 CFR 63.6580;	(12)	40 CFR 63.6630;
(2)	40 CFR 63.6585(a), (c), (d);	(13)	40 CFR 63.6635;
(3)	40 CFR 63.6590(a)(1)(iii) and (iv);	(14)	40 CFR 63.6640;
(4)	40 CFR 63.6595(a)(1), (b), (c);	(15)	40 CFR 63.6645;
(5)	40 CFR 63.6603(a);	(16)	40 CFR 63.6650(a), (b), (c), (d), (e);
(6)	40 CFR 63.6604;	(17)	40 CFR 63.6655(a), (b), (d);
(7)	40 CFR 63.6605;	(18)	40 CFR 63.6660;
(8)	40 CFR 63.6612;	(19)	40 CFR 63.6665;
(9)	40 CFR 63.6615;	(20)	40 CFR 63.6670;
(10)	40 CFR 63.6620;	(21)	40 CFR 63.6675; and
(11)	40 CFR 63.6625(a), (b), (g), (h);	(22)	Tables 1b, 2b, 2d, 3, 4, 5, 6, and 8.

(b) The 54.0 horsepower "small" generator (<500 HP, 10< x ≤30 liter/cylinder, constructed in 1982) is subject the following applicable portions of the NESHAP:

(1)	40 CFR 63.6580;	(8)	40 CFR 63.6640;
(2)	40 CFR 63.6585(a), (c), (d);	(9)	40 CFR 63.6655(a), (b), (d), (e);
(3)	40 CFR 63.6590(a)(1)(iii) and (iv);	(10)	40 CFR 63.6660
(4)	40 CFR 63.6595(a)(1), (b), (c);	(11)	40 CFR 63.6665
(5)	40 CFR 63.6603(a);	(12)	40 CFR 63.6670
(6)	40 CFR 63.6605;	(13)	40 CFR 63.6675
(7)	40 CFR 63.6625(e), (h), (i);	(14)	Tables 2d, and 8.

E.2.3 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

The Permittee shall perform the stack testing required under 40 CFR 63, Subpart ZZZZ, utilizing methods as approved by the Commissioner to document compliance with Condition E.2.2(a). These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Wabash Valley Asphalt Company, LLC
Source Address: (Portable)
FESOP Permit No.: 153-22594-03274

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:
Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Compliance and Enforcement Branch
Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT

Source Name: Wabash Valley Asphalt Company, LLC
Source Address: (Portable)
FESOP Permit No.: 153-22594-03274

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

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

- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16

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

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

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
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

FESOP Quarterly Report

Source Name: Wabash Valley Asphalt Company, LLC
Source Address: (Portable)
FESOP Permit No.: 153-22594-03274
Facility: Dryer/Mixer
Parameter: **Hot-mix Asphalt Production**
Limit: The amount of hot-mix asphalt produced in the dryer/burner shall not exceed 1,325,277 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER:_____ YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	Hot-mix Asphalt Produced This Month (tons)	Hot-mix Asphalt Produced Previous 11 Months (tons)	12 Month Total Hot-mix Asphalt Produced (tons)
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

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

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: Wabash Valley Asphalt Company, LLC
Source Address: (Portable)
FESOP Permit No.: 153-22594-03274

Facility: Dryer/Mixer Burner and Large Generator

Parameter: **Fuel & Slag Usage / SO2, NOx, & HCL emissions**

Emission Limits: *Sulfur dioxide (SO_2)* emissions shall not exceed 92.87 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.12(a).

Nitrogen oxides (NOx) emissions shall not exceed 82.69 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.12(b).

Hydrogen Chloride (HCL) emissions shall not exceed 9.90 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.12(c).

Fuel & Slag Limits: When combusting only one type of fuel per twelve (12) consecutive month period in the dryer/mixer and the large generator, in conjunction with the use of slag in the aggregate mix, fuel and slag usage shall not exceed the following:

Fuel Type (Units)	Fuel Usage Limit (per 12 consecutive month period)
Natural Gas (million cubic feet) (dryer)	850
No. 2 Distillate Fuel Oil (gallons) (dryer)	1,799,935
Waste Oil (gallons) (dryer)	1,159,142
Diesel Fuel Oil (gallons) (generator)	171,130
Blast Furnace Slag (tons) (dryer)	60,000

Facility: Cold-mix Asphalt Production

Parameter: **Binder Usage / VOC Emissions**

Emission Limits: *Volatile Organic Compound (VOC)* emissions from the sum of the binders shall not exceed 60.70 tons per twelve (12) consecutive month period with compliance determined at the end of each month, using the equation found in Condition D.2.2(d).

Binder Limits: When using only one type of liquid binder (asphalt emulsion) per twelve (12) consecutive month period in the production of cold-mix asphalt, liquid binder (asphalt emulsion) usage shall not exceed the following:

Type of Binder	Binder Usage Limit (tons per 12 consecutive month period)
Cutback Asphalt Rapid Cure	63.89
Cutback Asphalt Medium Cure	86.71
Cutback Asphalt Slow Cure	242.79
Emulsified Asphalt	130.82
Other Asphalt	2,427.93

FESOP Quarterly Report - Fuel & Slag Usage / SO2, NOx, & HCL emissions

QUARTER: _____ YEAR: _____

Month	Fuel Types / Slag (units)	Column 1	Column 2	Column 1 + Column 2	Equation Results		
		Usage This Month	Usage Previous 11 Months	Usage 12 Month Total	Sulfur Dioxide (SO2) Emissions (tons per 12 months)	Nitrogen Oxides (NOx) Emissions (tons per 12 months)	Hydrogen Chloride (HCl) Emissions (tons per 12 months)
Month 1	Natural Gas (million cubic feet)						
	No. 2 Fuel Oil (gallons)						
	Waste Fuel Oil (gallons)						
	Diesel Fuel Oil (gallons)						
	Blast Furnace Slag (tons)						
	Steel Slag Usage (tons)						
Month 2	Natural Gas (million cubic feet)						
	No. 2 Fuel Oil (gallons)						
	Waste Fuel Oil (gallons)						
	Diesel Fuel Oil (gallons)						
	Blast Furnace Slag (tons)						
	Steel Slag Usage (tons)						
Month 3	Natural Gas (million cubic feet)						
	No. 2 Fuel Oil (gallons)						
	Waste Fuel Oil (gallons)						
	Diesel Fuel Oil (gallons)						
	Blast Furnace Slag (tons)						
	Steel Slag Usage (tons)						

☐ No deviation occurred in this reporting period.

☐ Deviation/s occurred in this reporting period.

Deviation has been reported on: _____

Submitted by: _____ Date: _____

Title / Position: _____ Phone: _____

Signature: _____

FESOP Quarterly Report - Liquid Binder (Asphalt Emulsion) Usage / VOC Emissions

QUARTER: _____ YEAR: _____

Month	Binder/Emulsion Types (tons)	Column 1 Solvent Usage This Month	Column 2 Solvent Usage Previous 11 Months	Column 1 + Column 2 Solvent Usage 12 Month Total	Equation Results VOC Emissions (tons per 12 months)
Month 1	Cutback asphalt rapid cure liquid binder				
	Cutback asphalt medium cure liquid binder				
	Cutback asphalt slow cure liquid binder				
	Emulsified asphalt with solvent liquid binder				
	Other asphalt with solvent liquid binder				
Month 2	Cutback asphalt rapid cure liquid binder				
	Cutback asphalt medium cure liquid binder				
	Cutback asphalt slow cure liquid binder				
	Emulsified asphalt with solvent liquid binder				
	Other asphalt with solvent liquid binder				
Month 3	Cutback asphalt rapid cure liquid binder				
	Cutback asphalt medium cure liquid binder				
	Cutback asphalt slow cure liquid binder				
	Emulsified asphalt with solvent liquid binder				
	Other asphalt with solvent liquid binder				

☐ No deviation occurred in this reporting period.
☐ Deviation/s occurred in this reporting period.
Deviation has been reported on:_____

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

$$\text{VOC Emitted (tons/yr)} = \frac{\text{VOC solvent used for each binder (tons/yr)}}{\text{Adjustment factor}}$$

Type of Binder	Adjustment Factor
Cutback Asphalt Rapid Cure	1.053
Cutback Asphalt Medium Cure	1.429
Cutback Asphalt Slow Cure	4.0
Emulsified Asphalt	2.155
Other Asphalt	40.0

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Compliance and Enforcement Branch
Office of Air Quality

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Wabash Valley Asphalt Company, LLC
Source Address: (Portable)
FESOP Permit No.: 153-22594-03274

Months: _____ to _____ Year: _____

Page 1 of 2

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

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

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

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

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

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) RENEWAL OFFICE OF AIR QUALITY/

Wabash Valley Asphalt Company, LLC
(Portable)

Attachment A

HOT-MIX ASPHALT CONCRETE PLANT

FUGITIVE PARTICULATE MATTER EMISSIONS CONTROL PLAN

Op. Permit No.: F153-22594-03274
Significant Permit Revision No.: F027-31033-03274

A. Fugitive particulate matter emissions from paved roads, unpaved roads, and parking lots shall be controlled by one or more of the following methods:

1. Paved roads and parking lots:

   a. power brooming while wet either from rain or application of water on an as needed basis.

2. Unpaved roads and parking lots:

   a. paving with asphalt;

   b. treating with emulsified asphalt on an as needed basis;

   c. treating with water on an as needed basis; or

   d. double chip and seal the road surface and maintained on an as needed basis.

B. Fugitive particulate matter emissions from aggregate stockpiles shall be controlled by one or more of the following methods on an as needed basis:

1. maintaining minimum size and number of stockpiles of aggregate;

2. treating around the stockpile area with emulsified asphalt;

3. treating around the stockpile area with water; or

4. treating the stockpiles with water.

C. Fugitive particulate matter emissions from outdoor conveying of aggregates shall be controlled by the following methods:

1. applying water at the feed and the intermediate points.

D. Fugitive particulate matter emissions from the transfer of aggregates shall be controlled by one of the following methods:

1. minimize the vehicular distance between transfer points;

2. enclose the transfer points; or

3. apply water on transfer points on an as needed basis.

E. Fugitive particulate matter emissions from transportation of aggregate by truck, front end loader, etc. shall be controlled by one of the following methods:

1. maintain vehicle bodies in condition to prevent leakage;

2. spray the aggregates with water; or

3. maintain a 10 mph speed limit in the yard.

F. Fugitive particulate matter emissions from the loading and unloading of aggregate shall be controlled by one of the following methods:

1. reduce free fall distance to a minimum;

2. reduce the rate of discharge of the aggregate; or

3. spray the aggregate with water on an as needed basis.

G. Plan Implementation

1. The effective date of this plan was June 3, 1996.

DEFINITIONS:

An "as-needed basis" means the frequency or quantity of application necessary to minimize visible particulate matter emissions.

REFERENCE:

The Indiana Administrative Code, Title 326 Air Pollution Control Board, Article 6. Particulate Rules, weblink: http://www.in.gov/legislative/iac/T03260/A00060.PDF? . See page 12 for Rule 5. Fugitive Particulate Matter Emission Limitations.

FEDERALLY ENFORCEABLE
STATE OPERATING PERMIT RENEWAL

OFFICE OF AIR QUALITY

Wabash Valley Asphalt Company, LLC
(Portable)

Attachment B

Title 40: Protection of Environment

PART 60—NEW SOURCE PERFORMANCE STANDARDS

SUBPART I - STANDARDS OF PERFORMANCE
FOR HOT MIX ASPHALT FACILITIES

Op. Permit No.: F153-22594-03274
Significant Permit Revision No.: F027-31033-03274

40 CFR 60, SUBPART I — STANDARDS OF PERFORMANCE FOR HOT MIX ASPHALT FACILITIES

§ 60.90 Applicability and designation of affected facility.

(a) The affected facility to which the provisions of this subpart apply is each hot mix asphalt facility. For the purpose of this subpart, a hot mix asphalt facility is comprised only of any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler, systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems.

(b) Any facility under paragraph (a) of this section that commences construction or modification after June 11, 1973, is subject to the requirements of this subpart.

[42 FR 37936, July 25, 1977, as amended at 51 FR 12325, Apr. 10, 1986]

§ 60.91 Definitions.

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

(a) *Hot mix asphalt facility* means any facility, as described in §60.90, used to manufacture hot mix asphalt by heating and drying and mixing with asphalt cements.

[51 FR 12325, Apr. 10, 1986]

§ 60.92 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall discharge or cause the discharge into the atmosphere from any affected facility any gases which:

(1) Contain particulate matter in excess of 90 mg/dscm (four hundredths (0.04) gr/dscf).

(2) Exhibit 20 percent opacity, or greater.

[39 FR 9314, Mar. 8, 1974, as amended at 40 FR 46259, Oct. 6, 1975]

§ 60.93 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 appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).

(b) The owner or operator shall determine compliance with the particulate matter standards in §60.92 as follows:

(1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf).

(2) Method 9 and the procedures in §60.11 shall be used to determine opacity.

[54 FR 6667, Feb. 14, 1989]

Reference

The US EPA Electronic Code of Federal Regulations - 40 CFR 60, Subpart I: Standards of Performance for Hot Mix Asphalt Facilities weblink:
http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=875648a88dd2168ac2096fe26e3e4c98&rgn=div6&view=text&node=40:6.0.1.1.1.20&idno=40

FEDERALLY ENFORCEABLE
STATE OPERATING PERMIT RENEWAL

OFFICE OF AIR QUALITY

Wabash Valley Asphalt Company, LLC
(Portable)

Attachment C

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

SUBPART ZZZZ - NESHAPS FOR STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES

Significant Permit Revision No.: F027-31033-03274

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

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

What This Subpart Covers

§ 63.6580 What is the purpose of subpart ZZZZ?

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

[73 FR 3603, Jan. 18, 2008]

§ 63.6585 Am I subject to this subpart?

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

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

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

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

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

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

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

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

This subpart applies to each affected source.

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

(1) *Existing stationary RICE.*

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(3) The following stationary RICE do not have to meet the requirements of this subpart and of subpart A of this part, including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(vi) Existing residential emergency stationary RICE located at an area source of HAP emissions;

(vii) Existing commercial emergency stationary RICE located at an area source of HAP emissions; or

(viii) Existing institutional emergency stationary RICE located at an area source of HAP emissions.

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;

(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;

(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9674, Mar. 3, 2010; 75 FR 37733, June 30, 2010; 75 FR 51588, Aug. 20, 2010]

§ 63.6595 When do I have to comply with this subpart?

(a) *Affected sources.* (1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations and operating limitations no later than October 19, 2013.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008; 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

Emission and Operating Limitations

§ 63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010]

§ 63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 9675, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010]

§ 63.6602 What emission limitations must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is

based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

[75 FR 51589, Aug. 20, 2010]

§ 63.6603 What emission limitations and operating limitations must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 1b and Table 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE greater than 300 HP located at area sources in areas of Alaska not accessible by the Federal Aid Highway System (FAHS) you do not have to meet the numerical CO emission limitations specified in Table 2d to this subpart. Existing stationary non-emergency CI RICE greater than 300 HP located at area sources in areas of Alaska not accessible by the FAHS must meet the management practices that are shown for stationary non-emergency CI RICE less than or equal to 300 HP in Table 2d to this subpart.

[75 FR 9675, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011]

§ 63.6604 What fuel requirements must I meet if I own or operate an existing stationary CI RICE?

If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel. Existing non-emergency CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or at area sources in areas of Alaska not accessible by the FAHS are exempt from the requirements of this section.

[75 FR 51589, Aug. 20, 2010]

General Compliance Requirements

§ 63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations and operating limitations in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[75 FR 9675, Mar. 3, 2010]

Testing and Initial Compliance Requirements

§ 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (d)(1) through (5) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3605, Jan. 18, 2008]

§ 63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions specified in Table 4 to this subpart, as appropriate.

[73 FR 3605, Jan. 18, 2008, as amended at 75 FR 51589, Aug. 20, 2010]

§ 63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[75 FR 9676, Mar. 3, 2010, as amended at 75 FR 51589, Aug. 20, 2010]

§ 63.6615 When must I conduct subsequent performance tests?

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

§ 63.6620 What performance tests and other procedures must I use?

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again.

(c) [Reserved]

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

(e)(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \qquad \text{(Eq. 1)}$$

Where:

C_i= concentration of CO or formaldehyde at the control device inlet,

C_o= concentration of CO or formaldehyde at the control device outlet, and

R = percent reduction of CO or formaldehyde emissions.

(2) You must normalize the carbon monoxide (CO) or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO_2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO_2concentration is measured in lieu of oxygen concentration measurement, a CO_2correction factor is needed. Calculate the CO_2correction factor as described in paragraphs (e)(2)(i) through (iii) of this section.

(i) Calculate the fuel-specific $F_o$value for the fuel burned during the test using values obtained from Method 19, section 5.2, and the following equation:

$$F_o = \frac{0.209\, F_d}{F_c} \qquad \text{(Eq. 2)}$$

Where:

F_o= Fuel factor based on the ratio of oxygen volume to the ultimate CO_2volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d= Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).

F_c= Ratio of the volume of CO_2produced to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).

(ii) Calculate the CO_2correction factor for correcting measurement data to 15 percent oxygen, as follows:

$$X_{co_2} = \frac{5.9}{F_o} \qquad \text{(Eq. 3)}$$

Where:

X_{co2}= CO_2correction factor, percent.

5.9 = 20.9 percent O_2−15 percent O_2, the defined O_2correction value, percent.

(iii) Calculate the $NO_X$and SO_2gas concentrations adjusted to 15 percent O_2using CO_2as follows:

$$C_{adj} = C_d \frac{X_{co_2}}{\%CO_2} \qquad \text{(Eq. 4)}$$

Where:

$\%CO_2$= Measured CO_2concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (*e.g.,* operator adjustment, automatic controller adjustment, etc.) or unintentionally (*e.g.,* wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010]

§ 63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either oxygen or CO_2at both the inlet and the outlet of the control device according to the requirements in paragraphs (a)(1) through (4) of this section.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO_2concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (5) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (*e.g.,* thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also §63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;

(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

(3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;

(4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;

(5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;

(6) An existing non-emergency, non-black start landfill or digester gas stationary RICE located at an area source of HAP emissions;

(7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and

(10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (g)(2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska not accessible by the FAHS do not have to meet the requirements of paragraph (g) of this section.

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have

the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011]

§ 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?

(a) You must demonstrate initial compliance with each emission and operating limitation that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.

Continuous Compliance Requirements

§ 63.6635 How do I monitor and collect data to demonstrate continuous compliance?

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

§ 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?

(a) You must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) [Reserved]

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) *Requirements for emergency stationary RICE.* (1) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed on or after June 12, 2006, or an existing emergency stationary RICE located at an area source of HAP emissions, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1)(i) through (iii) of this section. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1)(i) through (iii) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1)(i) through (iii) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.

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

(ii) You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.

(iii) You may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except that owners and operators may operate the emergency engine for a maximum of 15

hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph (f)(1)(iii), as long as the power provided by the financial arrangement is limited to emergency power.

(2) If you own or operate an emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed prior to June 12, 2006, you must operate the engine according to the conditions described in paragraphs (f)(2)(i) through (iii) of this section. If you do not operate the engine according to the requirements in paragraphs (f)(2)(i) through (iii) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.

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

(ii) You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance.

(iii) You may operate your emergency stationary RICE for an additional 50 hours per year in non-emergency situations. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010]

Notifications, Reports, and Records

§ 63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

(b) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should include the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

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

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010]

§ 63.6650 What reports must I submit and when?

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

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

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in §63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

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

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report

must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

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

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

(3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

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

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

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

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

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010]

§ 63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv).

(2) Records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in paragraphs (b)(1) through (3) of this section.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.,* superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in §63.8(f)(6)(i), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in paragraphs (f)(1) or (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010]

§ 63.6660 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

Other Requirements and Information

§ 63.6665 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary

RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

§ 63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in §63.6600 under §63.6(g).

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

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

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

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in §63.6610(b).

§ 63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

Black start engine means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.,* as amended by Public Law 101–549, 104 Stat. 2399).

Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

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

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

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

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (*e.g.* biodiesel) that is suitable for use in compression ignition engines.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO_2.

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, *etc.* Stationary RICE used for peak shaving are not considered emergency stationary RICE. Stationary RICE used to supply power to an electric grid or that supply non-emergency power as part of a financial arrangement with another entity are not considered to be emergency engines, except as permitted under §63.6640(f). All emergency stationary RICE must comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

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

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

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

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes “rich” glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The “lean” glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

Institutional emergency stationary RICE means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO_2.

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

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

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

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

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

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_X) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_X, CO, and volatile organic compounds (VOC) into CO_2, nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (*i.e.,* remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in §63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to §63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to §63.1270(a)(2).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8.

Residential emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

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

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO_X(such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

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

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

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart PPPPP of this part, that tests stationary RICE.

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

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

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

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011]

Table 1a to Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

Table 1b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed Spark Ignition 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions and Existing Spark Ignition 4SRB Stationary RICE >500 HP Located at an Area Source of HAP Emissions

As stated in §§63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions and existing 4SRB stationary RICE >500 HP located at an area source of HAP emissions that operate more than 24 hours per calendar year:

For each . . .	You must meet the following operating limitation . . .
1. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O2 and using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd or less at 15 percent O2 and using NSCR.	a. Maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and b. Maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.

For each . . .	You must meet the following operating limitation . . .
2. 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O2 and not using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd or less at 15 percent O2 and not using NSCR.	Comply with any operating limitations approved by the Administrator.

[76 FR 12867, Mar. 9, 2011]

Table 2a to Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O_2. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O_2until June 15, 2007	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O_2	
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O_2	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 9680, Mar. 3, 2010]

Table 2b to Subpart ZZZZ of Part 63— Operating Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE≥250 HP Located at a Major Source of HAP Emissions, Existing Compression Ignition Stationary RICE >500 HP, and Existing 4SLB Stationary RICE >500 HP Located at an Area Source of HAP Emissions

As stated in §§63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and compression ignition stationary RICE located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE≥250 HP lo cated at a major source of HAP emissions; existing compression ignition stationary RICE >500 HP; and existing 4SLB stationary RICE >500 HP located at an area source of HAP emissions that operate more than 24 hours per calendar year:

For each . . .	You must meet the following operating limitation . . .
1. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst; or 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]
2. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and not using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; or 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst	Comply with any operating limitations approved by the Administrator.

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(g) for a different temperature range.

[75 FR 51593, Aug. 20, 2010, as amended at 76 FR 12867, Mar. 9, 2011]

Table 2c to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Emergency stationary CI RICE and black start stationary CI RICE.[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[3]
2. Non-Emergency, non-black start stationary CI RICE <100 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[2]	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O_2	
4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
5. Non-Emergency, non-black start stationary CI RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
6. Emergency stationary SI RICE and black start stationary SI RICE.[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[2]	
	b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[2]	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
8. Non-Emergency, non-black start 2SLB stationary SI RICE <100 HP	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[2]	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first;	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O_2	
10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O_2	
11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O_2	
12. Non-emergency, non-black start landfill or digester gas-fired stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O_2	

[1]If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

[2]Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2c of this subpart.

[3]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[75 FR 51593, Aug. 20, 2010]

Table 2d to Subpart ZZZZ of Part 63— Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Non-Emergency, non-black start CI stationary RICE ≤300 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[1]	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
2. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1] b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
8. Non-emergency, non-black start 4SLB stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 93 percent or more.	
9. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
10. Non-emergency, non-black start 4SRB stationary RICE >500 HP	a. Limit concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd at 15 percent O_2; or	
	b. Reduce formaldehyde emissions by 76 percent or more.	
11. Non-emergency, non-black start landfill or digester gas-fired stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	

[1]Sources have the option to utilize an oil analysis program as described in §63.6625(i) in order to extend the specified oil change requirement in Table 2d of this subpart.

[2]If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

[75 FR 51595, Aug. 20, 2010]

Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests

As stated in §§63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

For each . . .	Complying with the requirement to . . .	You must . . .
1. New or reconstructed 2SLB stationary RICE with a brake horsepower >500 located at major sources; new or reconstructed 4SLB stationary RICE with a brake horsepower ≥250 located at major sources; and new or reconstructed CI stationary RICE with a brake horsepower >500 located at major sources	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually.[1]
2. 4SRB stationary RICE with a brake horsepower ≥5,000 located at major sources	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually.[1]

For each . . .	Complying with the requirement to . . .	You must . . .
3. Stationary RICE with a brake horsepower >500 located at major sources and new or reconstructed 4SLB stationary RICE with a brake horsepower 250≤HP≤500 located at major sources	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually.[1]
4. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower >500 that are not limited use stationary RICE; existing non-emergency, non-black start 4SLB and 4SRB stationary RICE located at an area source of HAP emissions with a brake horsepower >500 that are operated more than 24 hours per calendar year that are not limited use stationary RICE	Limit or reduce CO or formaldehyde emissions	Conduct subsequent performance tests every 8,760 hrs. or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower >500 that are limited use stationary RICE; existing non-emergency, non-black start 4SLB and 4SRB stationary RICE located at an area source of HAP emissions with a brake horsepower >500 that are operated more than 24 hours per calendar year and are limited use stationary RICE	Limit or reduce CO or formaldehyde emissions	Conduct subsequent performance tests every 8,760 hrs. or 5 years, whichever comes first.

[1]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[75 FR 51596, Aug. 20, 2010]

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

As stated in §§63.6610, 63.6611, 63.6612, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. Reduce CO emissions	i. Measure the O_2 at the inlet and outlet of the control device; and	(1) Portable CO and O_2analyzer	(a) Using ASTM D6522–00 (2005)[a](incorporated by reference, see §63.14). Measurements to determine O_2must be made at the same time as the measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of the control device	(1) Portable CO and O_2analyzer	(a) Using ASTM D6522–00 (2005)[ab](incorporated by reference, see §63.14) or Method 10 of 40 CFR appendix A. The CO concentration must be at 15 percent O_2, dry basis.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
2. 4SRB stationary RICE	a. Reduce formaldehyde emissions	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00m (2005)	(a) Measurements to determine O_2 concentration must be made at the same time as the measurements for formaldehyde concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.
		iv. Measure formaldehyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348–03,[c]provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
3. Stationary RICE	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (2005)	(a) Measurements to determine O_2concentration must be made at the same time and location as the measurements for formaldehyde concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348–03,[c]provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. Measure CO at the exhaust of the stationary RICE	(1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522–00 (2005),[a]Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03	(a) CO Concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour longer runs.

[a]You may also use Methods 3A and 10 as options to ASTM–D6522–00 (2005). You may obtain a copy of ASTM–D6522–00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106. ASTM–D6522–00 (2005) may be used to test both CI and SI stationary RICE.

[b]You may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03.

[c]You may obtain a copy of ASTM–D6348–03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[75 FR 51597, Aug. 20, 2010]

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Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations and Operating Limitations

As stated in §§63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if. . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Limit the concentration of CO, and not using oxidation catalyst	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. You have recorded the approved operating parameters (if any) during the initial performance test.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if. . .
5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2 or CO_2 at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Limit the concentration of CO, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2 or CO_2 at the outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and
		iii. The average concentration of CO calculated using §63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.
7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce formaldehyde emissions and using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if. . .
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
9. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Limit the concentration of formaldehyde and not using NSCR	i. The average formaldehyde concentration determined from the initial performance test is less than or equal to the formaldehyde emission limitation; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
11. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
12. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Reduce CO or formaldehyde emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.
13. Existing non-emergency stationary RICE 100≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.

[76 FR 12867, Mar. 9, 2011]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, Operating Limitations, Work Practices, and Management Practices

As stated in §63.6640, you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved;[a]and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved;[a]and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE >500 HP located at a major source of HAP, existing non-emergency stationary CI RICE >500 HP, existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS	i. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to §63.6620; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to §63.6625(b); and ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. Non-emergency 4SRB stationary RICE with a brake HP ≥5,000 located at a major source of HAP	a. Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved.[a]
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250 ≤HP≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit;[a]and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
8. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250 ≤HP≤500 located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit;[a]and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency landfill or digester gas stationary SI RICE located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate 24 hours or less per calendar year	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE, and existing 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year and are not limited use stationary RICE	a. Reduce CO or formaldehyde emissions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE, and existing 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year and are not limited use stationary RICE	a. Reduce CO or formaldehyde emissions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and not using oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
12. Existing limited use CI stationary RICE >500 HP and existing limited use 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year	a. Reduce CO or formaldehyde emissions or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using an oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
13. Existing limited use CI stationary RICE >500 HP and existing limited use 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year	a. Reduce CO or formaldehyde emissions or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and not using an oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

[a]After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

[76 FR 12870, Mar. 9, 2011]

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Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports

As stated in §63.6650, you must comply with the following requirements for reports:

For each ...	You must submit a ...	The report must contain ...	You must submit the report ...
1. Existing non-emergency, non-black start stationary RICE 100≤HP≤500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP; existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP and operated more than 24 hours per calendar year; new or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4)	i. Semiannually according to the requirements in §63.6650(b)(1)–(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to the requirements in §63.6650(b)(6)–(9) for engines that are limited use stationary RICE subject to numerical emission limitations. i. Semiannually according to the requirements in §63.6650(b). i. Semiannually according to the requirements in §63.6650(b).
2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Report	a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and	i. Annually, according to the requirements in §63.6650.
		b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and	i. See item 2.a.i.
		c. Any problems or errors suspected with the meters.	i. See item 2.a.i.

[75 FR 51603, Aug. 20, 2010]

Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.

As stated in §63.6665, you must comply with the following applicable general provisions.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.1	General applicability of the General Provisions	Yes.	
§63.2	Definitions	Yes	Additional terms defined in §63.6675.
§63.3	Units and abbreviations	Yes.	
§63.4	Prohibited activities and circumvention	Yes.	
§63.5	Construction and reconstruction	Yes.	
§63.6(a)	Applicability	Yes.	
§63.6(b)(1)–(4)	Compliance dates for new and reconstructed sources	Yes.	
§63.6(b)(5)	Notification	Yes.	
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes.	
§63.6(c)(1)–(2)	Compliance dates for existing sources	Yes.	
§63.6(c)(3)–(4)	[Reserved]		
§63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes.	
§63.6(d)	[Reserved]		
§63.6(e)	Operation and maintenance	No.	
§63.6(f)(1)	Applicability of standards	No.	
§63.6(f)(2)	Methods for determining compliance	Yes.	
§63.6(f)(3)	Finding of compliance	Yes.	
§63.6(g)(1)–(3)	Use of alternate standard	Yes.	
§63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§63.6(i)	Compliance extension procedures and criteria	Yes.	
§63.6(j)	Presidential compliance exemption	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.7(a)(1)–(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612.
§63.7(a)(3)	CAA section 114 authority	Yes.	
§63.7(b)(1)	Notification of performance test	Yes	Except that §63.7(b)(1) only applies as specified in §63.6645.
§63.7(b)(2)	Notification of rescheduling	Yes	Except that §63.7(b)(2) only applies as specified in §63.6645.
§63.7(c)	Quality assurance/test plan	Yes	Except that §63.7(c) only applies as specified in §63.6645.
§63.7(d)	Testing facilities	Yes.	
§63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.
§63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at §63.6620.
§63.7(e)(3)	Test run duration	Yes.	
§63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§63.7(f)	Alternative test method provisions	Yes.	
§63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§63.7(h)	Waiver of tests	Yes.	
§63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at §63.6625.
§63.8(a)(2)	Performance specifications	Yes.	
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring for control devices	No.	
§63.8(b)(1)	Monitoring	Yes.	
§63.8(b)(2)–(3)	Multiple effluents and multiple monitoring systems	Yes.	
§63.8(c)(1)	Monitoring system operation and maintenance	Yes.	
§63.8(c)(1)(i)	Routine and predictable SSM	Yes.	
§63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	Yes.	
§63.8(c)(2)–(3)	Monitoring system installation	Yes.	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)–(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§63.8(d)	CMS quality control	Yes.	
§63.8(e)	CMS performance evaluation	Yes	Except for §63.8(e)(5)(ii), which applies to COMS.
		Except that §63.8(e) only applies as specified in §63.6645.	
§63.8(f)(1)–(5)	Alternative monitoring method	Yes	Except that §63.8(f)(4) only applies as specified in §63.6645.
§63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that §63.8(f)(6) only applies as specified in §63.6645.
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.
§63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§63.9(b)(1)–(5)	Initial notifications	Yes	Except that §63.9(b)(3) is reserved.
		Except that §63.9(b) only applies as specified in §63.6645.	
§63.9(c)	Request for compliance extension	Yes	Except that §63.9(c) only applies as specified in §63.6645.
§63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that §63.9(d) only applies as specified in §63.6645.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.9(e)	Notification of performance test	Yes	Except that §63.9(e) only applies as specified in §63.6645.
§63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(1)	Notification of performance evaluation	Yes	Except that §63.9(g) only applies as specified in §63.6645.
§63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that §63.9(g) only applies as specified in §63.6645.	
§63.9(h)(1)–(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
			Except that §63.9(h) only applies as specified in §63.6645.
§63.9(i)	Adjustment of submittal deadlines	Yes.	
§63.9(j)	Change in previous information	Yes.	
§63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§63.10(b)(1)	Record retention	Yes.	
§63.10(b)(2)(i)–(v)	Records related to SSM	No.	
§63.10(b)(2)(vi)–(xi)	Records	Yes.	
§63.10(b)(2)(xii)	Record when under waiver	Yes.	
§63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§63.10(b)(3)	Records of applicability determination	Yes.	
§63.10(c)	Additional records for sources using CEMS	Yes	Except that §63.10(c)(2)–(4) and (9) are reserved.
§63.10(d)(1)	General reporting requirements	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.10(d)(2)	Report of performance test results	Yes.	
§63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.10(d)(4)	Progress reports	Yes.	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that §63.10(e)(3)(i) (C) is reserved.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§63.11	Flares	No.	
§63.12	State authority and delegations	Yes.	
§63.13	Addresses	Yes.	
§63.14	Incorporation by reference	Yes.	
§63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010]

Resource(s)

EPA Rule and Implementation Information for Reciprocating Internal Combustion Engines
http://www.epa.gov/ttn/atw/rice/ricepg.html (scroll down the page to find Implementation Information)

Reference

The US EPA Electronic Code of Federal Regulations - 40 CFR 63, Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines web address:
http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&rgn=div6&view=text&node=40:13.0.1.1.1.1&idno=40

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Significant Permit Revision to a Federally Enforceable State Operating Permit (FESOP)

Source Description and Location

Source Name:	Wabash Valley Asphalt Co., LLC
Future/Pending Source Location:	South 650 East State Road 9, Columbus, Indiana 47203
County:	Bartholomew
SIC Code:	2951 (Asphalt Paving Mixtures and Blocks)
Operation Permit No.:	F153-22594-03274
Operation Permit Issuance Date:	March 15, 2007
Significant Permit Revision No.:	F005-31033-03274
Permit Reviewer:	Hannah L. Desrosiers

On October 17, 2011, the Office of Air Quality (OAQ) received an application from Wabash Valley Asphalt Co., LLC related to a modification to an existing portable drum hot mix asphalt plant and cold-mix manufacturing operation.

Portable Source

(a) Initial Location
This is a portable source and its initial location was 937 S. Section Street, Sullivan, Indiana 47882, Sullivan County.

(b) Current Location
This portable source is currently located at South 650 East State Road 9, Columbus, Indiana 47203, Bartholomew County.

(c) PSD and Emission Offset Requirements
The emissions from this portable source were reviewed under the requirements of the Prevention of Significant Deterioration (PSD) 326 IAC 2-2 and Emission Offset 326 IAC 2-3.

(d) Relocation Locations
The Permittee is authorized to relocate this portable drum hot mix asphalt plant to all areas of the state except for Clark, Floyd, Lake, LaPorte, and Porter Counties, or any county designated as a "severe" or "serious" non-attainment area for PM2.5, PM10, SO_2, NO_X, CO, Lead, or Ozone. The source has indicated that they do not wish access to Clark, Floyd, Lake, and Porter Counties due to additional requirements specific to these counties, and currently, none of the remaining counties in Indiana are designated "severe" or "serious" non-attainment for any pollutant. Therefore, since the limited potential emissions of all regulated pollutants are less than 100 tons per year, this source may relocate to any county in Indiana, except for Clark, Floyd, Lake, and Porter Counties, and will be a minor source under 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset).

Source Definition

A source determination was not required for this location since Wabash Valley Asphalt Co., LLC has no other asphalt manufacturing facility, or any support facilities, at the same address, or on contiguous or adjacent properties, and there are no other similar and/or support facilities located in the area.

Existing Approvals

The source was issued FESOP Renewal No. F153-22594-03274 on March 15, 2007. The source has since received the following approvals:

(a) First Relocation No. 117-26902-05227, issued on May 2, 2008;

(b) Second Relocation No. 055-27746-05227, issued on April 1, 2009;

(c) Third Relocation No. 145-28888-05227, issued on May 7, 2010; and

(d) Fourth Relocation No. 109-29530-05227, issued on August 3, 2010;

County Attainment Status

The source is located in Bartholomew County. The following attainment status designations are applicable to Bartholomew County:

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
$PM_{2.5}$	Unclassifiable or attainment effective April 5, 2005.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.
[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.	

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Bartholomew County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) PM2.5
Bartholomew County has been classified as attainment for $PM_{2.5}$. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011, the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct $PM_{2.5}$ and SO_2 emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
Bartholomew County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, however, there is an applicable New Source Performance Standard that was in effect on August 7, 1980, therefore fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Status of the Existing Source

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

Process/emission unit	Potential To Emit (tons/year)						
	PM	PM-10	SO_2	NO_x	VOC	CO	HAPs
Drum Mixer and Dryer[1]	77.4[2]	77.4[2]	90.0	37.1	21.6	87.7	14.5
Hot Oil Heater	0.16	0.26	5.64	1.59	0.03	0.40	Negligible
Generator	3.56	3.56	3.33	50.6	4.13	10.9	Negligible
Storage[3]	0.05	0.02	----	----	----	----	----
Conveying	4.70	2.22	----	----	----	----	----
Semi Truck[3]	21.5	5.49	----	----	----	----	----
Front End Loader[3]	39.9	10.2	----	----	----	----	----
Cold Mix Cutback Asphalt[4]	----	----	----	----	< 73.3	----	----
Total Emissions	**147**	**99.1**	**99.0**	**89.3**	**< 99**	**99.0**	**14.6**

Note(s):

This table was taken directly from the TSD for FESOP Renewal No. F153-22594-03274 *(Potential to Emit After Issuance Section, page 4 of 16)*, and only the formatting has been modified slightly for clarity. IDEM was not required to quantify $PM_{2.5}$ or Greenhouse Gas emissions at the time of issuance.

1 Limited PTE for SO_2, VOC, CO, and NO_x reflects fuel usage and asphalt throughput limitation to comply with 326 IAC 2-8 (FESOP) and 326 IAC 2-2 (PSD).

2 Limited PM/PM10 emissions in order to comply with 326 IAC 2-8 (FESOP) and 326 IAC 2-2 (PSD).

3 Potential to emit after controls included in the fugitive particulate matter control plan.

4 Limited VOC emissions in order to comply with 326 IAC 2-8 (FESOP) and 326 IAC 2-2 (PSD).

(a) This existing source is not a major source, under PSD (326 IAC 2-2), because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).

(b) This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the Permittee accepted limits on HAPs emissions to less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by Wabash Valley Asphalt Co., LLC (Wabash), on October 17, 2011, relating to increasing the operational flexibility of the existing portable drum hot mix asphalt plant through the addition of blast furnace and electric arc furnace steel mill slag, and recycled shingles to the aggregate mix, and natural gas as a back-up fuel for the dryer burner and hot oil heater. Wabash has confirmed that it does not perform any crushing of recycled asphalt pavement (RAP) or any aggregate, or any grinding of any kind of recycled asphalt shingles (RAS), asbestos-free or otherwise. Additionally, Wabash has requested that the allowable pressure drop for the baghouse be adjusted from one

(1.0) to six (6.0) inches of water to one (1.0) to eight (8.0) inches of water. Furthermore, Wabash has indicated that it no longer wants the flexibility to locate this existing portable drum hot mix asphalt plant in Clark, Floyd, Lake, and/or Porter Counties due to the additional requirements specific to these counties. Finally, Wabash has requested that the date of construction for the 20,000 gallon storage tank for liquid asphalt AC-20 be corrected, from 1884 to 1984.

(a) The following is a list of the existing affected emission unit(s) and pollution control device(s), as described in FESOP Renewal No.: F153-22594-03274:

(1) One (1) drum hot mix asphalt plant consisting of the following units:

(A) One (1) aggregate dryer/mixer, constructed in 1984, with a maximum capacity of 320 tons per hour, having a burner with a maximum heat input rate of 97 million British thermal units per hour, exhausting to a baghouse. The burner is fired by waste oil with No. 2 fuel oil used as a backup fuel.

(B) One (1) hot oil heater, constructed in 1984, with a maximum heat input rate of 2.54 million British thermal units per hour, fired by No. 2 distillate fuel oil.

(C) One (1) No. 2 distillate fuel oil fired generator, constructed in 1984, with a maximum heat input capacity of 2.62 million Btu per hour.

(D) One (1) material conveying and handling operation.

This drum hot mix asphalt facility is considered to be an affected source under 40 CFR 60, Subpart I.

(2) One (1) 20,000 gallon storage tank for liquid asphalt AC-20, constructed in 1884.

(b) The following is a list of the new emission unit(s) and/or pollution control device(s):

(1) Blast furnace and/or electric arc steel slag storage piles, with a maximum anticipated pile size of 0.57 acres.

(2) Recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) storage piles, with a maximum anticipated pile size of 0.44 acres.

(c) Upon review of the permit and supporting documentation, IDEM OAQ, in collaboration with the source, determined that the following additional revisions were required to maintain the Source's FESOP Status:

(1) Recent testing performed on similar operations at another asphalt plant facility has shown that blast furnace slag emits higher SO2 emissions than were previously accounted for in standard asphalt plant emission calculations. Consequently, IDEM determined that the emission factors developed during the testing should be applied to emissions from blast furnace slag use, and that permit requirements and conditions should be revised and/or added, as needed, to account for SO2 emissions generated by the addition of blast furnace slag to the aggregate mix. Additionally, similar testing has shown that SO2 emissions from electric arc steel mill slag are negligible and a limit is not needed for compliance with the FESOP.

Wabash has confirmed that they would like the flexibility to use blast furnace slag in their aggregate mix. Therefore, a new condition limiting the use of blast furnace slag in the aggregate mix has been added to the permit in order to ensure compliance with the one hundred (100) ton per year FESOP threshold for SO2, and making the requirements of 326 IAC 2-7 Title V (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

This is a new requirement for this source. This is a Title I change.

Correspondingly, the existing No. 2 fuel oil, and waste oil usage limits have been revised to accommodate the addition of the blast furnace slag to the permit in order to ensure compliance with the one hundred (100) ton per year FESOP threshold for SO2, and making the requirements of 326 IAC 2-7 Title V (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

This is a Title I change.

(2) Wabash does not intend to grind shingles at this plant; therefore, they will be required to use/purchase only supplier certified asbestos-free factory seconds and/or post consumer waste shingles for use in their aggregate mix. This requirement will be added to the permit because it is the physical act of grinding that releases asbestos into the air. Consequently, the company performing the grinding would need to test the shingles, prior to grinding, in order for the testing to be effective. A new condition limiting the use of asphalt shingles in the aggregate mix to only those that are asbestos-free, will be added to the permit.

This is a new requirement for this source. This is a Title I change.

(3) During this review, the emissions calculations were updated to reflect the source's most current "worst-case" operating conditions for all units, and includes emissions not previously counted. Additionally, since OAQ relies on the most up-to-date emission factors recommended by U.S. EPA, facility emissions have been characterized using the most recent version of U.S. EPA's AP-42.

(A) The most recent AP-42 emission factor has been used to characterize VOC emissions from the fuel combustion and the drying/mixing process. In order to ensure compliance with the twenty five (25) tons/yr threshold, and to render the requirements of 326 IAC 8-1-6 BACT not applicable, a new (#/ton) limit for VOC has been added to the permit

This is a Title I change.

(B) The most recent AP-42 emission factors have been used to characterize emissions from fuel combustion in the dryer/mixer. As a result, the following applies:

(α) A new ash content limit for waste oil (a limiting factor for PM, PM10, PM2.5) has been added to the permit to ensure compliance with the one hundred (100) ton per year FESOP threshold for each pollutant and making the requirements of 326 IAC 2-7 Title V (Part 70) not applicable;

This is a Title I change.

(β) A new chlorine content limit for waste oil (a limiting factor for HAPs) has been added to the permit to ensure compliance with the ten (10) ton per year single HAP, and the twenty-five (25) ton per year combined HAP, thresholds and making the requirements of 326 IAC 2-7 Title V (Part 70) not applicable;

This is a Title I change.

(χ) A new lead content limit for waste oil (another limiting factor for HAPs) has been added to the permit to ensure compliance with the ten (10) ton per year single HAP, and the twenty-five (25) ton per year combined HAP, thresholds and making the requirements of 326 IAC 2-7 Title V (Part 70) not applicable;

This is a Title I change.

(C) The most recent adjustment ratio has been used to characterize VOC emissions from the cold-mix asphalt production and storage. The cold-mix VOC limit has been revised to accommodate these changes, in addition to the effect of the slag and natural gas on the emissions from the dryer/mixer unit. The existing cold-mix asphalt limit has been increased.

This is a Title I change.

(D) HAP emissions from the cold-mix asphalt production and storage, not previously accounted for in FESOP Renewal F153-22594-03274, have been calculated. The revised cold-mix VOC limit is sufficient to limit the cold-mix asphalt production rate such that source wide potential to emit of any single HAP is limited to less than ten (10) tons per year, and any combination of HAPs is limited to less than twenty-five (25) tons per year; and therefore, rendering 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable. No change to the permit occurred because of this update.

(5) The existing permit specifies the compliance with the SO2 limits in terms of fuel equivalency, however, the source has indicated that they would prefer compliance be demonstrated by equation, as indicated in the "PTE of the Entire Source after Issuance of the FESOP Revision" section, below ;

This is a Title I change.

(d) Finally, IDEM OAQ has determined that the following additional revisions were required.

(1) Pursuant to 326 IAC 2-7-1(39), starting July 1, 2011, greenhouse gases (GHGs) emissions are subject to regulation at a source with a potential to emit 100,000 tons per year or more of CO2 equivalent emissions (CO2e). Therefore, CO2e emissions have been calculated for this source (see TSD Appendix A for detailed calculations and this TSD, for a summary table). Based on the calculations, the unlimited potential to emit greenhouse gases from the entire source is less than 100,000 tons of CO2e per year. A FESOP emissions cap for greenhouse gases (GHGs) has been added to Section C of the permit. No other changes have been made to the permit as a result of this review.

(2) A number of Federal Area Source National Emission Standards for Hazardous Air Pollutants (NESHAPs) and New Source Performance Standards (NSPS) have been promulgated, or revised, since the issuance of FESOP Renewal No. F153-22594-03274, on March 15, 2007. Therefore, IDEM has performed an applicability determination for the following:

A. 40 CFR 60, Subpart IIII (4I);
B. 40 CFR 60, Subpart JJJJ (4J);
C. 40 CFR 63, Subpart ZZZZ (4Z);
D. 40 CFR 63, Subpart DDDDD (5D);
E. 40 CFR 63, Subpart CCCCCC (6C);
F. 40 CFR 63, Subpart JJJJJJ (6J); and
G. 40 CFR 63, Subpart AAAAAAA (7A).

(3) PM2.5 emissions have been calculated for all applicable units in compliance with the May 8, 2008 promulgation of Prevention of Significant Deterioration (PSD) requirements for PM2.5 emissions. PM2.5 limits have been added to the permit as necessary to ensure that PM2.5 emissions from the entire source are less than the Title V major source threshold of one hundred (100) tons per year, in order that the source may preserve its FESOP status.

Note: this is a new requirement to the source. This is a Title I change.

(4) It has come to IDEM's attention that this source actually has two (2) generators onsite. The existing No. 2 distillate fuel oil (aka diesel) fired generator, with a maximum rated capacity of 2.62 million Btu per hour, or 670.0 horsepower (hp), and a smaller 54.0 hp generator.

The emissions calculations have been revised to incorporate the "small" 54.0 hp generator and new emission unit description has been added to the permit. Additionally, the existing emission unit description of the "large" 670.0 hp generator has been updated for clarity.

(5) IDEM has determined that a majority of the hot-mix asphalt plant hot oil heating systems are indirect-fired units and meet the definition of a boiler under 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units). Therefore, as part of this revision, IDEM has performed an applicability determination for the existing No. 2 distillate fuel oil fired hot oil heater, and determined that the rule applies.

This is a new requirement for this source. This is a Title I change.

Enforcement Issues

There are no pending enforcement actions related to this revision.

Emission Calculations

See Appendices A.1 and A.2 of this TSD for detailed emission calculations.

Permit Level Determination – FESOP Revision

The following table is used to determine the appropriate permit level under 326 IAC 2-8.11.1. This table reflects the PTE before controls of the proposed revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

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Process/ Emission Unit	PTE of Proposed Revision (tons/year)									
	PM	PM_{10}*	**$PM_{2.5}$***	SO_2	NO_x	VOC	CO	GHGs** as CO2e	Total HAPs	Worst Single HAP
Ducted/Ductable Emissions										
Dryer Fuel Combustion (worst case)	~~na~~ **198.11**	~~na~~ **157.87**	~~na~~ **157.87**	~~390.34~~ **334.58**	~~na~~ **60.69**	~~na~~ **3.03**	~~na~~ **35.69**	**68,588.12**	~~na~~ **43.49**	~~na~~ **40.06 (HCL)**
Dryer/Mixer (Process)	39,244.80	9,110.40	~~na~~ **2,102.40**	~~na~~ **81.29**	77.09	44.85	182.21	**46,606.00**	~~14.55~~ **14.94**	4.34 (formaldehyde)
Dryer/Mixer Slag Processing	**0**	**0**	**0**	**435.62**	**0**	**0**	**0**	**0**	**0**	**N/A**
Hot Oil Heater Fuel Combustion (worst case)	0.16	0.26	~~na~~ **0.26**	5.64	1.59	~~0.02~~ **0.06**	~~0.40~~ 0.93	**1,796.02**	~~0.003~~ **0.026**	**0.020 (hexane)**
Generator (< 600 hp) Fuel Combustion	**0.52**	**0.52**	**0.52**	**0.48**	**7.33**	**0.59**	**1.58**	**272.91**	**$6.41E^{-03}$**	**$1.95E^{-03}$ (formaldehyde)**
Generator **(> 600 hp)** Fuel Combustion	~~3.56~~ **2.05**	~~3.56~~ **1.18**	~~na~~ **1.18**	~~3.33~~ **11.87**	~~50.61~~ **70.43**	~~4.13~~ **2.07**	~~10.90~~ **16.14**	**3,416.47**	~~0.073~~ **0.032**	**0.016 (benzene)**
"Worst Case" Emissions α	~~39,248.52~~ **39,247.53**	~~9,114.22~~ **9,112.36**	~~na~~ **2,104.36**	~~399.31~~ **788.19**	~~129.28~~ **156.44**	~~49.01~~ **47.58**	~~193.51~~ **200.86**	**74,073.52**	~~14.62~~ **43.56**	~~na~~ **40.06 (HCL)**
Fugitive Emissions										
Asphalt Load-Out and On-Site Yard	~~na~~ **0.73**	~~na~~ **0.73**	~~na~~ **0.73**	**0**	**0**	~~na~~ **6.93**	~~na~~ **2.38**	**0**	~~na~~ **0.14**	~~na~~ **0.03 (formaldehyde)**
Material Storage Piles	~~0.10~~ **2.69**	~~0.04~~ **0.94**	~~na~~ **0.94**	0	0	0	0	**0**	0	N/A
Material Processing and Handling	**9.06**	**4.28**	~~na~~ **0.65**	0	0	0	0	**0**	0	N/A
Material Screening, and Conveying	~~4.70~~ **37.28**	~~2.22~~ **13.05**	~~na~~ **13.05**	0	0	0	0	**0**	0	N/A
Unpaved and Paved Roads (worst case) β	~~122.80~~ **99.54**	~~31.30~~ **25.37**	~~na~~ **2.54**	0	0	0	0	**0**	0	N/A
Cold Mix Asphalt Production	0	0	0	0	0	~~> 250~~ **33,687.46**	0	**0**	~~na~~ **8,786.93**	~~na~~ **3,031.87 (xylenes)**
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0	0	**0**	0	N/A
Volatile Organic Liquid Storage Vessels***	0	0	0	0	0	negl.	0	**0**	negl.	negl.
Total Fugitive Emissions	~~127.59~~ **149.30**	~~33.55~~ **44.37**	~~na~~ **17.91**	0	0	~~> 250~~ **33,694.38**	**2.38**	**0**	~~na~~ **8,787.08**	~~na~~ **3,031.87 (xylenes)**
Total PTE of Proposed Revision	~~39,376.11~~ **39,396.83**	~~9,147.77~~ **9,156.73**	~~na~~ **2,122.27**	~~399.31~~ **788.19**	~~129.28~~ **156.44**	~~> 250~~ **33,741.96**	~~193.51~~ **203.25**	**74,073.52**	~~14.62~~ **8,830.64**	~~na~~ **3,031.87 (xylenes)**
Title V Major Source Thresholds	N/A	100	100	100	100	100	100	100,000	10	25
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000	N/A	N/A
Emission Offset/ Nonattainment NSR Major Source Thresholds	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

negl = negligible N/A = Not applicable na = Not accounted for in previous permit HCL = hydrogen chloride

* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

** The 100,000 CO2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

*** Fugitive emissions from each of the volatile organic liquid storage tanks were calculated using the EPA Tanks 4.0.9d program and were determined to be negligible.

α Worst Case Emissions (tons/yr) = Worst Case Emissions from Dryer Fuel Combustion and Dryer/Mixer Process + Worst Case Emissions from Hot Oil Heater Fuel Combustion + Emissions from each of the Generators.

β The worst case "Unpaved and Paved Roads" emissions were historically addressed as the "Semi Truck" and "Front End Loader".

This FESOP is being revised through a FESOP Significant Permit Revision (SPR) pursuant to 326 IAC 2-8-11.1(f)(1)(E) because the revision involves the addition of blast furnace slag, with potential to emit (PTE) SO2 greater than 25 tons per year. Additionally, this FESOP is being revised through a FESOP SPR pursuant to 326 IAC 2-8-11.1(g) because it involves adjustment to the existing source-wide emissions limitations to maintain the FESOP status of the source (see "PTE of the Entire Source after Issuance of the FESOP Revision Section", below).

PTE of the Entire Source after Issuance of the FESOP Revision

The table below summarizes the potential to emit of the entire source, with updated emissions shown as **bold** values and previous emissions shown as ~~strikethrough~~ values.

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Process/ Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs** as CO2e	Total HAPs	Worst Single HAP
Ducted/Ductable Emissions										
Dryer Fuel Combustion (worst case) (1)	~~na~~ **37.83**	~~na~~ **30.15**	~~na~~ **30.15**	~~89.96~~ **63.90**	~~37.10~~ **42.49**	~~na~~ **2.34**	~~na~~ **35.69**	**51,363.96**	~~na~~ **8.95**	~~na~~ **7.65 (HCl)**
Dryer/Mixer (2) (Process)	~~77.40~~ **175.16**	~~77.40~~ **76.07**	~~na~~ **88.58**	~~na~~ **38.43**	~~na~~ **36.45**	~~21.59~~ **21.20**	~~87.70~~ **86.14**	**22,034.06**	~~na~~ **7.06**	~~na~~ **2.05 (formaldehyde)**
Dryer/Mixer Slag Processing (3)	**0**	**0**	**0**	**22.20**	**0**	**0**	**0**	**0**	**0**	**N/A**
Hot Oil Heater Fuel Combustion (worst case)	0.16	0.26	~~na~~ **0.26**	5.64	1.59	~~0.02~~ **0.06**	~~0.40~~ 0.93	**1,796.02**	~~0.003~~ **0.026**	**0.020 (hexane)**
Generator (< 600 hp) Fuel Combustion	**0.52**	**0.52**	**0.52**	**0.48**	**7.33**	**0.59**	**1.58**	**272.91**	**6.41E^{-03}**	**1.95E^{-03} (formaldehyde)**
Generator **(> 600 hp)** Fuel Combustion	~~3.56~~ **1.17**	~~3.56~~ **0.67**	~~na~~ **0.67**	~~3.33~~ **6.78**	~~50.61~~ **40.20**	~~4.13~~ **1.18**	~~10.90~~ **9.21**	**1,950.04**	~~0.073~~ **0.018**	**0.009 (benzene)**
Worst Case Emissions β	~~81.12~~ **177.01**	~~81.22~~ **77.53**	~~na~~ **90.04**	~~98.93~~ **99.00**	~~89.30~~ **91.61**	~~25.75~~ **23.04**	~~99.00~~ **97.87**	**55,382.93**	~~14.62~~ **9.00**	~~na~~ **7.65 (HCl)**
Fugitive Emissions										
Asphalt Load-Out, Silo Filling, and On-Site Yard (3)	~~na~~ **0.35**	~~na~~ **0.35**	~~na~~ **0.35**	**0**	**0**	~~na~~ **3.28**	~~na~~ **1.13**	**0**	~~na~~ **0.068**	~~na~~ **0.014 (formaldehyde)**
Material Storage Piles	~~0.05~~ **2.69**	~~0.02~~ **0.94**	~~na~~ **0.94**	0	0	0	0	0	0	N/A
Material Processing and Handling (3)	~~na~~ **4.28**	~~na~~ **2.02**	~~na~~ **0.31**	0	0	0	0	0	0	N/A
Material Screening, and Conveying (3)	~~4.70~~ **17.63**	~~2.22~~ **6.17**	~~na~~ **6.17**	0	0	0	0	0	0	N/A
Unpaved and Paved Roads (worst case) (1)	~~61.40~~ **47.04**	~~15.65~~ **11.99**	~~na~~ **1.20**	0	0	0	0	0	0	N/A
Cold Mix Asphalt Production (4)	0	0	0	0	0	~~73.25~~ **60.70**	0	0	~~na~~ **15.83**	~~na~~ **5.46 (xylenes)**
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0	0	0	0	N/A
Volatile Organic Liquid Storage Vessels ***	0	0	0	0	0	negl.	0	0	negl.	negl.
Total Fugitive Emissions	~~66.15~~ **71.99**	~~17.89~~ **21.47**	~~na~~ **8.96**	**0**	**0**	~~73.25~~ **63.97**	~~na~~ **1.13**	**0**	~~na~~ **15.90**	~~na~~ **5.46 (xylenes)**
Total Limited/ Controlled Emissions	~~147.26~~ **249.00**	~~99.11~~ **99.00**	~~na~~ **99.00**	~~98.93~~ **99.00**	~~89.30~~ **91.61**	~~99.00~~ **87.02**	99.00	**55,382.93**	~~14.62~~ **24.90**	~~6.97~~ **7.65** (HCL)
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000	N/A	N/A
Emission Offset/ Nonattainment NSR Major Source Thresholds	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

negl = negligible N/A = Not applicable HCL = hydrogen chloride na = not accounted for

Note: This table was taken directly from the TSD for FESOP SPR No. F005-28174-05323 (Potential to Emit After Issuance Section, page 6 of 19). Additionally, the Green House Gasses (GHGs) emissions were taken from Appendix A: Unlimited Emissions Calculations for Relocation No. F015-30727-05323.

* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant.

** The 100,000 CO2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

*** Fugitive emissions from each of the volatile organic liquid storage tanks were calculated using the EPA Tanks 4.0.9d program and were determined to be negligible.

α The crusher has been determined a nonroad vehicle under 40 CFR 60, and 40 CFR 63, therefore, the criteria pollutant emissions are not counted toward PSD and TV applicability.

β Worst Case Emissions (tons/yr) = Worst Case Emissions from Dryer Fuel Combustion and Dryer/Mixer Process + Worst Case Emissions from Hot Oil Heater Fuel Combustion + Emissions from each of the Generators.

(1) Limited PTE based upon annual production and fuel usage limits to comply with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).

(2) Limited PTE based upon annual production limit and lb/ton emission limits to comply with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).

(3) Limited PTE based upon annual production limit to comply with 326 IAC 2-2 (PSD) & 326 IAC 2-8 (FESOP).

(4) Limited PTE based upon maximum annual VOC usage limit to comply with 326 IAC 2-8 (FESOP).

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this FESOP permit revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. (Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted).

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Process/ Emission Unit	Potential To Emit of the Entire Source after Issuance of the Revision (tons/year)									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs** as CO2e	Total HAPs	Worst Single HAP
Ducted/Ductable Emissions										
Dryer Fuel Combustion (worst case) (1)	37.83	30.15	30.15	63.90	42.49	2.34	35.69	51,363.96	8.95	7.65 (HCL)
Dryer/Mixer (2) (Process)	175.16	76.07	88.58	38.43	36.45	21.20	86.14	22,034.06	7.06	2.05 (formaldehyde)
Dryer/Mixer Slag Processing (3)	0	0	0	22.20	0	0	0	0	0	N/A
Hot Oil Heater Fuel Combustion (worst case)	0.16	0.026	0.026	5.64	1.59	0.06	0.93	1,796.02	0.026	0.020 (hexane)
Generator (< 600 hp) Fuel Combustion	0.52	0.52	0.52	0.48	7.33	0.59	1.58	272.91	$6.41E^{-03}$	$1.95E^{-03}$ (formaldehyde)
Generator (> 600 hp) Fuel Combustion	1.17	0.67	0.67	6.78	40.20	1.18	9.21	1,950.04	0.018	0.009 (benzene)
Worst Case Emissions*	**177.01**	**77.53**	**90.04**	**99.00**	**91.61**	**23.04**	**97.87**	**55,382.93**	**9.00**	**7.65 (HCl)**
Fugitive Emissions										
Asphalt Load-Out, Silo Filling, and On-Site Yard (3)	0.35	0.35	0.35	0	0	3.28	1.13	0	0.068	0.014 (formaldehyde)
Material Storage Piles	2.69	0.94	0.94	0	0	0	0	0	0	N/A
Material Processing and Handling (3)	4.28	2.02	0.31	0	0	0	0	0	0	N/A
Material Screening, and Conveying (3)	17.63	6.17	6.17	0	0	0	0	0	0	N/A
Unpaved and Paved Roads (worst case) (1)	47.04	11.99	1.20	0	0	0	0	0	0	N/A
Cold Mix Asphalt Production (4)	0	0	0	0	0	60.70	0	0	15.83	5.46 (xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0	0	0	0	N/A
Volatile Organic Liquid Storage Vessels ***	0	0	0	0	0	negl.	0	0	negl.	negl.
Total Fugitive Emissions	**71.99**	**21.47**	**8.96**	**0**	**0**	**63.97**	**1.13**	**0**	**15.90**	**5.46 (xylenes)**
Total Limited/ Controlled Emissions	**249.00**	**99.00**	**99.00**	**99.00**	**91.61**	**87.02**	**99.00**	**55,382.93**	**24.90**	**7.65 (HCL)**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds	250	250	100	250	250	250	250	100,000	N/A	N/A
Emission Offset/ Nonattainment NSR Major Source Thresholds	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

negl = negligible N/A = Not applicable HCL = hydrogen chloride

* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant.

** The 100,000 CO2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

*** Fugitive emissions from each of the volatile organic liquid storage tanks were calculated using the EPA Tanks 4.0.9d program and were determined to be negligible.

α The crusher has been determined a nonroad vehicle under 40 CFR 60, and 40 CFR 63, therefore, the criteria pollutant emissions are not counted toward PSD and Title V applicability.

β Worst Case Emissions (tons/yr) = Worst Case Emissions from Dryer Fuel Combustion and Dryer/Mixer Process + Worst Case Emissions from Hot Oil Heater Fuel Combustion + Emissions from each of the Generators.

(1) Limited PTE based upon annual production and fuel usage limits to comply with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).

(2) Limited PTE based upon annual production limit and lb/ton emission limits to comply with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).

(3) Limited PTE based upon annual production limit to comply with 326 IAC 2-2 (PSD) & 326 IAC 2-8 (FESOP).

(4) Limited PTE based upon maximum annual VOC usage limit to comply with 326 IAC 2-8 (FESOP).

(a) FESOP Status

This revision to an existing Title V minor portable source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP).

(1) In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), PM10, PM2.5, SO2, NOx, VOC, and CO emissions from the dryer/mixer process shall be limited as follows:

(A) The amount of hot-mix asphalt processed shall not exceed 1,325,277 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a change from an asphalt production rate of less than 1,349,244 tons of asphalt per twelve (12) month consecutive period. This is a Title I change.*

(B) The PM10 emissions from the dryer/mixer shall not exceed 0.115 pounds per ton of asphalt processed. *This is a change from 0.0.11 pounds per ton of asphalt produced. This is a Title I change.*

(C) The PM2.5 emissions from the dryer/mixer shall not exceed 0.134 pounds per ton of asphalt processed. *This is a new requirement for this source. This is a Title I change.*

(D) The SO2 emissions from the dryer/mixer shall not exceed 0.058 pounds per ton of asphalt processed. *This is a new requirement for this source. This is a Title I change*.

(E) The NOx emissions from the dryer/mixer shall not exceed 0.055 pounds per ton of asphalt processed. *This is an existing requirement for this source.*

(F) The VOC emissions from the dryer/mixer shall not exceed 0.032 pounds per ton of asphalt processed. *This is an existing requirement for this source.*

(G) The CO emissions from the dryer/mixer shall not exceed 0.130 pounds per ton of asphalt processed. *This is an existing requirement for this source.*

Compliance with these limits, combined with the potential to emit PM10, PM2.5, SO2, NOx, VOC, and CO from all other emission units at this source, shall limit the source-wide total potential to emit of PM10, PM2.5, SO2, NOx, VOC, and CO to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-1.1-5 (Nonattainment New Source Review) not applicable.

(2) In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), HAP emissions from the usage of asphalt shingles in the dryer/mixer process shall be limited as follows:

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAPs)) not applicable, the Permittee shall not grind recycled asphalt shingles (RAS) on-site and shall only use certified asbestos-free recycled shingles, post consumer waste and/or factory seconds, as an additive in the aggregate mix. *This is a new requirement for this source. This is a Title I change.*

Compliance with this limit, combined with the potential to emit HAPs from all other emission units at this source, shall limit the source-wide total potential to emit of any single HAP to less than ten (10) tons per twelve (12) consecutive month period, and of total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render the

requirements of 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable.

(3) In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), SO2, NOx, and HAP emissions from the dryer/mixer fuel combustion, in conjunction with the use of slag in the aggregate mix, and the large generator fuel combustion, combined, shall be limited as follows:

(A) Fuel and Slag Specifications

(i) The sulfur content of No. 2 fuel oil combusted in the dryer/mixer and hot oil heater shall not exceed 0.50% by weight. *This is an existing requirement for this source*.

(ii) The sulfur content of the diesel fuel oil combusted in the large generator shall not exceed 0.50% by weight. *This is a new requirement for this source. This is a Title I change.*

(ii) The sulfur content of the waste oil combusted in the dryer/mixer shall not exceed 0.75% by weight. *This is an existing requirement for this source.*

(iii) The waste oil combusted in the dryer/mixer shall not contain more than 0.20% chlorine, 1.02% ash, and 0.010% lead. *This is a new requirement for this source. This is a Title I change*.

(iv) The hydrogen chloride (HCl) emissions from the dryer/mixer shall not exceed 13.2 pounds of HCl per 1,000 gallons of waste oil burned. *This is a new requirement for this source. This is a Title I change*.

(v) The sulfur content of the blast furnace slag shall not exceed 1.50% by weight. *This is a new requirement for this source. This is a Title I change*.

(vi) The SO2 emissions from the dryer/mixer shall not exceed 0.740 pounds per ton of blast furnace slag processed in the aggregate mix. *This is a new requirement for this source. This is a Title I change*.

(vii) The sulfur content of the steel slag shall not exceed 0.66% by weight. *This is a new requirement for this source. This is a Title I change*.

(viii) The SO2 emissions from the dryer/mixer shall not exceed 0.0014 pounds per ton of steel slag processed in the aggregate mix. *This is a new requirement for this source. This is a Title I change*.

(B) Single Fuel and Slag Usage Limitations:

(i) When combusting only one type of fuel per twelve (12) consecutive month period in the dryer/mixer burner, the usage of fuel and slag shall be limited as follows:

(α) Natural gas usage in the dryer/mixer burner shall not exceed 850 million cubic feet (MMCF) per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a change from the following equivalencies: every kilogallon of No. 2 fuel oil burned in the dryer/mixer burner shall be equivalent to 0.1263 MMcf of natural gas, based on NOx emissions, such that the total MMcf of natural gas and natural gas equivalent input does not exceed 496.83 million cubic feet (MMCF) per twelve (12)*

consecutive month period; and every kilogallon of re-refined waste oil burned in the aggregate dryer/burner shall be equivalent to 0.10 MMcf of natural gas, based on NOx emissions, such that the total MMcf of natural gas and natural gas equivalent input does not exceed the limit specified. This is a Title I change;

(β) No. 2 fuel oil usage in the dryer/mixer burner shall not exceed 1,799,935 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a change from the following equivalencies: every gallon of No. 2 fuel oil burned shall be equivalent to 0.71 gallons of waste oil based on SO2 emissions, such that the total gallons of No. 2 fuel oil and No. 2 fuel oil equivalent input does not exceed 1,550,000 gallons per twelve (12) consecutive month period; and every gallon of No. 2 fuel oil burned in the dryer/mixer burner shall be equivalent to 0.131 MMcf of natural gas, based on SO2 emissions, such that the total gallons of No. 2 fuel oil and No. 2 fuel oil equivalent input does not exceed the limit specified. This is a Title I change*.

(χ) Waste oil usage in the dryer/mixer burner shall not exceed 1,159,142 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a change from the following equivalencies: every gallon of waste oil burned in the dryer/mixer burner shall be equivalent to 1.4 gallons of No. 2 fuel oil, based on SO2 emissions, that the total gallons of waste oil and waste oil equivalent input does not exceed 1,055,000 gallons per twelve (12) consecutive month period; and every gallon of waste oil burned in the dryer/mixer burner shall be equivalent to 0.02 MMcf of natural gas, based on SO2 emissions, such that the total gallons of waste oil and waste oil equivalent input does not exceed the limit specified. This is a Title I change*; and

(ε) The blast furnace slag usage shall not exceed 60,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a new requirement for this source. This is a Title I change.*

(ϕ) A Steel slag usage limit is not required for the source to comply with their FESOP SO2 Limit, since unlimited usage results in a PTE SO2 of less than 1.0 ton/yr (see TSD Appendix A.1, page 6 of 21). To form a conservative estimate, SO2 emissions are based on the "worst case" assumption that steel slag usage corresponds to 100% of the aggregate used to produce hot-mix asphalt (see TSD Appendix A.2, page 6 of 21).

(ii) When combusting only one type of fuel per twelve (12) consecutive month period in the 670 hp generator burner, the usage of fuel shall be limited as follows:

(α) Diesel fuel usage in the large generator burner shall not exceed 171,130 gallons per consecutive twelve (12) month period, with compliance to be determined at the end of each month. *This is a change from 350,000 gallons per consecutive twelve (12) month period. This is a Title I change*;

(β) A diesel fuel usage limit is not required for the small generator.

Note: The source is only permitted to burn the above-mentioned fuels in the associated emission units. *This is a new requirement for this source. This is a Title I change.*

(C) Multiple Fuel and Slag Usage Limitation:
When combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer, in conjunction with the use of slag in the aggregate mix, emissions from the dryer/mixer and the large generator shall be limited as follows:

(i) SO_2 emissions from the dryer/mixer and the large generator, combined, shall not exceed 92.87 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a new requirement for this source. This is a Title I change.*

SO_2 = 63.90 + 22.20 + 6.78 = 92.87 tons/year

The Permittee shall limit fuel and blast furnace slag usage in the dryer/mixer, and fuel usage in the large generator, according to the following formula: *This is a change from determining fuel usage by equivalency.*

$$S = \frac{G(E_G) + O(E_O) + W(E_W) + D(E_D) + B(E_B) + T(E_T)}{2{,}000 \text{ lbs/ton}}$$

where:
S = tons of sulfur dioxide emissions for a 12-month consecutive period
G = million cubic feet of natural gas used in the in the dryer/mixer in the last 12 months
O = gallons of No. 2 fuel oil used in the dryer/mixer in the last 12 months
W = gallons of waste oil used in the dryer/mixer in the last 12 months
D = gallons of diesel fuel oil used in the large generator in the last 12 months
B = tons of blast furnace slag used in the dryer/mixer in the last 12 months
T = tons of steel slag used in the in the dryer/mixer last 12 months
E_G = 0.60 lb/million cubic feet of natural gas
E_O = 71.0 lb/1000 gallons of No. 2 fuel oil
E_W = 110.3 lb/1000 gallons of waste oil
E_D = 79.18 lb/1000 gallons of diesel fuel oil
E_B = 0.74 lb/ton of blast furnace slag used
E_T = 0.0014 lb/ton of steel slag used

(ii) NOx emissions from the dryer/mixer and the large generator, combined, shall not exceed 82.69 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a new requirement for this source. This is a Title I change.*

NOx = 42.49 + 40.20 = 82.69 tons/year

The Permittee shall limit fuel usage in the dryer/mixer burner and the large generator according to the following formula: *This is a change from determining fuel usage by equivalency.*

$$N = \frac{G(E_G) + O(E_O) + W(E_W) + D(E_D)}{2{,}000 \text{ lbs/ton}}$$

where:
N = tons of nitrogen oxide emissions for a 12-month consecutive period

G = million cubic feet of natural gas used in the in the dryer/mixer in the last 12 months
O = gallons of No. 2 fuel oil used in the dryer/mixer in the last 12 months
W = gallons of waste oil used in the dryer/mixer in the last 12 months
D = gallons of diesel fuel oil used in the large generator in the last 12 months
E_G = 190 lb/million cubic feet of natural gas;
E_O = 24.0 lb/1000 gallons of No. 2 fuel oil;
E_W = 19.0 lb/1000 gallons of waste oil.
E_D = 469.82 lb/1000 gallons of diesel fuel oil.

(iii) HCl emissions from the dryer/mixer shall not exceed 9.90 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a new requirement for this source. This is a Title I change.*

The Permittee shall limit fuel usage in the dryer/mixer burner according to the following formula:

$$HCL = \frac{W(E_W)}{2000 \text{ lbs/ton}}$$

Where:
HCl = tons of hydrogen chloride emissions for a 12-month consecutive period
W = gallons of waste oil used in the in the dryer/mixer in the last 12 months.
E_W = 13.2 lbs/1000 gallons of waste oil.

(iv) The unlimited PTE CO2e of this source is less than 100,000 tons per year. Therefore, a CO2e emissions limit is not required to allow for compliance with FESOP.

Compliance with these limits, combined with the potential to emit SO2, NOx, and HAPs from all other emission units at this source, shall limit the source-wide total potential to emit of SO2 and NOx to less than 100 tons per twelve (12) consecutive month period, each, any single HAP to less than ten (10) tons per twelve (12) consecutive month period, and total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable.

(4) In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the VOC emissions from cold-mix (cutback) asphalt production shall be limited as follows:

(A) VOC emissions from the sum of the binders shall not exceed 60.70 tons per twelve (12) consecutive month period with compliance determined at the end of each month. *This is a change from 73.3 tons of VOC per twelve (12) consecutive month period. This is a Title I change.*

(B) Liquid binders used in the production of cold mix asphalt shall be defined as follows:

(i) <u>Cut back asphalt rapid cure</u>, containing a maximum of 25.3% of the liquid binder by weight of VOC solvent and 95.0% by weight of VOC solvent evaporating. *This is an existing requirement for this source.*

(ii) Cut back asphalt medium cure, containing a maximum of 28.6% of the liquid binder by weight of VOC solvent and 70.0% by weight of VOC solvent evaporating. *This is an existing requirement for this source*.

(iii) Cut back asphalt slow cure, containing a maximum of 20.0% of the liquid binder by weight of VOC solvent and 25.0% by weight of VOC solvent evaporating. *This is an existing requirement for this source.*

(iv) Emulsified asphalt with solvent, containing a maximum of 15.0% of liquid binder by weight of VOC solvent and 46.4% by weight of the VOC solvent in the liquid blend evaporating. The percent oil distillate in emulsified asphalt with solvent liquid, as determined by ASTM, must be seven percent (7%) or less of the total emulsion by volume. *This is an existing requirement for this source.*

(v) Other asphalt with solvent binder, containing a maximum 25.9% of the liquid binder of VOC solvent and 2.5% by weight of the VOC solvent evaporating. *This is an existing requirement for this source.*

(C) When using only one type of liquid binder per twelve (12) consecutive month period, the usage of liquid binder shall be limited as follows:

(i) The amount of VOC solvent used in rapid cure cutback asphalt shall not exceed 63.89 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a change from 77.2 tons of VOC solvent per twelve (12) consecutive month period. This is a Title I change.*

(ii) The amount of VOC solvent used in medium cure cutback asphalt shall not exceed 86.71 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a change from 105 tons of VOC solvent per twelve (12) consecutive month period. This is a Title I change.*

(iii) The amount of VOC solvent used in slow cure cutback asphalt shall not exceed 242.79 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a change from 293 tons of VOC solvent per twelve (12) consecutive month period. This is a Title I change.*

(iv) The amount of VOC solvent used in emulsified asphalt shall not exceed 130.82 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a change from 158 tons of VOC solvent per twelve (12) consecutive month period. This is a Title I change.*

(v) The amount of VOC solvent used in all other asphalt shall not exceed 2,427.93 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a change from 2,932 tons of VOC solvent per twelve (12) consecutive month period. This is a Title I change.*

(D) When using more than one liquid binder per twelve (12) consecutive month period, VOC emissions shall be limited as follows:

(i) The VOC solvent allotments in (C)(i) through (C)(v) above shall be adjusted when more than one type of binder is used per twelve (12) consecutive month period with compliance determined at the end of each month. In order to determine the tons of VOC emitted per each type of binder, use the following formula and divide the tons of VOC solvent used for each type of binder by the corresponding adjustment factor listed in the table that follows. *This is a revised requirement for this source. This is a Title I change.*

$$\text{VOC emitted (tons/yr)} = \frac{\text{VOC solvent used for each binder (tons/yr)}}{\text{Adjustment factor}}$$

Type of Binder	Adjustment Factor	~~Adjustment Ratio~~
Cutback Asphalt Rapid Cure	1.053	~~1.000~~
Cutback Asphalt Medium Cure	1.429	~~1.360~~
Cutback Asphalt Slow Cure	4.000	~~3.800~~
Emulsified Asphalt	2.155	~~2.040~~
Other Asphalt	40.0	~~38.0~~

Compliance with these limits, combined with the VOC emissions from other units at this source, will limit source-wide VOC emissions to less than 100 tons per twelve (12) consecutive month period and render 326 IAC 2-7 (Part 70 Permit Program) and 326 IAC 2-2 (PSD), not applicable.

(b) PSD Minor Source

This modification to an existing PSD minor portable source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

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

(1) The amount of hot-mix asphalt processed shall not exceed 1,325,277 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is an existing requirement for this source.*

(2) PM emissions from the dryer/mixer shall not exceed 0.264 pounds per ton of asphalt processed. *This is a change from 0.11 pounds per ton of asphalt produced. This is a Title I change.*

Compliance with these limits, combined with the potential to emit PM from all other emission units at this source, shall limit the source-wide total potential to emit of PM to less than 250 tons per twelve (12) consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

(c) Emission Offset Minor Status

All counties in Indiana have been classified as attainment or unclassifiable in Indiana for all criteria pollutants, except PM2.5. Therefore, the requirements of 326 IAC 2-3 (Emission Offset) do not apply and are not included in the permit.

(d) Nonattainment New Source Review

This existing portable source is still not a major source, under 326 IAC 2-1.1-5 (Nonattainment New Source Review), because the potential to emit particulate matter with a diameter less than two and five tenths (2.5) micrometers (PM2.5), continues to be limited to less than one hundred (100) tons per

year. Therefore, the requirements of 326 IAC 2-1.1-5 (Nonattainment New Source Review) still do not apply to this source, and are not included in the permit.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

(a) 40 CFR 60, Subpart IIII - NSPS for Stationary Compression Ignition Internal Combustion Engines

(1) The requirements of the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart IIII (4I) (326 IAC 12), are not included in the permit for the large generator (>500 HP, 10< x ≤30 liter/cylinder), since the generator was originally manufactured, and constructed (ordered by the owner or operator), in 1982, prior to the April 1, 2006 applicability date. Additionally, the unit has never been re-constructed.

(2) The requirements of the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart IIII (4I) (326 IAC 12), are not included in the permit for the small generator, since the generator was originally manufactured, and constructed (ordered by the owner or operator), in 1982, prior to the April 1, 2006 applicability date. Additionally, the unit has never been re-constructed.

(b) 40 CFR 60, Subpart JJJJ - NSPS for Stationary Spark Ignition Internal Combustion Engines
The requirements of the New Source Performance Standard for Stationary Spark Ignition Internal Combustion Engines, 40 CFR 60, Subpart JJJJ (4J) (326 IAC 12), are not included in the permit for the large generator, or the small generator, because each generator is a compression ignition (CI) internal combustion engine (ICE) and not a spark ignition (SI) internal combustion engine (ICE).

(c) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this proposed revision.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(a) 40 CFR 63, Subpart ZZZZ - NESHAP for Stationary Reciprocating Internal Combustion Engines

(1) The 670 horsepower [large] generator (>500 HP, 10< x ≤30 liter/cylinder) is subject to the requirements of the 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (326 IAC 20-82), because it is considered an existing (construction commenced before June 12, 2006) stationary compression ignition (CI) reciprocating internal combustion engine (RICE) at an area source of hazardous air pollutants (HAP). This generator was initially constructed at another site in 1982, and then moved to this plant in 1984.

The large generator is subject the following applicable portions of the NESHAP for existing stationary CI RICE at an area source of HAP, with a compliance date of May 3, 2013:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585(a), (c), (d);
(3) 40 CFR 63.6590(a)(1)(iii) and (iv);
(4) 40 CFR 63.6595(a)(1), (b), (c);
(5) 40 CFR 63.6603(a);
(6) 40 CFR 63.6604;
(7) 40 CFR 63.6605;
(8) 40 CFR 63.6612;
(9) 40 CFR 63.6615;
(10) 40 CFR 63.6620;

(11) 40 CFR 63.6625(a), (b), (g), (h);
(12) 40 CFR 63.6630;
(13) 40 CFR 63.6635;
(14) 40 CFR 63.6640;
(15) 40 CFR 63.6645;
(16) 40 CFR 63.6650(a), (b), (c), (d), (e);
(17) 40 CFR 63.6655(a), (b), (d);
(18) 40 CFR 63.6660;
(19) 40 CFR 63.6665;
(20) 40 CFR 63.6670;
(21) 40 CFR 63.6675; and
(22) Tables 1b, 2b, 2d, 3, 4, 5, 6, and 8.

This NESHAP includes testing requirements applicable to this existing CI RICE.

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the large generator except as otherwise specified in 40 CFR 63, Subpart ZZZZ.

Note: this is a new requirement for this source. This is a Title I change.

(2) The 54.0 horsepower [small] generator (<500 HP, 10< x ≤30 liter/cylinder) is subject to the requirements of the 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (326 IAC 20-82), because it is considered an existing (construction commenced before June 12, 2006) stationary compression ignition (CI) reciprocating internal combustion engine (RICE) at an area source of hazardous air pollutants (HAP). This generator was initially constructed at another site in 1982, and then moved to this plant in 1984.

The small generator is subject the following applicable portions of the NESHAP for existing stationary CI RICE at an area source of HAP, with a compliance date of May 3, 2013:

(1) 40 CFR 63.6580;
(2) 40 CFR 63.6585(a), (c), (d);
(3) 40 CFR 63.6590(a)(1)(iii) and (iv);
(4) 40 CFR 63.6595(a)(1), (b), (c);
(5) 40 CFR 63.6603(a);
(6) 40 CFR 63.6605;
(7) 40 CFR 63.6625(e), (h), (i);
(8) 40 CFR 63.6640;
(9) 40 CFR 63.6655(a), (b), (d), (e);
(10) 40 CFR 63.6660
(11) 40 CFR 63.6665
(12) 40 CFR 63.6670
(13) 40 CFR 63.6675
(14) Tables 2d, and 8.

There are no testing requirements applicable to this existing CI RICE for this NESHAP.

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the small generator except as otherwise specified in 40 CFR 63, Subpart ZZZZ.

Note: this is a new requirement for this source. This is a Title I change.

(b) 40 CFR 63, Subpart DDDDD - NESHAPs for Industrial, Commercial, and Institutional Boilers, and Process Heaters
The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD (5D) (326 IAC 20), are not included in the permit, since this source is not a major source of HAPs, and is not located at nor is a part of a major source of HAP emissions.

(c) 40 CFR 63, Subpart LLLLL - NESHAPs for Asphalt Processing and Asphalt Roofing Manufacturing
The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63, Subpart LLLLL (5L) (326 IAC 20-71), are not included in the permit, since the existing portable drum hot mix asphalt plant is still not an asphalt processing plant or an asphalt roofing manufacturing facility because it does not engage in the preparation of asphalt flux or asphalt roofing materials. Additionally, it is not a major source of HAPs, and is not located at nor is a part of a major source of HAP emissions.

(d) 40 CFR 63, Subpart CCCCCC - NESHAP for the Source Category Identified as Gasoline Dispensing Facilities (GDF)
The requirements of this National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Source Category Identified as Gasoline Dispensing Facilities (GDF), 40 CFR 63.11110, Subpart CCCCCC (6C) (326 IAC 20), are not included in the permit, because this existing portable drum hot mix asphalt plant has no gasoline dispensing facilities.

(e) 40 CFR 63, Subpart JJJJJJ - NESHAPs for Industrial, Commercial, and Institutional Boilers Area Sources

(1) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJJ (6J), are not included in the permit for the dryer/mixer burner, the large generator, or the small generator, since although this existing source is an area source of hazardous air pollutants (HAP), as defined in §63.2, the dryer/mixer burner, and the two (2) generators, are each a direct-fired process unit and not a boiler, as defined in 40 CFR 63.11237.

(2) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJJ (6J), are not included in the permit for the hot oil heater, because although this existing source is an area source of hazardous air pollutants (HAP), as defined in §63.2, and the hot oil heater fires No. 2 fuel oil, it does not meet the definition of a boiler, as defined in §63.11237, since heat transfer oil and not water is used as the indirect heating media.

(f) 40 CFR 63, Subpart AAAAAAA - NESHAP for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing
The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63, Subpart AAAAAAA (7A) (326 IAC 20), are not included in the permit, because although the portable drum hot mix asphalt plant is an area source of hazardous air pollutant (HAP) emissions, as defined in §63.2, it does not meet the definition of an asphalt processing operation or an asphalt roofing manufacturing operation, as defined in §63.11566, since it does not engage in the preparation of asphalt flux or asphalt roofing materials.

(g) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included for this proposed revision.

Compliance Assurance Monitoring (CAM)

Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination - Entire Source

The following state rules are applicable to the proposed revision:

(a) 326 IAC 2-8-4 (FESOP)
This revision to an existing Title V minor source will not change the minor status, because the potential to emit criteria pollutants from the entire source will continue to be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP). See PTE of the Entire Source After Issuance of the FESOP Revision Section above.

(b) 326 IAC 2-1.1-5 (Nonattainment New Source Review)
This modification to an existing minor portable source under 326 IAC 2-1.1-5 (Nonattainment New Source Review) will not change the minor status, because the potential to emit of PM2.5 from the entire source will continue to be limited to less than 100 tons per year. Therefore, pursuant to 326 IAC 2-1.1-5, the Nonattainment New Source Review requirements do not apply. See PTE of the Entire Source After Issuance of the FESOP Revision Section above.

(c) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
This modification to an existing PSD minor portable source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be limited to less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the FESOP Revision Section above.

(d) 326 IAC 2-3 (Emission Offset)
All counties in Indiana have been classified as attainment or unclassifiable in Indiana for all criteria pollutants, except PM2.5. Therefore, the requirements of 326 IAC 2-3 (Emission Offset) do not apply and are not included in the permit.

(e) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this existing portable source is no longer subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is no longer authorized to relocate to Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, pursuant to 326 IAC 2-6-1(b), the source is only subject to additional information requests as provided for in 326 IAC 2-6-5.

(f) 326 IAC 5-1 (Opacity Limitations)
This existing portable source is still authorized to relocate to all areas of the state except Clark, Floyd, Lake, and/or Porter Counties, or any area designated as extreme, severe, or serious nonattainment for any National Ambient Air Quality Standard. Therefore, 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 continue to meet the following, unless otherwise stated in the permit:

(1) 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, when the source is located in any County except Lake, or the areas specified in (2)(a) through (g).

(2) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4, when the source is located in the following areas listed in 326 IAC 5-1-1(c):

(A) Dearborn County (Lawrenceburg Township - Cities of Lawrenceburg and Greendale);

(B) Dubois County (Bainbridge Township - the City of Jasper);

(C) Marion County (except the area of Washington Township east of Fall Creek and the area of Franklin Township south of Thompson Road and east of Five Points Road);

(D) St. Joseph County (the area north of Kern Road and east of Pine Road);

(E) Vanderburgh County (the area included in the City of Evansville and Pigeon Township); and

(F) Vigo County (Indiana State University campus, 0.5 km radius around UTM Easting 464,519.00, Northing 4,369,208.00, Zone 16.

(3) 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, when the source is located in any County.

(g) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
This existing portable source continues to be subject to the requirements of 326 IAC 6-4 (Fugitive Dust Emissions Limitations). Therefore, pursuant to 326 IAC 6-4, the source 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.

(h) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
This existing portable source continues to be subject to the requirements of 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations). Therefore, pursuant Pursuant to 326 IAC 6-5, fugitive particulate matter emissions shall continue to be controlled according to the Fugitive Dust Control Plan, included as Attachment A to the permit, when operating in the areas described in 326 IAC 6-5-1(a).

(i) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.

(j) 326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

State Rule Applicability Determination - Individual Facilities

Drum Mix Asphalt Plant - Natural Gas Combustion

(a) 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)
The existing dryer burner is still not a source of indirect heating, as defined in 326 IAC 1-2-19 “Combustion for Indirect Heating”. Therefore, the requirements of 326 IAC 6-2 still do not apply, and are not included in the permit.

(b) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) applicability is discussed in the "Material Handling - Slag and Recycled Shingles" section below.

(c) 326 IAC 6.5 (PM Limitations Except Lake County)
The potential to emit particulate matter (PM) before controls for the entire source is greater than one hundred (100) tons per year, and this existing portable hot-mix asphalt plant is authorized to relocate to Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties. Therefore, pursuant to 6.5-1-2(a), PM emissions from the dryer/mixer shall continue to not exceed seven hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)) when located in Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.

(d) 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)
The potential to emit SO2 from the combustion of natural gas in the existing dryer burner is less than twenty-five (25) tons/year, and ten (10) pounds/hour. However, the potential to emit SO2 from the combustion of waste oil and No. 2 distillate fuel oil, each, is equal to or greater than twenty-five (25) tons/year, or ten (10) pounds/hour. Therefore, the requirements of 326 IAC 7-1.1 still apply, and are included in the permit.

(e) 326 IAC 9-1 (Carbon Monoxide Emission Limits)
This existing portable, drum hot-mix asphalt plant is still not one of the source types listed in 326 IAC 9-1-2. Therefore, the requirements of 326 IAC 9-1 do not apply and are not included in the permit.

(f) 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category)
The existing 100 MMBtu/hr dryer burner still does not meet the definition of an affected facility, as defined in 326 IAC 10-3-1(a), because it still has a maximum a heat input of less than two hundred fifty million (250,000,000) British thermal units per hour (MMBtu/hr); therefore, it is still not subject to this rule and the requirements are not included in the permit.

(g) 326 IAC 10-5 (Nitrogen Oxide Reduction Program for Internal Combustion Engines (ICE))
The existing 100 MMBtu/hr dryer burner still does not meet the definition of an affected facility, as defined in 326 IAC 10-5-2(1), because it is still an external combustion unit and not an internal combustion engine.

Drum Mix Asphalt Plant - Asphalt Production

(a) 326 IAC 8-1-6 (VOC rules: General Reduction Requirements for New Facilities)
The unlimited potential VOC emissions from the existing dryer/mixer are greater than twenty-five (25) tons per year. However, the source has opted to limit the potential VOC emissions from the existing dryer/mixer to less than twenty-five (25) tons per year, therefore, rendering the requirements of 326 IAC 8-1-6 Best Available Control Technology (BACT) not applicable.

In order to render the requirements of 326 IAC 8-1-6 not applicable, the existing dryer/mixer shall be limited as follows:

(1) The amount of hot-mix asphalt processed shall not exceed 1,325,277 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is an existing requirement for this source.*

(2) The VOC emissions from the dryer/mixer shall not exceed 0.032 pounds per ton of asphalt processed. *This is an existing requirement for this source.*

Compliance with these limits shall limit the potential VOC emissions from the existing dryer/mixer to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render 326 IAC 8-1-6 BACT not applicable.

See Appendix A for the detailed calculations.

(b) 326 IAC 8-6-1 (Organic Solvent Emission Limitations)
The existing dryer/mixer is subject to 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities). Therefore, the requirements of 326 IAC 8-6-1 (Organic Solvent Emission Limitations) still do not apply to the hot-mix asphalt production and are not included in the permit.

(c) There are no other 326 IAC 8 Rules that are applicable to the portable drum hot-mix asphalt plant.

Material Handling - Slag and Recycled Shingles

(a) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
The existing portable drum hot mix asphalt plant, including the systems for screening, handling, storing, and weighing hot aggregate (which includes slag and recycled shingles), is subject to 40 CFR 60, Subpart I (Standards of Performance for Hot Mix Asphalt Facilities), which incorporated by reference through 326 IAC 12. Pursuant to 326 IAC 6-3-1(c)(5), the dryer/mixer is not subject to the requirements of 326 IAC 6-3 because it is subject to the more stringent particulate limit established in 326 IAC 12.

(b) 326 IAC 6.5 (PM Limitations Except Lake County)
The existing portable drum hot mix asphalt plant's systems for screening, handling, storing, and weighing hot aggregate (which includes slag and recycled shingles), only have the potential to emit fugitive particulate matter (PM). Therefore, the requirements of 326 IAC 6.5 (PM Limitations Except Lake County) specifically do not apply to these activities and are not included in the permit.

Generators - Combustion

(a) 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)
The large generator, and the small generator, are each not a source of indirect heating, as defined in 326 IAC 1-2-19 “Combustion for Indirect Heating”. Therefore, the requirements of 326 IAC 6-2 do not apply, and are not included in the permit.

(b) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
The large generator, and the small generator, each do not meet the definition of a "manufacturing process", as defined in 326 IAC 6-3-1.5(2), therefore each generator is exempt from the requirements of 326 IAC 6-3, and they are not included in the permit.

(c) 326 IAC 6.5 (PM Limitations Except Lake County)
The potential to emit particulate matter (PM) before controls for the entire source is greater than one hundred (100) tons per year, and this existing portable hot-mix asphalt plant is authorized to relocate to Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties. Therefore, pursuant to 6.5-1-2(a), PM emissions from the large generator, and the small generator, each, shall not exceed seven hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)) when located in Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.

(d) 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)
The unlimited potential to emit SO2 from the large generator, and the small generator, each, is less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations) do not apply to either generator and are not included in the permit.

See ATSD Appendices A.1 and A.2 for detailed calculations.

(e) 326 IAC 9-1 (Carbon Monoxide Emission Limits)
This large generator, and the small generator, each, are still not one of the source types listed in 326 IAC 9-1-2. Therefore, the requirements of 326 IAC 9-1 do not apply and are not included in the permit.

(f) 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category)
The large generator, and the small generator, each, do not meet the definition of an affected facility, as defined in 326 IAC 10-3-1(a), because each generator still has a maximum heat input capacity of less than two hundred fifty million (250,000,000) British thermal units per hour (MMBtu/hr). Therefore, each generator is still not subject to this rule and the requirements are not included in the permit.

(g) 326 IAC 10-5 (Nitrogen Oxide Reduction Program for Internal Combustion Engines (ICE))
The large generator, and the small generator, each, do not meet the definition of an affected engine, as defined in 326 IAC 10-5-2(1), because although each generator is an internal combustion engine, neither generator is specifically listed in the NOx SIP Call engine inventory. Therefore, the requirements of 326 IAC 10-5 (Nitrogen Oxide Reduction Program for Internal Combustion Engines (ICE)) do not apply and are not included in the permit.

Hot Oil Heater

(a) 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)
The existing No. 2 distillate fuel oil fired hot oil heater, constructed in 1984, having maximum rated heat input capacity of 2.54 MMBtu/hr, is subject to 326 IAC 6-2-4 because the unit was constructed after the rule applicability date of September 21, 1983, and meets the definition of an indirect heating unit, as defined in 326 IAC 1-2-19, since it combusts fuel to produce usable heat that is to be transferred through a heat-conducting materials barrier or by a heat storage medium to a material to be heated so that the material being heated is not contacted by, and adds no substance to the products of combustion.

Pursuant to 326 IAC 6-2-4(a), for a total source maximum operating capacity rating of less than ten (10) MMBtu/hr, the pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input shall not exceed six tenths (0.6) pounds per MMBtu (lb/MMBtu).

Therefore, particulate emissions from the hot oil heater shall not exceed six tenths (0.6) pounds per MMBtu heat input.

(b) 326 IAC 6.5 (PM Limitations Except Lake County)
The potential to emit particulate matter (PM) before controls for the entire source is greater than one hundred (100) tons per year, and this existing portable hot-mix asphalt plant is authorized to relocate to Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties. Therefore, pursuant to 6.5-1-2(a), PM emissions from the hot oil heater shall not exceed seven hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)) when located in Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.

Compliance Determination, Monitoring and Testing Requirements

(a) The compliance determination requirements applicable to this proposed revision are as follows:

(1) In order to comply with the PM2.5 limitations in the permit, the baghouse for the dryer/mixer shall continue to be in operation and control emissions from the dryer/mixer at all times when the dryer/mixer is in operation.

(2) The annual hot-mix asphalt production rate will be used to verify compliance with the FESOP PM2.5 emission limitation, and BACT avoidance VOC emission limitation.

(3) The slag and fuel characteristics (i.e., sulfur and chlorine content) and usage rates will be used to verify compliance with the SO2 and HAPs emission limitations.

(4) The waste oil characteristics (i.e., ash and lead content) and usage rates will be used to verify compliance with the FESOP PM2.5 and HAP limitations.

(5) The shingle characteristics (i.e., lack of asbestos content) will be used to verify compliance with the FESOP HAP limitation.

(6) The liquid binder characteristics (i.e., evaporation temperature) and usage rate, in the production of cold-mix cutback asphalt, will be used to verify compliance with the FESOP VOC emission limitation.

(b) The testing requirements applicable to this proposed revision are as follows:

Emission Unit	Control Device	Pollutant	Timeframe for Testing	Frequency of Testing
Dryer/mixer	Baghouse	PM2.5	No later than five (5) years from the last valid test(1)	Once every five (5) years
Dryer/mixer	N/A	SO2	Within 180 days after initial use of Blast Furnace slag(2)	One time test
Large Generator	N/A	PM, NOx, CO2, HAPs	Within 180 days after initial use(3)	Once every five (5) years

(1) Required for compliance with 40 CFR 60, Subpart I, and 326 IAC 2-8 (FESOP). The last valid dryer/mixer stack test for PM and PM10 occurred on September 16, 2009. The source was in compliance at that time.

Based on a comparison with recent test results from similar sources, IDEM has determined that the source would have complied with their PM2.5 limit at that time. Therefore, PM2.5 testing shall be conducted in concurrence with the next PM/PM10 test.

(2) Testing shall only be performed if the company has not previously performed SO2 testing while using blast furnace slag in the aggregate mix at one of their other Indiana facilities.

(3) Required for compliance with 40 CFR 63, Subpart ZZZZ, and 326 IAC 2-8 (FESOP).

(c) The compliance monitoring requirements applicable to this proposed revision are as follows:

The existing drum mixer dryer/burner, baghouse stack exhaust, and the material processing and handling, screening, conveying, and material transfer points continue to have applicable compliance monitoring conditions as specified below:

Emission Unit & Control Device	Parameter	Frequency	Range	Excursions and Exceedances
Dryer/mixer baghouse stack exhaust	Visible Emissions	Once per day	normal/ abnormal	Response Steps
	Pressure Drop	Once per day	1.0 to 8.0 inches	Response Steps
	Bags in baghouse	As needed	normal/ abnormal	Response Steps
Conveyors, screens, and material transfer points	Visible Emissions	Once per day	normal/ abnormal	Response Steps

These monitoring conditions are necessary because the baghouse used in conjunction with the dryer/mixer must operate properly to ensure continued compliance with 40 CFR 60, Subpart I,

326 IAC 2-8 (FESOP), 326 IAC 6.5 (Particulate Matter Limitations Except Lake County), and the limits that render 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70 Permit Program) not applicable.

The existing compliance requirements will not change as a result of this revision. The source shall continue to comply with the applicable requirements and permit conditions as contained in FESOP No: F153-22594-03274 on March 15, 2007.

Proposed Changes

(a) The following changes listed below are due to the proposed revision:

(1) Section A.1 - General Information, has been revised to update the source description to include the additional operational flexibility incorporated by this revision (i.e., cold-mix asphalt production, use of slag and shingles in the aggregate mix, and not crushing RAP and/or grinding shingles).

(2) Sections A.2 - Emission Units and Pollution Control Equipment Summary and D.1 - Emission Unit Operation Conditions for the portable drum hot mix asphalt plant, have been revised to update the drum mix dryer description to include the use of slag and shingles in the aggregate mix. Furthermore, the drum mix dryer and hot oil heater descriptions have been revised to include natural gas as a back-up fuel.

(3) Condition A.3(d)(2), renumbered A.3(b)(2), the date of construction for the 20,000 gallon storage tank for liquid asphalt AC-20 has been corrected.

(4) Conditions C.8 - Fugitive Dust Emissions, and C.21 - Emission Statement, have been removed from the permit. Additionally, Condition C.24 - Relocation of Portable Sources, has been revised to reflect the change in county access for this portable source.

(5) Condition D.1 - Sulfur Dioxide (SO2), renamed "FESOP Limits: SO2, NOx, and HAPs", has been revised to incorporate the new blast furnace and steel slag sulfur content (%) limitations, the new pound per ton blast furnace and steel slag emission limitations, the new blast furnace slag usage limitation (ton/yr), the new asphalt shingle usage limitation, and the new natural gas usage limitation (MMCF/yr).

(6) Condition D.1 - Sulfur Dioxide (SO2) Emissions and Sulfur Content, has been revised to incorporate the new compliance determination requirements for the blast furnace and steel slag limits contained in Section D.1 - FESOP Limits: SO2, NOx, and HAPs.

(7) Condition D.1 - Testing Requirements, has been revised to incorporate the new blast furnace slag SO2 testing requirements.

(8) A new condition D.1 - Multiple Fuel and Slag Usage Limitations, has been added to assist the Permittee in determining compliance with the new FESOP SO2, NOx, and HAPs emission limits, contained in condition D.1 - FESOP Limits: SO2, NOx, and HAPs.

(9) A new condition D.1 - Shingle Asbestos Content, has been added to assist the Permittee in determining compliance with the FESOP Asphalt Shingle Usage Limitation contained in condition D.1 - FESOP Limits: SO2 and HAPs.

(10) Condition D.1 - Parametric Monitoring, has been revised to change the upper range of the pressure drop from six (6.0) to eight (8.0) inches of water.

(11) Condition D.1 - Record Keeping Requirements, has been revised to include recordkeeping requirements for the blast furnace slag, steel slag, and recycled shingles.

(12) Condition D.1 - Reporting Requirements, has been revised to include reporting requirements for the blast furnace slag.

(13) The FESOP Reporting Forms located at the back of the permit have been updated to reflect the revised limits, as described on pages 13 through 19 of 76 of this TSD, the addition of the blast furnace and steel slag, and the change to determining compliance using an equation.

(b) Upon further review, IDEM, OAQ has decided to make the following changes to the permit.

(1) Sections A.2 - Emission Units and Pollution Control Equipment Summary, and D.1 - Emission Operation Conditions for the portable drum mix asphalt pavement production plant, have been revised for clarity, separating the hot oil heater and No. 2 fuel oil fired (670.5 horsepower diesel fuel-fired (aka large)) generator from the hot-mix asphalt plant description, since these units are not regulated under 40 CFR 60, Subpart I. Also, since the hot oil heater meets the definition of an insignificant activity, it has been moved to Section A.3 - Insignificant Activities.

(2) Section A.2 - Emission Units and Pollution Control Equipment, the emission unit listing has been updated to include a reference to the cold-mix asphalt manufacturing and storage operation.

(3) Section A.3 - Insignificant Activities, has been revised to include a description of the small 54.0 hp generator.

(4) Section A.3 - Insignificant Activities, the emission unit descriptions have been revised to include a reference to any applicable requirements, as appropriate.

(5) On October 27, 2010, the Indiana Air Pollution Control Board issued revisions to 326 IAC 2. These revisions resulted in changes to the rule cites listed in the permit. These changes are not changes to the underlining provisions. The change is only to the cite of these rules in Section B - Operational Flexibility. IDEM, OAQ has clarified the rule cites for the Preventive Maintenance Plan.

(6) Section C - Overall Source Limit has been revised to include a new FESOP emissions cap for greenhouse gases (GHGs).

(7) IDEM, OAQ has clarified the Permittee's responsibility with regards to record keeping.

(8) IDEM, OAQ has clarified the interaction of the Quarterly Deviation and Compliance Monitoring Report and the Emergency Provisions.

(9) Section D.1 - Emission Operation Conditions for the portable drum mix asphalt pavement production plant has been revised to remove the New Source Performance Standards (NSPS) Requirements for Hot-Mix Asphalt Facilities (40 CFR 60, Subpart I). A NEW Condition E.1 - NSPS Requirements, has been added to incorporate by reference the requirements of 40 CFR 60, Subpart I. Also, a copy of the rule is included as Attachment B to the permit.

(10) Section D.1 - Emission Operation Conditions for the portable drum mix asphalt pavement production plant, has been revised to remove all cold-mix asphalt manufacturing and storage requirements. A NEW section D.2 - Emissions Unit Operation Conditions for the cold-mix asphalt manufacturing and storage, has been added to address the requirements for the cold-mix manufacturing operation and storage piles.

(11) Condition D.1.1 - Particulate Matter (PM), has been renamed and renumbered as "D.1.4 - Particulate Emission Limits".

(12) A new condition D.1.1 - PSD Minor Limit, has been added to clarify that the PM PSD avoidance limit is a separate requirement from the FESOP PM10 limit. Additionally, the pound per ton emission limit for PM has been revised to reflect the increased pound per ton emission limits for PM.

(13) Condition D.1.2 - FESOP, PSD, and Emission Offset Limits, renamed "FESOP Limits: PM10, PM2.5, SO2, NOx, VOC, and CO", has been revised to include the new FESOP limits for PM2.5 and SO2. Additionally, the pound per ton emission limit for PM10 has been revised to reflect the increased pound per ton emission limits for PM10. Finally, the rule cites have been updated to include a reference to 326 IAC 2-1.1-5, since the PM2.5 limit is also a Nonattainment New Source Review (NNSR) avoidance limit, and to 326 IAC 8-1-6, since the FESOP VOC emission limit is also a Best Available Control Technology (BACT) avoidance limit.

(14) Condition D.1.4. - Sulfur Dioxide (SO2), renumbered and renamed as "D.1.3 - FESOP Limits: SO2, NOx, and HAPs", has been restructured for clarity. The fuel equivalency requirements were removed and replace with annual fuel usage limits for each fuel permitted, and the new ash, chlorine, and lead content limits for the waste oil were added. Finally, annual SO2, NOx, and HCL emission limits for the dryer/mixer burner were added.

(15) A new condition D.1.5 - Particulate Emission Limits, has been added to the permit to incorporate the requirements of 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units) for the hot oil heater.

(16) Condition D.1.5 - Sulfur Dioxide (SO2) Emission Limitations, renumbered and renamed as D.1.6 - Sulfur Dioxide (SO2) has been revised for clarity.

(17) Condition D.1.9 - Testing Requirements, has been revised to incorporate a reference to 326 IAC 3-6 since it was previously removed from section C, to add reference to Section C - Performance Testing, and to add PM2.5 testing requirements needed to determine compliance with condition D.1.2(c).

(18) Condition D.1.10 - Particulate Matter (PM) and PM10, renumbered and renamed as D.1.8 - Particulate Control, has been revised to include reference to PM2.5.

(19) A new condition D.1.11 - Hydrogen Chloride (HCl) Emissions and Ash, Chlorine, and Lead Content, has been added to incorporate the new compliance determination requirements for the new ash and lead content (%) limits contained in Section D.1.3 - FESOP Limits: SO2, NOx, and HAPs.

(20) IDEM, OAQ, has decided to clarify Condition D.13 - Parametric Monitoring, renumbered as condition D.1.15.

(21) Condition D.1.14 - Record Keeping Requirements and condition D.1.15 - Reporting Requirements, renumbered as conditions D.1.17 and D.1.18, respectively, have been revised to reflect the consolidation of several existing conditions, as described above.

(22) Existing section D.2 - Emissions Unit Operation Conditions for the Insignificant Activities has been renumbered as Section D.3, and the Lake County storage tanks and unpaved roads requirements have been deleted. Since there are no requirements that apply to the remaining activities listed in the original condition, it is not necessary to list them in a D Section so they have been removed..

(23) A NEW Section E.2 - NESHAPS Requirements, has been added to incorporate by reference the requirements of 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines for the two (2) generators. A copy of the rule is included as Attachment C to the permit.

The Permit has been revised as follows, with deleted language shown as ~~strikeouts~~ and new language **bolded**. Permit conditions have been renumbered as needed to accommodate the above-listed revisions.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a portable drum hot mix asphalt plant~~.~~**, and cold-mix asphalt production operation. Blast furnace, electric arc furnace steel mill slag, and/or asbestos-free recycled shingles are processed in the aggregate mix. This source does not crush any recycled asphalt pavement (RAP) or grind any shingles on-site.**

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A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

(a) One (1) drum hot mix asphalt plant consisting of the following units:

(1) One (1) aggregate dryer/mixer, constructed in 1984, with a maximum **throughput** capacity of 320 tons ~~per hour~~ **of raw material per hour, processing blast furnace slag, steel slag, and recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) in the aggregate mix**, having a burner with a maximum heat input rate of 97 million British thermal units per hour, **primarily firing waste oil and using No. 2 distillate fuel oil and using natural gas as backup fuels,** ~~exhausting to~~ **equipped with** a baghouse **for particulate control, and exhausting to one (1) stack (DM-1)** ~~The burner is fired by waste oil with No. 2 fuel oil used as a backup fuel.~~**;**

~~(2) One (1) hot oil heater, constructed in 1984, with a maximum heat input rate of 2.54 million British thermal units per hour, fired by No. 2 distillate fuel oil.~~

~~(3) One (1) No. 2 distillate fuel oil fired generator, constructed in 1984, with a maximum heat input capacity of 2.62 million Btu per hour.~~

(~~4~~**2**) One (1) material conveying and handling operation.

(3) Aggregate storage piles, including:

(A) Blast furnace and/or electric arc steel slag storage piles, with a maximum anticipated pile size of 1.00 acres.

(B) Recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) storage piles, with a maximum anticipated pile size of 0.40 acres.

Under NSPS 40 CFR Part 60, Subpart I, New Source Performance Standards for Hot-mix Asphalt Plants, ~~T~~this drum hot mix asphalt facility is considered ~~to be~~ an affected ~~source under 40 CFR 60, Subpart I~~**facility**.

(b) One (1) 670.0 hp diesel fuel-fired "large" genset generator, identified as ES(a), manufactured in 1982 and initially constructed in 1982, then moved onsite in 1984, uncontrolled and exhausting at one (1) stack (ES-1).

Under 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines, this is considered an affected facility.

(c) **One (1) 54.0 hp diesel fuel-fired "small" generator, identified as ES(b), manufactured in 1982 and initially constructed in 1982, then moved onsite in 1984, uncontrolled and exhausting at one (1) stack (ES-2).**

Under 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines, this is considered an affected facility.

(d) **Cold-mix (stockpile mix) asphalt manufacturing operations and storage piles.**

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A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

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

(a) **One (1) No. 2 distillate fuel oil fired hot oil heater, constructed in 1984, with a maximum heat input rate of 2.54 million British thermal units per hour, using natural gas as a backup fuel, uncontrolled and exhausting to the atmosphere. [326 IAC 6-2, 326 IAC 6.5]**

(~~d~~**b**) Emission units with PM and PM10 emissions less than five (5) tons per year; SO2, NOx, and VOC emissions less than ten (10) tons per year; CO emissions less than twenty-five (25) tons per year; lead emissions less than two-tenths (0.2) tons per year; single HAP emissions less than one (1) ton per year; and combination of HAPs emissions less than two and a half (2.5) tons per year:

(1) One (1) 10,000 gallon storage tank for No. 2 distillate fuel oil.

(2) One (1) 20,000 gallon storage tank for liquid asphalt AC-20, constructed in ~~1884~~**1984**.

(~~b~~**c**) A laboratory as defined in 326 IAC 2-7-1(21)(D).

(~~c~~**d**) Application of oils, greases, lubricants, or other nonvolatile materials applied as temporary protective coatings.

(~~a~~**e**) Paved and unpaved roads and parking lots with public access. **[326 IAC 2-8,** 326 IAC 6-4, **326 IAC 6-5]**

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B.12 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]~~[326 IAC 2-8-5(a)(1)]~~

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B.20 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) **and (c)** ~~through (d)~~ without a prior permit revision, if each of the following conditions is met:

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(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 2-8-15~~(b)(2), (c)(1), and (d)~~ **(b)(1) and (c)**. The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15~~(b)(2), (c)(1), and (d)~~ **(b)(1) and (c).**

(b) Emission Trades [326 IAC 2-8-15 ~~(c)~~ **(b)**]
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 2-8-15 ~~(c)~~ **(b)**.

(c) Alternative Operating Scenarios [326 IAC 2-8-15 ~~(d)~~ **(c)**]

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C.2 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM) **and greenhouse gases (GHGs)**, from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

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(4) The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per twelve (12) consecutive month period.

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C.3 Opacity [326 IAC 5-1]

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(b) 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 when operating in areas listed in 326 IAC 5-1-1(c), **except any areas listed for Clark County,** unless otherwise stated in this permit:

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~~(2) Opacity from a facility located in Lake County shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period unless otherwise specified in 326 IAC 6-1-10.1. This opacity limit shall supersede the opacity limit contained in 326 IAC 5-1-2(2)(A), paragraph (c)(1) above.~~

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~~C.8 Fugitive Dust Emissions [326 IAC 6.8-10-3]~~

~~Pursuant to 326 IAC 6.8-10-3 (formerly 326 IAC 6-1-11.1) (Lake County Fugitive Particulate Matter Control Requirements), the particulate matter emissions from source wide activities shall meet the following requirements whenever the source is operating in Lake County:~~

~~(a) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).~~

~~(b) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).~~

~~(c) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).~~

~~(d) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.~~

~~(e) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.~~

~~(f) There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.~~

~~(g) The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).~~

~~(h) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.~~

~~(i) The PM10 emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.~~

~~(j) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).~~

~~(k) Any facility or operation not specified in 326 IAC 6.8-10-3 shall meet a twenty percent (20%), three (3) minute average opacity standard.~~

~~The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the Fugitive Dust Control Plan, submitted on June 3, 1996. The plan includes watering of roadways and stockpiles as necessary to prevent fugitive particulate emissions.~~

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C.~~14~~**15** Reserved

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C.~~20~~**21** ~~Emission Statement [326 IAC 2-6] [326 IAC 2-8-4(3)]~~**Reserved**

~~Pursuant to 326 IAC 2-6-3(a)(1), when the source is operating in Lake or Porter Counties the Permittee shall submit an emission statement by July 1 following a calendar year when the source emits oxides of nitrogen into the ambient air equal to or greater than twenty-five (25) tons. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.~~

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C.22 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

(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. ~~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.~~

(1) Support information includes the following:

(A) All calibration and maintenance records.

(B) All original strip chart recordings for continuous monitoring instrumentation.

(C) Copies of all reports required by the FESOP.

(2) Records of required monitoring information include the following:

(A) The date, place, as defined in this permit, and time of sampling or measurements.

(B) The dates analyses were performed.

(C) The company or entity that performed the analyses.

(D) The analytical techniques or methods used.

(E) The results of such analyses.

(F) 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.

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C.23 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. **Proper notice submittal under Section B – Emergency Provisions satisfies the reporting requirements of 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 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

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C.24 Relocation of Portable Sources [326 IAC 2-14-4]

(a) This permit is approved for operation in all areas of Indiana except **Clark, Floyd, Lake, LaPorte, or Porter Counties, or** ~~in~~ severe nonattainment areas for ozone. This determination is based on the requirements of Prevention of Significant Deterioration in 326 IAC 2-2, and Emission Offset requirements in 326 IAC 2-3. Prior to locating in any severe nonattainment area, the Permittee must submit a request and obtain a permit modification.

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~~SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS~~

~~Emissions Unit Description:~~

~~(a) One (1) drum hot mix asphalt plant consisting of the following units:~~

~~(1) One (1) aggregate dryer/mixer, constructed in 1984, with a maximum capacity of 320 tons per hour, having a burner with a maximum heat input rate of 97 million British thermal units per hour, exhausting to a baghouse. The burner is fired by waste oil with No. 2 fuel oil used as a backup fuel.~~

~~(2) One (1) hot oil heater, constructed in 1984, with a maximum heat input rate of 2.54 million British thermal units per hour, fired by No. 2 distillate fuel oil.~~

~~(3) One (1) No. 2 fuel oil fired generator, constructed in 1984, with a maximum heat input capacity of 2.62 million Btu per hour.~~

~~(4) One (1) material conveying and handling operation.~~

~~This drum hot mix asphalt facility is considered to be an affected source under 40 CFR 60, Subpart I.~~

~~(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 2-8-4(1)]~~

~~D.1.1 Particulate Matter (PM) [326 IAC 6.5-1-2] [326 IAC 6.8-1-2]~~

~~(a) Pursuant to 326 IAC 6.5-1-2(a) and 326 IAC 6.8-1-2(a), particulate emissions from the aggregate dryer/mixer shall not exceed 0.03 grain per dry standard cubic foot when operating in the counties listed in 326 IAC 6.5-1-1(a) or in Lake County.~~

~~(b) Pursuant to 326 IAC 6.5-1-2(a) and 326 IAC 6.8-1-2(a), particulate emissions from the material conveying and handling operation shall not exceed 0.03 grain per dry standard cubic foot when operating in the counties listed in 326 IAC 6.5-1-1(a) or in Lake County.~~

~~D.1.2 FESOP, PSD, and Emission Offset Limits [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-3]~~

~~Pursuant to 326 IAC 2-8-4, the emissions from the aggregate dryer/mixer shall be limited as follows:~~

~~(a) The asphalt production rate shall be limited to less than 1,349,244 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~(b) PM/PM10 emissions from the aggregate dryer/mixer shall be limited to less than 0.11 pounds of PM/PM10 per ton of asphalt produced.~~

~~(c) CO emissions from the aggregate dryer/mixer shall be limited to less than 0.13 pounds of CO per ton of asphalt produced.~~

~~(d) NOx emissions from the aggregate dryer/mixer shall be limited to less than 0.055 pounds of NOx per ton of asphalt produced.~~

~~(e) VOC emissions from the aggregate dryer/mixer shall be limited to less than 0.032 pounds of VOC per ton of asphalt produced.~~

~~Compliance with these limitations renders the requirements of 326 IAC 2-7, 326 IAC 2-2 and 326 IAC 2-3 not applicable.~~

~~D.1.3 Volatile Organic Compounds (VOC) [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-3]~~

~~(a) Pursuant to 326 IAC 2-8-4, the VOC solvent used as diluent in the liquid binder used in cold mix asphalt production from the plant shall be limited such that no more than 73.3 tons of VOC emissions emitted per twelve (12) consecutive months with compliance determined at the end of each month. This shall be achieved by limiting the total VOC solvent of any one selected binder to not exceed the stated limit in (c) for that binder during the last twelve (12) months. When more than one binder is used, the formula in (c)(6) must be applied so that the total VOC emitted does not exceed 73.3 tons per twelve (12) consecutive month period.~~

~~(b) Liquid binders used in the production of cold mix asphalt shall be defined as follows:~~

~~(1) Cut back asphalt rapid cure, containing a maximum of 25.3% of the liquid binder by weight of VOC solvent and 95% by weight of VOC solvent evaporating.~~

~~(2) Cut back asphalt medium cure, containing a maximum of 28.6% of the liquid binder by weight of VOC solvent and 70% by weight of VOC solvent evaporating.~~

~~(3) Cut back asphalt slow cure, containing a maximum of 20% of the liquid binder by weight of VOC solvent and 25% by weight of VOC solvent evaporating.~~

~~(4) Emulsified asphalt with solvent, containing a maximum of 15% of liquid binder by weight of VOC solvent and 46.4% by weight of the VOC solvent in the liquid blend evaporating. The percent oil distillate in emulsified asphalt with solvent liquid, as determined by ASTM, must be 7% or less of the total emulsion by volume~~

~~(5) Other asphalt with solvent binder, containing a maximum 25.9% of the liquid binder of VOC solvent and 2.5% by weight of the VOC solvent evaporating~~

~~(c) The liquid binder used in cold mix asphalt production shall be limited as follows:~~

~~(1) Cutback asphalt rapid cure liquid binder usage shall not exceed 77.2 tons of VOC solvent per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~(2) Cutback asphalt medium cure liquid binder usage shall not exceed 105 tons of VOC solvent per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~(3) Cutback asphalt slow cure liquid binder usage shall not exceed 293 tons of VOC solvent per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~(4) Emulsified asphalt with solvent liquid binder usage shall not exceed 158 tons of VOC solvent per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~(5) Other asphalt with solvent liquid binder shall not exceed 2,932 tons of VOC solvent per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~(6) The VOC solvent allotments in subpart (c)(1) through (c)(5) of this condition shall be adjusted when more than one type of binder is used per twelve (12) month consecutive period rolled on a monthly basis. In order to determine the tons of VOC emitted per each type of binder, use the following formula and divide the tons of VOC solvent used for each type of binder by the corresponding adjustment ratio listed in the table that follows.~~

~~Tons of solvent contained in binder / Adjustment ratio = tons of VOC emitted~~

~~Type of Binder~~	~~Tons VOC Solvent~~	~~Adjustment Ratio~~	~~Tons VOC Emitted~~
~~Cutback Asphalt Rapid Cure~~		~~1~~	
~~Cutback Asphalt Medium Cure~~		~~1.36~~	
~~Cutback Asphalt Slow Cure~~		~~3.8~~	
~~Emulsified Asphalt~~		~~2.04~~	
~~Other Asphalt~~		~~38~~	

~~The equivalent total tons of VOC of the combined liquid binders shall be less than 73.3 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Compliance with this limit will ensure that 326 IAC 2-7 (Part 70 Program), 326 IAC 2-2 (PSD), and 326 IAC 2-3 (Emission Offset) do not apply.~~

~~D.1.4 Sulfur Dioxide (SO_2) [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-3]~~

~~Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following:~~

~~(a) The sulfur content of the waste oil used shall not exceed 0.75% by weight.~~

~~(b) The sulfur content of the No. 2 oil used shall not exceed 0.50% by weight.~~

~~(c) The SO_2 emissions from the aggregate dryer/mixer shall be limited to less than 110 pounds per thousand gallons (lb/kgal) of waste oil and less than 71.0 pounds per thousand gallons (lb/kgal) of No. 2 fuel oil.~~

~~(d) The No. 4 fuel oil combusted in the aggregate dryer/mixer shall be limited to less than 1,632,000 gallons per twelve (12) consecutive month period with compliance determined at the end of each month. For the purpose of determining compliance with this limit, every thousand gallons of No. 2 fuel oil shall be considered equivalent to 644 gallons of waste oil.~~

~~Combined with the SO_2 emissions from other existing units, the SO_2 emissions from the entire plant are limited to less than 100 tons per year. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program), 326 IAC 2-2 (Prevention of Significant Deterioration), and 326 IAC 2-3 (Emission Offset) are not applicable.~~

~~D.1.5 Sulfur Dioxide (SO_2) Emission Limitations [326 IAC 7-1.1-1] [326 IAC 7-1.1-2]~~

~~Pursuant to 7-1.1-2, sulfur dioxide emissions from the aggregate dryer/mixer shall be limited as follows:~~

~~(a) One and six-tenths (1.6) pounds per MMBtu for residual oil combustion, and~~

~~(b) Five-tenths (0.5) pound per MMBtu for distillate oil combustion.~~

~~D.1.6 Miscellaneous Operations: Asphalt Paving [326 IAC 8-5-2]~~

~~Pursuant to 326 IAC 8-5-2, no person shall cause or allow the use of cutback asphalt or asphalt emulsion containing more than 7 percent oil distillate by volume of emulsion of any paving application except:~~

~~(a) Penetrating prime coating;~~

~~(b) Stockpile storage; and~~

~~(c) Application during the months of November, December, January, February, and March.~~

~~D.1.7 Preventive Maintenance Plan [326 IAC 2-8-4(9)]~~

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

~~Compliance Determination Requirements~~

~~D.1.8 Sulfur Dioxide Emissions and Sulfur Content~~

~~Compliance shall be determined utilizing one of the following options.~~

~~(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed one and six-tenths (1.6) pounds per MMBtu for residual oil combustion and five-tenths (0.5) pounds per million Btu heat input for distillate oil combustion by:~~

~~(1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or~~

~~(2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.~~

~~(A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and~~

~~(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.~~

~~(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 97 MMBtu per hour burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.~~

~~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 Testing Requirements [326 IAC 2-8-4(3)]~~

~~The Permittee shall perform PM and PM-10 testing utilizing methods as approved by the Commissioner to demonstrate compliance with Condition D.1.2(b) at least once every five (5) years from the date of the most recent valid compliance demonstration. PM10 includes filterable and condensable PM. 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 Performance Testing.~~

~~D.1.10 Particulate Matter (PM) and PM10~~

~~(a) In order to comply with Condition D.1.2 the baghouse for PM and PM10 control shall be in operation and control emissions from the aggregate dryer/mixer at all times that the aggregate dryer/mixer is in operation.~~

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

~~Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]~~

~~D.1.11 Visible Emissions Notations~~

~~(a) Visible emission notations of the aggregate dryer/mixer stack exhaust 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.~~

~~D.1.12 Broken or Failed Bag Detection~~

~~In the event that bag failure has been observed:~~

~~(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).~~

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

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

~~D.1.13 Parametric Monitoring~~

~~The Permittee shall record the pressure drop across the baghouse used in conjunction with the aggregate dryer/mixer, at least once per day when the aggregate dryer/mixer is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response. Section C - Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.~~

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

~~Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]~~

~~D.1.14 Record Keeping Requirements~~

~~(a) To document the compliance status with Condition D.1.2(a), the Permittee shall maintain monthly records of asphalt production.~~

~~(b) To document the compliance status with Condition D.1.4(d), the Permittee shall maintain records of monthly fuel usage for No. 2 and waste oil combusted in the aggregate dryer/mixer.~~

~~(c) To document the compliance status with Conditions D.1.3 and D.1.6, the Permittee shall document VOC usage as follows:~~

~~(1) Amount and type of liquid binder used in the production of cold mix asphalt each day.~~

~~(2) Type and VOC, solvent content by weight of the liquid binder used in the production of cold mix asphalt each day.~~

~~(3) Amount of VOC, solvent used in the production of cold mix asphalt each day.~~

~~Records may include: delivery tickets, manufacturer's data, material safety data sheets (MSDS), and other documents necessary to verify the type and amount used. Test results of ASTM tests for asphalt cutback and asphalt emulsion may be used to document volatilization.~~

~~(d) To document the compliance status with Condition D.1.8, the Permittee shall maintain records in accordance with (1) through (6) below.~~

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

~~(2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;~~

~~(3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period,~~

~~the natural gas fired boiler certification does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1); and~~

~~If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:~~

~~(4) Fuel supplier certifications.~~

~~(5) The name of the fuel supplier; and~~

~~(6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.~~

~~The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.~~

~~(e) To document the compliance status with Condition D.1.11, the Permittee shall maintain records of visible emission notations of the aggregate dryer/mixer stack exhaust.~~

~~(f) To document the compliance status with Condition D.1.13, the Permittee shall maintain daily records of the pressure drop across the baghouse during normal operation.~~

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

~~D.1.15 Reporting Requirements~~

~~A quarterly summary of the information to document compliance status with Conditions D.1.2(a), D.1.3, D.1.4 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~

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

~~D.1.16 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 asphalt plant except as otherwise specified in 40 CFR Part 60, Subpart I.~~

~~(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:~~

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

~~D.1.17 New Source Performance Standard for Hot Mix Asphalt Facilities Requirements [40 CFR Part 60, Subpart I] [326 IAC 12]~~

~~Pursuant to 40 CFR Part 60, Subpart I, the Permittee shall comply with the provisions of 40 CFR 60, Subpart I (New Source Performance Standards for Hot Mix Asphalt Facilities), which are incorporated by reference as 326 IAC 12 for the asphalt plant as follows.~~

~~Subpart I – Standards of Performance for Hot Mix Asphalt Facilities~~

~~§ 60.90 Applicability and designation of affected facility.~~

~~(a) The affected facility to which the provisions of this subpart apply is each hot mix asphalt facility. For the purpose of this subpart, a hot mix asphalt facility is comprised only of any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler, systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems.~~

~~(b) Any facility under paragraph (a) of this section that commences construction or modification after June 11, 1973, is subject to the requirements of this subpart.~~

~~[42 FR 37936, July 25, 1977, as amended at 51 FR 12325, Apr. 10, 1986]~~

~~§ 60.91 Definitions.~~

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

~~(a) *Hot mix asphalt facility* means any facility, as described in §60.90, used to manufacture hot mix asphalt by heating and drying aggregate and mixing with asphalt cements.~~

~~[51 FR 12325, Apr. 10, 1986]~~

~~§ 60.92 Standard for particulate matter.~~

~~(a) On and after the date on which the performance test required to be constructed by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall discharge or cause the discharge into the atmosphere from any affected facility any gases which:~~

~~(1) Contain particulate matter in excess of 90 mg/dscm (0.04 gr/dscf).~~

~~(2) Exhibit 20 percent opacity, or greater.~~

~~[39 FR 9314, Mar. 8, 1974, as amended at 40 FR 46259, Oct. 6, 1975]~~

~~§ 60.93 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 appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).~~

~~(b) The owner or operator shall determine compliance with the particulate matter standards in §60.92 as follows:~~

~~(1) Method 5 shall be used to determine the particulate matter concentration. The sample time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf).~~

~~(2) Method 9 and the procedures in §60.11 shall be used to determine opacity.~~

~~[54 FR 6667, Feb. 14, 1989]~~

~~D.1.18 One Time Deadlines Relating to NSPS Subpart I~~

~~The Permittee shall comply with the following requirements by the dates listed below:~~

~~Requirement~~	~~Rule Citation~~	~~Affected Facility~~	~~Deadline~~
~~Notification of the date of construction commencement~~	~~40 CFR 60.7(a)(1)~~	~~Aggregate dryer/mixer~~	~~No later than 30 days after commencement of construction~~
~~Notification of initial startup and Compliance Report~~	~~40 CFR 60.7(a)(3)~~	~~Aggregate dryer/mixer~~	~~Within 15 days of startup~~

******

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-8-4(10)]: HMA Plant, Large Generator, and Hot Oil Heater

(a) One (1) drum hot mix asphalt plant consisting of the following units:

(1) One (1) aggregate dryer/mixer, constructed in 1984, with a maximum throughput capacity of 320 tons of raw material per hour, processing blast furnace slag, steel slag, and recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) in the aggregate mix, having a burner with a maximum heat input rate of 97 million British thermal units per hour, primarily firing waste oil and using No. 2 distillate fuel oil and natural gas as a backup fuels, equipped with a baghouse for particulate control, and exhausting to one (1) stack;

(2) One (1) material conveying and handling operation.

(3) Aggregate storage piles, including:

(A) Blast furnace and/or electric arc steel slag storage piles, with a maximum anticipated pile size of 1.00 acres.

(B) Recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) storage piles, with a maximum anticipated pile size of 0.40 acres.

Under NSPS 40 CFR Part 60, Subpart I, New Source Performance Standards for Hot-mix Asphalt Plants, this drum hot mix asphalt facility is considered an affected facility.

(b) One (1) 670.0 hp diesel fuel-fired "large" genset generator, identified as ES(a), manufactured in 1982 and initially constructed in 1982, then moved onsite in 1984, uncontrolled and exhausting at one (1) stack (ES-1).

Under 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines, this is considered an affected facility.

(c) One (1) 54.0 hp diesel fuel-fired "small" generator, identified as ES(b), manufactured in 1982 and initially constructed in 1982, then moved onsite in 1984, uncontrolled and exhausting at one (1) stack (ES-2).

Under 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines, this is considered an affected facility.

Insignificant Activities: Boilers

(a) One (1) No. 2 distillate fuel oil fired hot oil heater, constructed in 1984, with a maximum heat input rate of 2.54 million British thermal units per hour, using natural gas as a backup fuel, uncontrolled and exhausting to the atmosphere. [326 IAC 6-2, 326 IAC 6.5]

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 PSD Minor Limit [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable;

(a) The amount of asphalt processed shall not exceed 1,325,277 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The PM emissions from the dryer/mixer shall not exceed 0.264 pounds per ton of asphalt processed.

Compliance with these limitations, combined with the limited potential to emit from other emission units at this source, shall limit the source-wide total potential to emit PM to less than 250 tons per 12 consecutive month period and shall render 326 IAC 2-2 (PSD) not applicable.

D.1.2 FESOP Limits: PM10, PM2.5, SO2, NOx, VOC, and CO [326 IAC 2-8-4][326 IAC 2-2] [326 IAC 2-3][326 IAC 2-1.1-5][326 IAC 8-1-6]

Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following:

(a) The amount of asphalt processed shall not exceed 1,325,277 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The PM10 emissions from the dryer/mixer shall not exceed 0.115 pounds per ton of asphalt processed.

(c) The PM2.5 emissions from the dryer/mixer shall not exceed 0.134 pounds of PM2.5 per ton of asphalt produced.

(d) The SO2 emissions from the dryer/mixer shall not exceed 0.058 pounds per ton of asphalt processed.

(e) The NOx emissions from the dryer/mixer shall not exceed 0.055 pounds per ton of asphalt processed.

(f) The VOC emissions from the dryer/mixer shall not exceed 0.032 pounds per ton of asphalt processed.

(g) The CO emissions from the dryer/mixer shall not exceed 0.130 pounds per ton of asphalt processed.

Compliance with these limits, combined with the potential to emit PM10, PM2.5, SO2, NOx, VOC, and CO from all other emission units at this source, shall limit the source-wide total potential to emit of PM10, PM2.5, SO2, NOx, VOC, and CO to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-1.1-5 (Nonattainment New Source Review) not applicable.

Additionally, compliance with the limit in condition D.1.2(f) shall limit the VOC emissions from the dryer/mixer to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities) not applicable.

D.1.3 FESOP Limits: SO2, NOX, and HAPs [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-4.1]

Pursuant to 326 IAC 2-8-4, and in order to render 326 IAC 2-2 and 326 IAC 2-4.1 not applicable, the Permittee shall comply with the following:

(a) <u>Fuel and Slag Specifications</u>

(1) The sulfur content of the No. 2 distillate fuel oil combusted in the dryer/mixer and hot oil heater shall not exceed 0.50% by weight.

(2) The sulfur content of the diesel fuel oil combusted in the large generator shall not exceed 0.50% by weight.

(3) The sulfur content of the waste oil combusted in the dryer/mixer shall not exceed 0.75% by weight.

(4) The waste oil combusted in the dryer/mixer shall not contain more than 0.20% chlorine, 1.02% ash, and 0.010% lead.

(5) The hydrogen chloride (HCl) emissions from the dryer/mixer shall not exceed 13.2 pounds of HCl per 1,000 gallons of waste oil burned.

(6) The sulfur content of the blast furnace slag shall not exceed 1.50% by weight.

(7) The SO2 emissions from the dryer/mixer shall not exceed 0.740 pounds per ton of blast furnace slag processed in the aggregate mix.

(8) The sulfur content of the steel slag shall not exceed 0.66% by weight.

(9) The SO2 emissions from the dryer/mixer shall not exceed 0.0014 pounds per ton of steel slag processed in the aggregate mix.

(b) <u>Single Fuel and Slag Usage Limitations:</u>

(1) When combusting only one type of fuel per twelve (12) consecutive month period in the dryer/mixer burner, the usage of fuel and slag shall be limited as follows:

(A) Natural gas usage in the dryer/mixer burner shall not exceed 850 million cubic feet (MMCF) per twelve (12) consecutive month period, with compliance determined at the end of each month.

(B) No. 2 fuel oil usage in the dryer/mixer burner shall not exceed 1,799,935 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(C) Waste oil usage in the dryer/mixer burner shall not exceed 1,159,142 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month; and

(D) The blast furnace slag usage shall not exceed 60,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) When combusting only one type of fuel per twelve (12) consecutive month period in the large generator, the usage of fuel shall be limited as follows:

(A) Diesel fuel usage in the large generator burner shall not exceed 171,130 gallons per consecutive twelve (12) month period, with compliance to be determined at the end of each month;

Note: The source is only permitted to burn the above-mentioned fuels in the associated emission units.

(c) <u>Multiple Fuel and Slag Usage Limitation:</u>
When combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer and the large generator, in conjunction with the use of slag in the aggregate mix, emissions from the dryer/mixer and the large generator shall be limited as follows:

(1) SO_2 emissions from the dryer/mixer and the large generator, combined, shall not exceed 92.87 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) NOx emissions from the dryer/mixer and the large generator, combined, shall not exceed 82.69 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(3) HCl emissions from the dryer/mixer shall not exceed 9.90 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) <u>Asphalt Shingle Usage Limitation</u>
Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAPs)) not applicable, the Permittee shall not grind recycled asphalt shingles on-site and shall only use certified asbestos-free recycled shingles, post consumer waste and/or factory seconds, as an additive in its aggregate mix.

Compliance with these limits, combined with the potential to emit SO2, NOx, and HAPs from all other emission units at this source, shall limit the source-wide total potential to emit of SO2 and NOx to less than 100 tons per twelve (12) consecutive month period, each, any single HAP to less than ten (10) tons per twelve (12) consecutive

month period, and total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable.

D.1.4 Particulate Emission Limits [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the dryer/mixer, large generator, small generator, hot oil heater, and any enclosed material handling, screening, and/or conveying systems, each, shall not exceed 0.03 grain per dry standard cubic foot of exhaust air when operating in Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.

D.1.5 Particulate Emission Limits [326 IAC 6-2]

Pursuant to 326 IAC 6-2-4, the particulate emissions from the hot oil heater shall not exceed six tenths (0.6) pounds of particulate matter per MMBtu heat input.

D.1.6 Sulfur Dioxide (SO2) [326 IAC 7-1.1-1] [326 IAC 7-2-1]

(a) Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), the Permittee shall comply with the following:

(1) The sulfur dioxide (SO2) emissions from the dryer/mixer burner shall not exceed five tenths (0.5) pounds per MMBtu when using distillate oil.

(2) The sulfur dioxide (SO2) emissions from the dryer/mixer burner shall not exceed one and six tenths (1.6) pounds per MMBtu heat input when using residual oil.

Note: No. 2 distillate fuel oil is considered distillate oil, and waste oil is considered residual oil.

(b) Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

D.1.7 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements

D.1.8 Particulate Control (PM/PM10/PM2.5)

(a) In order to comply with Conditions D.1.1(b), D.1.2(b), D.1.2(c), and D.1.4, the baghouse for particulate control shall be in operation and control emissions from the dryer/mixer at all times when the dryer/mixer is in operation.

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

D.1.9 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.1.1(b), D.1.2(b), D.1.2(c), and D.1.4, the Permittee shall perform PM, PM10, and PM2.5 testing of the dryer/mixer not later than 180 days after the startup of the dryer/mixer, utilizing methods approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable particulate matter.

(b) In order to demonstrate compliance with Condition D.1.3(a)(7), when using blast furnace slag, the Permittee shall perform SO2 testing for the aggregate dryer within one hundred eighty (180) days of initial use of blast furnace slag in the aggregate mix, utilizing methods as approved by the Commissioner. Testing shall only be performed if the company has not previously performed SO2 testing while using blast furnace slag in the aggregate mix at one of their other Indiana facilities. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.1.10 Sulfur Dioxide (SO_2) Emissions and Sulfur Content

Fuel Oil

(a) Compliance with the fuel limitations established in Conditions D.1.3(a)(1), D.1.3(a)(2), D.1.3(a)(3), and D.1.6, shall be determined utilizing one of the following options. Pursuant to 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements) and 326 IAC 3-7-4 (Fuel oil sampling; analysis methods), compliance shall be demonstrated on a thirty (30) day calendar-month average.

(1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or

(2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

(3) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 97 MMBtu/hr burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (1) or (2) above shall not be refuted by evidence of compliance pursuant to the other method.

Blast Furnace Slag

(b) Compliance with the blast furnace slag limitation established in Condition D.1.3(a)(6) shall be determined utilizing one of the following options. Pursuant to 326 IAC 2-8-4 (FESOP), compliance shall be demonstrated on a thirty (30) day calendar-month average.

(1) Maintaining all records of vendor analyses or certifications of blast furnace slag delivered; or

(2) Analyzing a sample of each blast furnace slag delivery, if no vendor analyses or certifications are available, to determine the sulfur content of the blast furnace slag, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 97 MMBtu/hr burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, or other procedures approved by IDEM, OAQ.

A determination of noncompliance pursuant to any of the methods specified in (1) or (2) above shall not be refuted by evidence of compliance pursuant to the other method.

Steel Slag

(c) Compliance with the steel slag limitations established in Condition D.1.3(a)(8) shall be determined utilizing one of the following options. Pursuant to 326 IAC 2-8-4 (FESOP), compliance shall be demonstrated on a thirty (30) day calendar-month average.

(1) Maintaining all records of vendor analyses or certifications of steel slag delivered; or

(2) Analyzing a sample of the steel slag delivery if no vendor analyses or certifications are available, at least once per quarter, to determine the sulfur content of the steel slag, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 97 MMBtu/hr burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, or other procedures approved by IDEM, OAQ.

A determination of noncompliance pursuant to any of the methods specified in (1) or (2) above shall not be refuted by evidence of compliance pursuant to the other method.

D.1.11 Hydrogen Chloride (HCl) Emissions and Ash, Chlorine, and Lead Content

The Permittee shall demonstrate compliance with the waste oil chlorine, ash, and lead content limits established in Condition D.1.3(a)(4), by providing a vendor analysis of each fuel delivery accompanied by a vendor certification.

D.1.12 Multiple Fuel and Slag Usage

In order to comply with the Condition D.1.3(c) when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer, in conjunction with the use of slag in the aggregate mix, emissions from the dryer/mixer and large generator shall be limited as follows:

(a) Sulfur Dioxide (SO2) Emission Calculation

$$S = \frac{G(E_G) + O(E_O) + W(E_W) + D(E_D) + B(E_B) + T(E_T)}{2{,}000 \text{ lbs/ton}}$$

where:

S = tons of sulfur dioxide emissions for a 12-month consecutive period
G = million cubic feet of natural gas used in the in the dryer/mixer last 12 months;
O = gallons of No. 2 fuel oil used in the dryer/mixer in the last 12 months
W = gallons of waste oil used in the dryer/mixer in the last 12 months
D = gallons of diesel fuel oil used in the large generator in the last 12 months
B = tons of blast furnace slag used in the dryer/mixer in the last 12 months
T = tons of steel slag used in the in the dryer/mixer last 12 months
E_G = 0.60 lb/million cubic feet of natural gas
E_O = 71.0 lb/1000 gallons of No. 2 fuel oil
E_W = 110.3 lb/1000 gallons of waste oil
E_D = 79.18 lb/1000 gallons of diesel fuel oil
E_B = 0.74 lb/ton of blast furnace slag used
E_T = 0.0014 lb/ton of steel slag used

(b) Nitrogen Oxides (NOx) Emission Calculation

$$N = \frac{G(E_G) + O(E_O) + W(E_W) + D(E_D)}{2{,}000 \text{ lbs/ton}}$$

where:

N = tons of nitrogen oxide emissions for a 12-month consecutive period;
G = million cubic feet of natural gas used in the in the dryer/mixer last 12 months;
O = gallons of No. 2 fuel oil used in the in the dryer/mixer last 12 months;
W = gallons of reclaimed/waste oil used in the in the dryer/mixer last 12 months.
D = gallons of diesel fuel oil used in the large generator in the last 12 months
E_G = 190 lb/million cubic feet of natural gas;
E_O = 24.0 lb/1000 gallons of No. 2 fuel oil;
E_W = 19.0 lb/1000 gallons of waste oil.
E_D = 469.82 lb/1000 gallons of diesel fuel oil.

(c) Hydrogen Chloride (HCL) Emission Calculation

$$HCL = \frac{W(E_W)}{2000 \text{ lbs/ton}}$$

where:

HCl = tons of hydrogen chloride emissions for a 12-month consecutive period
W = gallons of waste oil used in the in the dryer/mixer in the last 12 months.

E_W = 13.2 lb/1000 gallons of waste oil.

D.1.13 Shingle Asbestos Content

Pursuant to 326 IAC 2-8-4, compliance with Condition D.1.3(d) shall be determined utilizing one of the following options:

(1) Providing shingle supplier certification that the factory second shingles do not contain asbestos; or

(2) Analyzing a sample of the recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) delivery to determine the asbestos content of the recycled asphalt shingles, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A determination of noncompliance pursuant to any of the methods specified above shall not be refuted by evidence of compliance pursuant to the other method.

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

D.1.14 Visible Emissions Notations

(a) Visible emission notations from the conveyors, screens, material transfer points, and dryer/mixer stack exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. An abnormal visible emission notation is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.1.15 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouse used in conjunction with the dryer/mixer, at least once per day when the dryer/mixer is in operation. When, for any one reading, the pressure drop across the baghouse is outside of the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between one (1.0) and eight (8.0) inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest 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. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months, or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer specifications, if used.

D.1.16 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

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

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.1.17 Record Keeping Requirements

(a) To document the compliance status with Conditions D.1.1(a), and D.1.2(a), the Permittee shall keep monthly records of the amount of asphalt processed through the dryer/mixer.

(b) To document the compliance status with Conditions D.1.3 and D.1.6, the Permittee shall maintain records in accordance with (1) through (10) below. Records maintained for (1) through (10) below shall be taken monthly and shall be complete and sufficient to establish compliance with the limits established in Conditions D.1.3 and D.1.6.

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

(2) Actual fuel usage, sulfur content, heat content, and equivalent sulfur dioxide (SO2) and nitrogen oxides (NOx) emission rates for each fuel used at the source since the last compliance determination period;

(3) Actual waste oil usage, ash, chlorine, and lead content, and equivalent hydrogen chloride (HCl) emission rate for waste oil used at the source since the last compliance determination period;

(4) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

(5) If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(A) Fuel supplier certifications;

(B) The name of the fuel supplier; and

(C) A statement from the fuel supplier that certifies the sulfur content of the No. 2, fuel oil, diesel fuel oil, and waste oil, and the ash, chlorine, and lead content of waste oil.

(6) Actual blast furnace and steel slag usage, sulfur content and equivalent sulfur dioxide emission rates for all blast furnace and steel slag used at the source since the last compliance determination period;

(7) A certification, signed by the owner or operator, that the records of the blast furnace and steel slag supplier certifications represent all of the blast furnace and steel slag used during the period; and

(8) If the slag supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(A) Blast furnace and steel slag supplier certifications;

(B) The name of the blast furnace and steel slag supplier; and

(C) A statement from the blast furnace and steel slag supplier that certifies the sulfur content of the blast furnace and steel slag.

(9) A certification, signed by the owner or operator, that the records of the shingle supplier certifications represent all of the shingles used during the period; and

(10) If the shingle supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(A) Shingle supplier certifications;

(B) The name of the shingle supplier(s); and

(C) A statement from the shingle supplier(s) that certifies the asbestos content of the shingles from their company.

(d) To document the compliance status with Condition D.1.14, the Permittee shall maintain records once per day of the visible emission notations. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

(e) To document the compliance status with Condition D.1.15, the Permittee shall maintain records once per day of the pressure drop during normal operation. The Permittee shall include in its daily record when the pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g., the process did not operate that day).

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

D.1.18 Reporting Requirements

A quarterly summary of the information to document compliance status with Conditions D.1.1(a), D.1.2(a), and D.1.3, shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1)by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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~~SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS~~

~~Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities~~

~~(a) Paved and unpaved roads and parking lots with public access.~~

~~(b) A laboratory as defined in 326 IAC 2-7-1(21)(D).~~

~~(c) Application of oils, greases, lubricants, or other nonvolatile materials applied as temporary protective coatings.~~

~~(d) Emission units with PM and PM10 emissions less than five (5) tons per year; SO2, NOx, and VOC emissions less than ten (10) tons per year; CO emissions less than twenty-five (25) tons per year; lead emissions less than two-tenths (0.2) tons per year; single HAP emissions less than one (1) ton per year; and combination of HAPs emissions less than two and a half (2.5) tons per year:~~

~~(1) One (1) 10,000 gallon storage tank for No. 2 distillate fuel oil.~~

~~(2) One (1) 20,000 gallon storage tank for liquid asphalt AC constructed in 1984.~~

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

~~Emission Limitations and Standards [326 IAC 2-8-4(1)]~~

~~D.2.1 Fugitive Particulate Matter [326 IAC 6.8-10]~~

~~Pursuant to 326 IAC 6.8-10-3, the particulate matter emissions from source wide activities shall meet the following requirements whenever the plant is located in Lake County:~~

~~(a) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).~~

~~(b) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).~~

~~(c) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).~~

~~(d) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.~~

~~(e) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.~~

~~(f) There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.~~

~~(g) The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).~~

~~(h) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.~~

~~(i) The PM_{10} emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.~~

~~(j) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).~~

~~(k) Any facility or operation not specified in 326 IAC 6.8-10-3 shall meet a twenty percent (20%), three (3) minute average opacity standard.~~

~~The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the Fugitive Dust Control Plan, submitted on June 3, 1996. The fugitive dust control plan is as follows: Roadways and stockpiles shall be watered on an as needed basis to prevent fugitive particulate emissions.~~

~~D.2.2 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]~~

~~Pursuant to 326 IAC 8-9-1(b), the storage tanks are subject to reporting and recordkeeping provisions of section 6(a) and 6(b) of this rule when operating in Clark, Floyd, Lake, or Porter Counties.~~

~~D.2.3 Particulate Emissions [326 IAC 2-8]~~

~~Pursuant to 326 IAC 2-8, the emissions of PM10 from the unpaved roads shall be controlled according to the Fugitive Dust Control Plan submitted by the Permittee on June 3, 1996. The Fugitive Dust Control Plan is as follows: Roadways and stockpiles shall be watered on an as-needed basis to control fugitive dust emissions at this source.~~

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SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-8-4(10)]: Cold-mix Asphalt Production & Storage

(h) Cold-mix (stockpile mix) asphalt manufacturing operations and storage piles.

(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 2-8-4(1)]

D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-5-2]

Pursuant to 326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving), the use of cutback asphalt or asphalt emulsion shall not contain more than seven percent (7%) oil distillate by volume of emulsion for any paving application except the following purposes:

(a) Penetrating prime coating

(b) Stockpile storage

(c) Application during the months of November, December, January, February, and March.

D.2.2 Volatile Organic Compounds (VOC) [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-4.1]

(a) Pursuant to 326 IAC 2-8-4, the VOC emissions from the sum of the liquid binders (asphalt emulsions) shall not exceed 60.70 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) Liquid binders used in the production of cold mix asphalt shall be defined as follows:

(1) <u>Cut back asphalt rapid cure</u>, containing a maximum of 25.3% of the liquid binder by weight of VOC solvent and 95.0% by weight of VOC solvent evaporating.

(2) <u>Cut back asphalt medium cure</u>, containing a maximum of 28.6% of the liquid binder by weight of VOC solvent and 70.0% by weight of VOC solvent evaporating.

(3) <u>Cut back asphalt slow cure</u>, containing a maximum of 20.0% of the liquid binder by weight of VOC solvent and 25.0% by weight of VOC solvent evaporating.

(4) <u>Emulsified asphalt with solvent</u>, containing a maximum of 15.0% of liquid binder by weight of VOC solvent and 46.4% by weight of the VOC solvent in the liquid blend evaporating. The percent oil distillate in emulsified asphalt with solvent liquid, as determined by ASTM, must be seven percent (7%) or less of the total emulsion by volume.

(5) <u>Other asphalt with solvent binder</u>, containing a maximum 25.9% of the liquid binder of VOC solvent and 2.5% by weight of the VOC solvent evaporating.

(c) When using only one type of liquid binder (asphalt emulsion) per twelve (12) consecutive month period, the usage of liquid binder shall be limited as follows:

(1) The amount of VOC solvent used in rapid cure cutback asphalt shall not exceed 63.89 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) The amount of VOC solvent used in medium cure cutback asphalt shall not exceed 86.71 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(3) The amount of VOC solvent used in slow cure cutback asphalt shall not exceed 242.79 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(4) The amount of VOC solvent used in emulsified asphalt shall not exceed 130.82 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(5) The amount of VOC solvent used in all other asphalt shall not exceed 2,427.93 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) When using more than one liquid binder (asphalt emulsion) per twelve (12) consecutive month period, VOC emissions shall be limited as follows:

(1) The VOC solvent allotments in (1) through (5) above shall be adjusted when more than one type of binder is used per twelve (12) consecutive month period with compliance determined at the end of each month. In order to determine the tons of VOC emitted per each type of binder, use the following formula and divide the tons of VOC solvent used for each type of binder by the corresponding adjustment factor listed in the table that follows.

$$\text{VOC emitted (tons/yr)} = \frac{\text{VOC solvent used for each binder (tons/yr)}}{\text{Adjustment factor}}$$

Type of binder	adjustment factor
cutback asphalt rapid cure	1.053
cutback asphalt medium cure	1.429
cutback asphalt slow cure	4.000
emulsified asphalt	2.155
other asphalt	40.0

Compliance with these limits, combined with the potential to emit VOCs and HAPs from all other emission units at this source, will limit source-wide VOC emissions to less than one hundred (100) tons per twelve (12) consecutive month period, any single HAP to less than ten (10) tons per twelve (12) consecutive month period, and total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period, and render 326 IAC 2-7 (Part 70 Permit Program), 326 IAC 2-2 (PSD)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.2.3 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.2(c)(1) through (5), the Permittee shall maintain records in accordance with (1) through (4) below.

Records maintained shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.2.2(c)(1) through (5).

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

(2) Actual asphalt binder usage in the production of cold mix asphalt since the last compliance determination period;

(3) Actual VOC solvent content by weight of the asphalt binder used in the production of cold mix asphalt since the last compliance determination period; and

(4) Actual amount of VOC solvent used in the production of cold mix asphalt, and the amount of VOC emitted since the last compliance determination period.

Records may include: delivery tickets, manufacturer's data, material safety data sheets (MSDS), and other documents necessary to verify the type and amount used. Test results of ASTM tests for asphalt cutback and asphalt emulsion may be used to document volatilization.

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

D.2.4 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.2.2 shall be submitted no later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-8-4(10)]: Roads

(e) Paved and unpaved roads and parking lots with public access. [326 IAC 2-8, 326 IAC 6-4, 326 IAC 6-5]

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.3.1 Particulate Emissions [326 IAC 2-8]

Pursuant to 326 IAC 2-8, particulate emissions (PM/PM10) from the unpaved roads shall be controlled according to the Fugitive Dust Control Plan submitted by the Permittee on June 3, 1996, which is included as Attachment A to the permit.

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SECTION E.1 NSPS REQUIREMENTS

Emissions Unit Description [326 IAC 2-8-4(10)]: HMA Plant

(a) One (1) drum hot mix asphalt plant consisting of the following units:

(1) One (1) aggregate dryer/mixer, constructed in 1984, with a maximum throughput capacity of 320 tons of raw material per hour, processing blast furnace slag, steel slag, and recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) in the aggregate mix, having a burner with a maximum heat input rate of 97 million British thermal units per hour, primarily firing waste oil and using No. 2 distillate fuel oil and natural gas as a backup fuels, equipped with a baghouse for particulate control, and exhausting to one (1) stack;

(2) One (1) material conveying and handling operation.

(3) Aggregate storage piles, including:

(A) Blast furnace and/or electric arc steel slag storage piles, with a maximum anticipated pile size of 1.00 acres.

(B) Recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) storage piles, with a maximum anticipated pile size of 0.40 acres.

Under NSPS 40 CFR Part 60, Subpart I, New Source Performance Standards for Hot-mix Asphalt Plants, this drum hot mix asphalt facility is considered an affected facility.

(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 2-8-4(1)]

E.1.1 General Provisions Relating to the New Source Performance Standards (NSPS) for Hot-mix Asphalt Facilities (40 CFR 60, Subpart I), [326 IAC 12] [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, except as otherwise specified in 40 CFR 60, Subpart I.

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

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

E.1.2 New Source Performance Standards (NSPS) for Hot-mix Asphalt Facilities [40 CFR Part 60, Subpart I] [326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart I (included as Attachment B of this permit), which are incorporated by reference as 326 IAC 12, except as otherwise specified in 40 CFR Part 60, Subpart I:

(a) 40 CFR 60.90

(b) 40 CFR 60.91

(c) 40 CFR 60.92

(d) 40 CFR 60.93

E.1.3 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

The Permittee shall perform the stack testing required under NSPS 40 CFR 60, Subpart I, utilizing methods as approved by the Commissioner to document compliance with Condition E.1.2. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

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SECTION E.2 NESHAP REQUIREMENTS

Emissions Unit Description [326 IAC 2-8-4(10)]: Generators

(b) One (1) 670.0 hp diesel fuel-fired "large" genset generator, identified as ES(a), manufactured in 1982 and initially constructed in 2009, then moved onsite in 1984, uncontrolled and exhausting at one (1) stack (ES-1).

Under 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines, this is considered an affected facility.

(c) One (1) 54.0 hp diesel fuel-fired "small" generator, identified as ES(b), manufactured in 1982 and initially constructed in 2009, then moved onsite in 1984, uncontrolled and exhausting at one (1) stack (ES-2).

Under 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines, this is considered an affected facility.

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

National Emission Standards for Hazardous Air Pollutants (NESHAPs) Requirements [326 IAC 2-8-4(1)]

E.2.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.5925, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, as specified in Table 8 of 40 CFR Part 63, Subpart ZZZZ, and in accordance with schedule in 40 CFR 63 Subpart ZZZZ.

(b) Pursuant to 40 CFR 63.12, 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.2.2 National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ] [326 IAC 20-82]

The Permittee which owns or operates an existing stationary compression ignition (CI) reciprocating internal combustion engine (RICE) at an area source of HAP emissions shall comply with the provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment C of this permit), which are incorporated by reference as 326 IAC 20-82, with a compliance date of May 3, 2013, as follows:

(a) The 670 horsepower "large" genset generator (>500 HP, 10< x ≤30 liter/cylinder, constructed in 1982) is subject the following applicable portions of the NESHAP:

(1)	**40 CFR 63.6580;**	**(12)**	**40 CFR 63.6630;**
(2)	**40 CFR 63.6585(a), (c), (d);**	**(13)**	**40 CFR 63.6635;**
(3)	**40 CFR 63.6590(a)(1)(iii) and (iv);**	**(14)**	**40 CFR 63.6640;**
(4)	**40 CFR 63.6595(a)(1), (b), (c);**	**(15)**	**40 CFR 63.6645;**
(5)	**40 CFR 63.6603(a);**	**(16)**	**40 CFR 63.6650(a), (b), (c), (d), (e);**
(6)	**40 CFR 63.6604;**	**(17)**	**40 CFR 63.6655(a), (b), (d);**
(7)	**40 CFR 63.6605;**	**(18)**	**40 CFR 63.6660;**
(8)	**40 CFR 63.6612;**	**(19)**	**40 CFR 63.6665;**
(9)	**40 CFR 63.6615;**	**(20)**	**40 CFR 63.6670;**
(10)	**40 CFR 63.6620;**	**(21)**	**40 CFR 63.6675; and**
(11)	**40 CFR 63.6625(a), (b), (g), (h);**	**(22)**	**Tables 1b, 2b, 2d, 3, 4, 5, 6, and 8.**

(b) The 54.0 horsepower "small" generator (<500 HP, 10< x ≤30 liter/cylinder, constructed in 1982) is subject the following applicable portions of the NESHAP:

(1)	**40 CFR 63.6580;**	**(8)**	**40 CFR 63.6640;**
(2)	**40 CFR 63.6585(a), (c), (d);**	**(9)**	**40 CFR 63.6655(a), (b), (d), (e);**
(3)	**40 CFR 63.6590(a)(1)(iii) and (iv);**	**(10)**	**40 CFR 63.6660**
(4)	**40 CFR 63.6595(a)(1), (b), (c);**	**(11)**	**40 CFR 63.6665**
(5)	**40 CFR 63.6603(a);**	**(12)**	**40 CFR 63.6670**
(6)	**40 CFR 63.6605;**	**(13)**	**40 CFR 63.6675**
(7)	**40 CFR 63.6625(e), (h), (i);**	**(14)**	**Tables 2d, and 8.**

E.2.3 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

The Permittee shall perform the stack testing required under 40 CFR 63, Subpart ZZZZ, utilizing methods as approved by the Commissioner to document compliance with

Condition E.2.2(a). These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

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~~INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT~~
~~Compliance and Enforcement Branch~~
~~Office of Air Quality~~

~~FESOP Quarterly Report~~

~~Source Name:~~ ~~Wabash Valley Asphalt Company, LLC~~
~~Source Address:~~ ~~(Portable)~~
~~FESOP Permit No.:~~ ~~153-22594-03274~~
~~Facility:~~ ~~Asphalt Plant~~
~~Parameter:~~ ~~Asphalt Production~~
~~Limit:~~ ~~Less than 1,349,244 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~YEAR:~~ _____

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

~~☐ No deviation occurred in this quarter.~~

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

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

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: Wabash Valley Asphalt Company, LLC
Source Address: (Portable)
FESOP Permit No.: 153-22594-03274
Facility: Dryer/Mixer
Parameter: Hot-mix Asphalt Production
Limit: The amount of hot-mix asphalt produced in the dryer/burner shall not exceed 1,325,277 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER:_____ **YEAR:**_____

Month	Column 1	Column 2	Column 1 + Column 2
	Hot-mix Asphalt Produced This Month (tons)	Hot-mix Asphalt Produced Previous 11 Months (tons)	12 Month Total Hot-mix Asphalt Produced (tons)
Month 1			
Month 2			
Month 3			

☐ **No deviation occurred in this quarter.**

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

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

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~~INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT~~
~~Compliance and Enforcement Branch~~
~~Office of Air Quality~~

~~Single Liquid Binder Solvent Quarterly Report~~

~~Source Name: Wabash Valley Asphalt Company, LLC~~
~~Source Address: (Portable)~~
~~FESOP No.: 153-22594-03274~~
~~Facility: Asphalt Plant~~
~~Parameter: VOC Emissions~~
~~Limit: Cutback asphalt rapid cure liquid binder usage shall not exceed 77.2 tons of VOC solvent per twelve (12) consecutive month period with compliance determined at the end of each month. Cutback asphalt medium cure liquid binder usage shall not exceed 105 tons of VOC solvent per twelve (12) consecutive month period with compliance determined at the end of each month. Cutback asphalt slow cure liquid binder usage shall not exceed 293 tons of VOC solvent per twelve (12) consecutive month period with compliance determined at the end of each month. Emulsified asphalt with solvent liquid binder usage shall not exceed 158 tons of VOC solvent per twelve (12) consecutive month period with compliance determined at the end of each month. Other asphalt with solvent liquid binder shall not exceed 2,932 tons of VOC solvent per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~YEAR:~~

~~The following liquid binder solvent was the only liquid binder solvent used over the previous 12 month period:_____ Limit applicable:_____~~

~~(use of more than one binder requires the use of the "Multiple Liquid Binder Solvents" report form)~~

~~Month~~	~~Column 1~~	~~Column 2~~	~~Column 1 + Column 2~~
	~~This Month (tons)~~	~~Previous 11 Months (tons)~~	~~12 Month Total (tons)~~
~~Month 1~~			
~~Month 2~~			
~~Month 3~~			

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

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

******

~~INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT~~
~~Compliance and Enforcement Branch~~
~~Office of Air Quality~~

~~Multiple Liquid Binder Solvent Quarterly Report~~

~~Source Name:~~ ~~Wabash Valley Asphalt Company, LLC~~
~~Source Address:~~ ~~(Portable)~~
~~FESOP No.:~~ ~~153-22594-03274~~
~~Facility:~~ ~~Asphalt Plant~~
~~Parameter:~~ ~~VOC Emissions~~
~~Limit::~~ ~~73.3 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

~~Year:~~

~~Month~~	~~Type of Liquid binder~~	~~Solvent Usage This Month (tons)~~	~~Divisor~~	~~VOC emitted This Month (tons) for each solvent~~	~~VOC emitted This Month (tons)~~	~~VOC emitted Previous 11 Months (tons)~~	~~This month + Previous 11 months =VOC emitted 12 Month Total(tons)~~
~~Month 1~~	~~Cutback asphalt rapid cure~~		~~1~~				
	~~Cutback asphalt medium cure~~		~~1.36~~				
	~~Cutback asphalt slow cure~~		~~3.8~~				
	~~Emulsified asphalt~~		~~2.04~~				
	~~other asphalt~~		~~38~~				
~~Month 2~~	~~Cutback asphalt rapid cure~~		~~1~~				
	~~Cutback asphalt medium cure~~		~~1.36~~				
	~~Cutback asphalt slow cure~~		~~3.8~~				
	~~Emulsified asphalt~~		~~2.04~~				
	~~other asphalt~~		~~38~~				
~~Month 3~~	~~Cutback asphalt rapid cure~~		~~1~~				
	~~Cutback asphalt medium cure~~		~~1.36~~				
	~~Cutback asphalt slow cure~~		~~3.8~~				
	~~Emulsified asphalt~~		~~2.04~~				
	~~other asphalt~~		~~38~~				

☐ ~~No deviation occurred in this reporting period.~~
☐ ~~Deviation/s occurred in this reporting period.~~
~~Deviation has been reported on:~~

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

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report **Page 1 of 3**

Source Name: **Wabash Valley Asphalt Company, LLC**
Source Address: **(Portable)**
FESOP Permit No.: **153-22594-03274**

Facility: Dryer/Mixer Burner and Large Generator

Parameter: **Fuel & Slag Usage / SO2, NOx, & HCL emissions**

Emission Limits: *Sulfur dioxide (SO_2)* emissions shall not exceed 92.87 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.12(a).

Nitrogen oxides (NOx) emissions shall not exceed 82.69 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.12(b).

Hydrogen Chloride (HCL) emissions shall not exceed 9.90 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.12(c).

Fuel & Slag Limits: When combusting only one type of fuel per twelve (12) consecutive month period in the dryer/mixer and the large generator, in conjunction with the use of slag in the aggregate mix, fuel and slag usage shall not exceed the following:

Fuel Type (Units)	Fuel Usage Limit (per 12 consecutive month period)
Natural Gas (million cubic feet) (dryer)	850
No. 2 Distillate Fuel Oil (gallons) (dryer)	1,799,935
Waste Oil (gallons) (dryer)	1,159,142
Diesel Fuel Oil (gallons) (generator)	171,130
Blast Furnace Slag (tons) (dryer)	60,000

Facility: Cold-mix Asphalt Production

Parameter: **Binder Usage / VOC Emissions**

Emission Limits: *Volatile Organic Compound (VOC)* emissions from the sum of the binders shall not exceed 60.70 tons per twelve (12) consecutive month period with compliance determined at the end of each month, using the equation found in Condition D.2.2(d).

Binder Limits: When using only one type of liquid binder (asphalt emulsion) per twelve (12) consecutive month period in the production of cold-mix asphalt, liquid binder (asphalt emulsion) usage shall not exceed the following:

Type of Binder	Binder Usage Limit (tons per 12 consecutive month period)
Cutback Asphalt Rapid Cure	63.89
Cutback Asphalt Medium Cure	86.71
Cutback Asphalt Slow Cure	242.79
Emulsified Asphalt	130.82
Other Asphalt	2,427.93

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FESOP Quarterly Report - Fuel & Slag Usage / SO2 & NOx emissions **Page 2 of 3**

QUARTER: _____ YEAR: _____

Month	Fuel Types / Slag (units)	Column 1	Column 2	Column 1 + Column 2	Equation Results		
		Usage This Month	Usage Previous 11 Months	Usage 12 Month Total	Sulfur Dioxide (SO2) Emissions (tons per 12 months)	Nitrogen Oxides (NOx) Emissions (tons per 12 months)	Hydrogen Chloride (HCl) Emissions (tons per 12 months)
Month 1	Natural Gas (million cubic feet)						
	No. 2 Fuel Oil (gallons)						
	Waste Fuel Oil (gallons)						
	#2 Diesel Fuel Oil (gallons)						
	Blast Furnace Slag (tons)						
	Steel Slag Usage (tons)						
Month 2	Natural Gas (million cubic feet)						
	No. 2 Fuel Oil (gallons)						
	Waste Fuel Oil (gallons)						
	#2 Diesel Fuel Oil (gallons)						
	Blast Furnace Slag (tons)						
	Steel Slag Usage (tons)						
Month 3	Natural Gas (million cubic feet)						
	No. 2 Fuel Oil (gallons)						
	Waste Fuel Oil (gallons)						
	#2 Diesel Fuel Oil (gallons)						
	Blast Furnace Slag (tons)						
	Steel Slag Usage (tons)						

☐ **No deviation occurred in this reporting period.** **Submitted by: _____ Date: _____**

☐ **Deviation/s occurred in this reporting period.** **Title / Position: _____Phone: _____**

Deviation has been reported on: _____ Signature: _____

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FESOP Quarterly Report - Liquid Binder (Asphalt Emulsion) Usage / VOC Emissions

Page 3 of 3

QUARTER: _____ YEAR: _____

Month	Binder/Emulsion Types (tons)	Column 1	Column 2	Column 1 + Column 2	Equation Results
		Usage This Month	Usage Previous 11 Months	Usage 12 Month Total	VOC Emissions (tons per 12 months)
Month 1	Cutback asphalt rapid cure liquid binder				
	Cutback asphalt medium cure liquid binder				
	Cutback asphalt slow cure liquid binder				
	Emulsified asphalt with solvent liquid binder				
	Other asphalt with solvent liquid binder				
Month 2	Cutback asphalt rapid cure liquid binder				
	Cutback asphalt medium cure liquid binder				
	Cutback asphalt slow cure liquid binder				
	Emulsified asphalt with solvent liquid binder				
	Other asphalt with solvent liquid binder				
Month 3	Cutback asphalt rapid cure liquid binder				
	Cutback asphalt medium cure liquid binder				
	Cutback asphalt slow cure liquid binder				
	Emulsified asphalt with solvent liquid binder				
	Other asphalt with solvent liquid binder				

☐ **No deviation occurred in this reporting period.** **Submitted by:_____ Date: _____**

☐ **Deviation/s occurred in this reporting period.** **Title / Position:_____ Phone: _____**

Deviation has been reported on: **_____ Signature: _____**

VOC Emitted (tons/yr) = $\frac{\text{VOC solvent used for each binder (tons/yr)}}{\text{Adjustment factor}}$

Type of Binder	Adjustment Factor
Cutback Asphalt Rapid Cure	1.053
Cutback Asphalt Medium Cure	1.429
Cutback Asphalt Slow Cure	4.0
Emulsified Asphalt	2.155
Other Asphalt	40.0

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QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Brooks Construction Company, Inc.
Source Address: 3930 Hardrock Road, Ft. Wayne, Indiana 46819
FESOP Permit No.: F003-30740-00351

Months: _____ to _____ Year: _____

Page 1 of 2

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

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No other changes have been made to the permit as a result of this permit action.

Conclusion and Recommendation

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 October 17, 2011.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Significant Revision No. F005-31033-03274. The staff recommends to the Commissioner that this FESOP Significant Revision be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Ms. Hannah Desrosiers at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5374 or toll free at 1-800-451-6027 extension 4-5374.

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

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.in.gov/idem

Appendix A.1: Unlimited Emissions Calculations
Entire Source

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

Asphalt Plant Maximum Capacity

Maximum Hourly Asphalt Production =	320	ton/hr								
Maximum Annual Asphalt Production =	2,803,200	ton/yr								
Maximum Annual Blast Furnace Slag Usage =	1,177,344	ton/yr	1.50	% sulfur						
Maximum Annual Steel Slag Usage =	1,177,344	ton/yr	0.66	% sulfur						
Maximum Dryer Fuel Input Rate =	97.0	MMBtu/hr								
Natural Gas Usage =	850	MMCF/yr								
No. 2 Fuel Oil Usage =	6,069,429	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Usage =	0	gal/yr, and	0	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and	0	% sulfur						
Propane Usage =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Butane Usage =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Used/Waste Oil Usage =	6,069,429	gal/yr, and	0.75	% sulfur	1.02	% ash	0.200	% chlorine,	0.010	% lead
Diesel Fuel Usage - Generator < 600 HP =	24,165	gal/yr,and	0.50	% sulfur						
Diesel Fuel Usage - Generator > 600 HP =	299,820	gal/yr	0.50	% sulfur						
Unlimited PM Dryer/Mixer Emission Factor =	28.0	lb/ton of asphalt production								
Unlimited PM10 Dryer/Mixer Emission Factor =	6.5	lb/ton of asphalt production								
Unlimited PM2.5 Dryer/Mixer Emission Factor =	1.5	lb/ton of asphalt production								
Unlimited SO2 Dryer/Mixer Emission Factor =	0.058	lb/ton of asphalt production								
Unlimited NOx Dryer/Mixer Emission Factor =	0.055	lb/ton of asphalt production								
Unlimited VOC Dryer/Mixer Emission Factor =	0.032	lb/ton of asphalt production								
Unlimited CO Dryer/Mixer Emission Factor =	0.13	lb/ton of asphalt production								
Unlimited Blast Furnace Slag SO2 Dryer/Mixer Emission Factor =	0.74	lb/ton of slag processed								
Unlimited Steel Slag SO2 Dryer/Mixer Emission Factor =	0.0014	lb/ton of slag processed								

Unlimited/Uncontrolled Emissions

	Unlimited/Uncontrolled Potential to Emit (tons/year)										
	Criteria Pollutants							Greenhouse Gas Pollutants	Hazardous Air Pollutants		
Process Description	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**CO_2e**	**Total HAPs**	**Worst Case HAP**	
Ducted Emissions											
Dryer Fuel Combustion (worst case)	198.11	157.87	157.87	334.58	60.69	3.03	35.69	68,588.12	43.49	40.06	(hydrogen chloride)
Dryer/Mixer (Process)	39,244.80	9,110.40	2,102.40	81.29	77.09	44.85	182.21	46,606.00	14.94	4.34	(formaldehyde)
Dryer/Mixer Slag Processing (worst case)	0	0	0	435.62	0	0	0	0.00	0	0	
Hot Oil Heater Fuel Combustion (worst case)	0.16	0.26	0.26	5.64	1.59	0.06	0.93	1,796.02	0.026	0.020	(hexane)
Diesel-Fired Generator < 600 HP	0.52	0.52	0.52	0.48	7.33	0.59	1.58	272.91	6.41E-03	1.95E-03	(formaldehyde)
Diesel-Fired Generator > 600 HP	2.05	1.18	1.18	11.87	70.43	2.07	16.14	3,416.47	0.032	0.016	(benzene)
Worst Case Emissions*	**39,247.53**	**9,112.36**	**2,104.36**	**788.19**	**156.44**	**47.58**	**200.86**	**74,073.52**	**43.56**	**40.06**	(hydrogen chloride)
Fugitive Emissions											
Asphalt Load-Out and On-Site Yard	0.73	0.73	0.73	0	0	6.93	2.38	0	0.14	0.03	(formaldehyde)
Material Storage Piles	2.69	0.94	0.94	0	0	0	0	0	0	0	
Material Processing and Handling	9.06	4.28	0.65	0	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	37.28	13.05	13.05	0	0	0	0	0	0	0	
Unpaved and Paved Roads (worst case)	99.54	25.37	2.54	0	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	0	33,687.46	0	0	8,786.93	3,031.87	(xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0	0	0	0	0	
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	0	negl	0	
Total Fugitive Emissions	**149.30**	**44.37**	**17.91**	**0**	**0**	**33,694.38**	**2.38**	**0**	**8,787.08**	**3,031.87**	(xylenes)
Totals Unlimited/Uncontrolled PTE	**39,396.83**	**9,156.73**	**2,122.27**	**788.19**	**156.44**	**33,741.96**	**203.25**	**74,073.52**	**8,830.64**	**3,031.87**	(xylenes)

negl = negligible
Worst Case Fuel Combustion is based on the fuel with the highest emissions for each specific pollutant.
*Worst Case Emissions (tons/yr) = Worst Case Emissions from Dryer Fuel Combustion and Dryer/Mixer + Worst Case Emissions From Dryer/Mixer Slag Processing + Worst Case Emissions from Hot Oil Heater Fuel Combustion + Diesel-Fired Generator < 600 HP + Diesel-Fired Generator > 600 HP
Fuel component percentages provided by the source.

Appendix A.1: Unlimited Emissions Calculations
Dryer/Mixer Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

The following calculations determine the unlimited/uncontrolled emissions created from the combustion of natural gas, fuel oil, propane, butane, or used/waste oil in the dryer/mixer at the source.

Maximum Capacity

Maximum Hourly Asphalt Production =	320	ton/hr								
Maximum Annual Asphalt Production =	2,803,200	ton/yr								
Maximum Fuel Input Rate =	97	MMBtu/hr								
Natural Gas Usage =	850	MMCF/yr								
No. 2 Fuel Oil Usage =	6,069,429	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Usage =	0	gal/yr, and	0	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and	0	% sulfur						
Propane Usage =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Butane Usage =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Used/Waste Oil Usage =	6,069,429	gal/yr, and	0.75	% sulfur	1.02	% ash	0.200	% chlorine,	0.010	% lead

Unlimited/Uncontrolled Emissions

	Emission Factor (units)							Unlimited/Uncontrolled Potential to Emit (tons/yr)							
Criteria Pollutant	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/ Waste Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/ Waste Oil (tons/yr)	**Worse Case Fuel (tons/yr)**
PM	1.9	2.0	7.0	3.22	0.5	0.6	65.3	0.81	6.07	0	0	0	0	198.11	**198.11**
PM10/PM2.5	7.6	3.3	8.3	4.72	0.5	0.6	52.02	3.23	10.01	0	0	0	0	157.87	**157.87**
SO2	0.6	71.0	0	0	0	0	110.3	0.25	215.46	0	0	0	0	334.58	**334.58**
NOx	100	20.0	20.0	55.0	13.0	15.0	19.0	42.49	60.69	0	0	0	0	57.66	**60.69**
VOC	5.5	0.20	0.20	0.28	1.00	1.10	1.0	2.34	0.61	0	0	0	0	3.03	**3.03**
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	35.69	15.17	0	0	0	0	15.17	**35.69**
Hazardous Air Pollutant															
HCl							13.2							40.06	**40.06**
Antimony			5.25E-03	5.25E-03			negl			0	0			negl	**0**
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03			1.1E-01	8.5E-05	1.70E-03	0	0			3.34E-01	**3.3E-01**
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05			negl	5.1E-06	1.27E-03	0	0			negl	**1.3E-03**
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04			9.3E-03	4.7E-04	1.27E-03	0	0			2.82E-02	**2.8E-02**
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02	5.9E-04	1.27E-03	0	0			6.07E-02	**6.1E-02**
Cobalt	8.4E-05		6.02E-03	6.02E-03			2.1E-04	3.6E-05		0	0			6.37E-04	**6.4E-04**
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03			0.55	2.1E-04	3.82E-03	0	0			1.7E+00	**1.67**
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03			6.8E-02	1.6E-04	2.55E-03	0	0			2.06E-01	**0.21**
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04				1.1E-04	1.27E-03	0	0				**1.3E-03**
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02	8.9E-04	1.27E-03	0	0			3.34E-02	**0.033**
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl	1.0E-05	6.37E-03	0	0			negl	**6.4E-03**
1.1.1-Trichloroethane			2.36E-04	2.36E-04						0	0				**0**
1,3-Butadiene															**0**
Acetaldehyde															**0**
Acrolein															**0**
Benzene	2.1E-03		2.14E-04	2.14E-04				8.9E-04		0	0				**8.9E-04**
Bis(2-ethylhexyl)phthalate							2.2E-03							6.68E-03	**6.7E-03**
Dichlorobenzene	1.2E-03						8.0E-07	5.1E-04						2.43E-06	**5.1E-04**
Ethylbenzene			6.36E-05	6.36E-05						0	0				**0**
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				3.2E-02	1.85E-01	0	0				**0.185**
Hexane	1.8E+00							0.76							**0.765**
Phenol							2.4E-03							7.28E-03	**7.3E-03**
Toluene	3.4E-03		6.20E-03	6.20E-03				1.4E-03		0	0				**1.4E-03**
Total PAH Haps	negl		1.13E-03	1.13E-03			3.9E-02	negl		0	0			1.19E-01	**1.2E-01**
Polycyclic Organic Matter		3.30E-03							1.00E-02						**1.0E-02**
Xylene			1.09E-04	1.09E-04						0	0				**0**
							Total HAPs	**0.80**	**0.22**	**0**	**0**	**0**	**0**	**42.52**	**43.49**

Methodology

Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Propane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0905 MMBtu]
Butane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0974 MMBtu]
Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
Sources of AP-42 Emission Factors for fuel combustion:
Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
No. 2, No.4, and No.6 Fuel Oil: AP-42 Chapter 1.3 (dated 5/10), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11
Propane and Butane: AP-42 Chapter 1.5 (dated 7/08), Tables 1.5-1 (assuming PM = PM10)
Waste Oil: AP-42 Chapter 1.11 (dated 10/96), Tables 1.11-1, 1.11-2, 1.11-3, 1.11-4, and 1.11-5
*Since there are no specific AP-42 HAP emission factors for combustion of No. 4 fuel oil, it was assumed that HAP emissions from combustion of No. 4 fuel oil were equal to combustion of residual or No. 6 fuel oil.

Abbreviations

PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (< 2.5 um)
SO2 = Sulfur Dioxide
NOx = Nitrous Oxides
VOC - Volatile Organic Compounds
CO = Carbon Monoxide
HAP = Hazardous Air Pollutant
HCl = Hydrogen Chloride
PAH = Polyaromatic Hydrocarbon

Appendix A.1: Unlimited Emissions Calculations
Greenhouse Gas (CO2e) Emissions from the
Dryer/Mixer Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

The following calculations determine the unlimited/uncontrolled emissions created from the combustion of natural gas, fuel oil, propane, butane, or used/waste oil in the dryer/mixer at the source.

Maximum Capacity

Maximum Hourly Asphalt Production =	320	ton/hr								
Maximum Annual Asphalt Production =	2,803,200	ton/yr								
Maximum Fuel Input Rate =	97	MMBtu/hr								
Natural Gas Usage =	850	MMCF/yr								
No. 2 Fuel Oil Usage =	6,069,429	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Usage =	0	gal/yr, and	0	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and	0	% sulfur						
Propane Usage =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Butane Usage =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Used/Waste Oil Usage =	6,069,429	gal/yr, and	0.75	% sulfur	1.02	% ash	0.200	% chlorine,	0.010	% lead

Unlimited/Uncontrolled Emissions

	Emission Factor (units)						
CO2e Fraction	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/Waste Oil (lb/kgal)
CO2	120,161.84	22,501.41	24,153.46	24,835.04	12,500.00	14,506.73	22,024.15
CH4	2.49	0.91	0.97	1.00	0.60	0.67	0.89
N2O	2.2	0.26	0.19	0.53	0.9	0.9	0.18

Global Warming Potentials (GWP)		
Name	Chemical Formula	Global warming potential
Carbon dioxide	CO_2	1
Methane	CH_4	21
Nitrous oxide	N_2O	310

	Unlimited/Uncontrolled Potential to Emit (tons/yr)						
CO2e Fraction	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/ Waste Oil (tons/yr)
CO2	51,051.96	68,285.35	0	0	0	0	66,837.01
CH4	1.06	2.77	0	0	0	0	2.71
N2O	0.93	0.79	0	0	0	0	0.55
Total	51,053.95	68,288.91	0	0	0	0	66,840.27
CO2e Equivalent Emissions (tons/yr)	51,363.96	68,588.12	0	0	0	0	67,063.25

CO2e for Worst Case Fuel* (tons/yr)
68,588.12

Methodology
Fuel Usage from TSD Appendix A.1, page 1 of 14.
Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
Fuel Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Propane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0915 MMBtu]
Butane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.102 MMBtu]
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)
Natural Gas: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2
No. 2, No. 4, and Residual (No. 5 or No. 6) Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 5/10), Table 1.3-8
Propane: Emission Factor for CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, has been converted from kg/mmBtu to lb/kgal. Emission Factors for CO2 and N2O from AP-42 Chapter 1.5 (dated 7/08), Table 1.5-1
Butane: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.5 (dated 7/08), Table 1.5-1
Waste Oil: Emission Factors for CO2, CH4, and N2O from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal.
Emission Factor (EF) Conversions
Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Natural Gas (MMBtu/scf) * Conversion Factor (1,000,000 scf/MMCF)]
Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of the Fuel Oil (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]

Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case fuel (ton/yr) x N2O GWP (310).

Abbreviations
PTE = Potential to Emit
CO2 = Carbon Dioxide
CH4 = Methane
N2O = Nitrogen Dioxide

Appendix A.1: Unlimited Emissions Calculations
Dryer/Mixer Process Emissions

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

The following calculations determine the unlimited/uncontrolled emissions from the aggregate drying/mixing

Maximum Hourly Asphalt Production =	320	ton/hr
Maximum Annual Asphalt Production =	2,803,200	ton/yr

	Uncontrolled Emission Factors (lb/ton)			Unlimited/Uncontrolled Potential to Emit (tons/yr)			
	Drum-Mix Plant (dryer/mixer)			Drum-Mix Plant (dryer/mixer)			
Criteria Pollutant	Natural Gas	No. 2 Fuel Oil	Waste Oil	Natural Gas	No. 2 Fuel Oil	Waste Oil	**Worse Case PTE**
PM*	28	28	28	39,244.80	39,244.80	39,244.80	**39,244.80**
PM10*	6.5	6.5	6.5	9,110.40	9,110.40	9,110.40	**9,110.40**
PM2.5*	1.5	1.5	1.5	2,102.40	2,102.40	2,102.40	**2,102.40**
SO2**	0.0034	0.011	0.058	4.8	15.4	81.3	**81.3**
NOx**	0.026	0.055	0.055	36.4	77.1	77.1	**77.1**
VOC**	0.032	0.032	0.032	44.9	44.9	44.9	**44.9**
CO***	0.13	0.13	0.13	182.2	182.2	182.2	**182.2**
Hazardous Air Pollutant							
HCl			2.10E-04			2.94E-01	**0.29**
Antimony	1.80E-07	1.80E-07	1.80E-07	2.52E-04	2.52E-04	2.52E-04	**2.52E-04**
Arsenic	5.60E-07	5.60E-07	5.60E-07	7.85E-04	7.85E-04	7.85E-04	**7.85E-04**
Beryllium	negl	negl	negl	negl	negl	negl	**0**
Cadmium	4.10E-07	4.10E-07	4.10E-07	5.75E-04	5.75E-04	5.75E-04	**5.75E-04**
Chromium	5.50E-06	5.50E-06	5.50E-06	7.71E-03	7.71E-03	7.71E-03	**7.71E-03**
Cobalt	2.60E-08	2.60E-08	2.60E-08	3.64E-05	3.64E-05	3.64E-05	**3.64E-05**
Lead	6.20E-07	1.50E-05	1.50E-05	8.69E-04	2.10E-02	2.10E-02	**2.10E-02**
Manganese	7.70E-06	7.70E-06	7.70E-06	1.08E-02	1.08E-02	1.08E-02	**1.08E-02**
Mercury	2.40E-07	2.60E-06	2.60E-06	3.36E-04	3.64E-03	3.64E-03	**3.64E-03**
Nickel	6.30E-05	6.30E-05	6.30E-05	0.09	0.09	0.09	**0.09**
Selenium	3.50E-07	3.50E-07	3.50E-07	4.91E-04	4.91E-04	4.91E-04	**4.91E-04**
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	0.06	0.06	0.06	**0.06**
Acetaldehyde			1.30E-03			1.82	**1.82**
Acrolein			2.60E-05			3.64E-02	**3.64E-02**
Benzene	3.90E-04	3.90E-04	3.90E-04	0.55	0.55	0.55	**0.55**
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0.34	0.34	0.34	**0.34**
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	4.34	4.34	4.34	**4.34**
Hexane	9.20E-04	9.20E-04	9.20E-04	1.29	1.29	1.29	**1.29**
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0.07	0.07	0.07	**0.07**
MEK			2.00E-05			0.03	**0.03**
Propionaldehyde			1.30E-04			0.18	**0.18**
Quinone			1.60E-04			0.22	**0.22**
Toluene	1.50E-04	2.90E-03	2.90E-03	0.21	4.06	4.06	**4.06**
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0.27	1.23	1.23	**1.23**
Xylene	2.00E-04	2.00E-04	2.00E-04	0.28	0.28	0.28	**0.28**
						Total HAPs	**14.94**
						Worst Single HAP	**4.34** **(formaldehyde)**

Methodology
Unlimited/Uncontrolled Potential to Emit (tons/yr) = (Maximum Annual Asphalt Production (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-3, 11.1-4, 11.1-7, 11.1-8, 11.1-10, and 11.1-12
Natural gas, No. 2 fuel oil, and waste oil represent the worst possible emissions scenario. AP-42 did not provide emission factors for any other fuels.

* PM, PM10, and PM2.5 AP-42 emission factors based on drum mix dryer fired with natural gas, propane, fuel oil, and waste oil. According to AP-42 fuel type does not significantly effect PM, PM10, and PM2.5 emissions.

** SO2, NOx, and VOC AP-42 emission factors are for natural gas, No. 2 fuel oil, and waste oil only.

*** CO AP-42 emission factor determined by combining data from drum mix dryer fired with natural gas, No. 6 fuel oil, and No. 2 fuel oil to develop single CO emission factor.

Abbreviations
VOC - Volatile Organic Compounds
HAP = Hazardous Air Pollutant
HCl = Hydrogen Chloride
PAH = Polyaromatic Hydrocarbon
SO2 = Sulfur Dioxide

Appendix A.1: Unlimited Emissions Calculations
Greenhouse Gas (CO2e) Emissions from the
Drum-Mix Plant (Dryer/Mixer) Process Emissions

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

The following calculations determine the unlimited/uncontrolled emissions from the aggregate drying/mixing

Maximum Hourly Asphalt Production =	320	ton/hr
Maximum Annual Asphalt Production =	2,803,200	ton/yr

	Emission Factor (lb/ton) Drum-Mix Plant (dryer/mixer)				Unlimited/Uncontrolled Potential to Emit (tons/yr) Drum-Mix Plant (dryer/mixer)			
Criteria Pollutant	Natural Gas	No. 2 Fuel Oil	Waste Oil	Global Warming Potentials (GWP)	Natural Gas	No. 2 Fuel Oil	Waste Oil	**CO2e for Worst Case Fuel (tons/yr)**
CO2	33	33	33	1	46,252.80	46,252.80	46,252.80	**46,606.00**
CH4	0.0120	0.0120	0.0120	21	16.82	16.82	16.82	
N2O				310	0	0	0	
				Total	46,269.62	46,269.62	46,269.62	
				CO2e Equivalent Emissions (tons/yr)	46,606.00	46,606.00	46,606.00	

Methodology

Natural gas, No. 2 fuel oil, and waste oil represent the worst possible emissions scenario. AP-42 did not provide emission factors for any other fuels.
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-7 and 11.1-8

There are no emission factors for N20 available in either the 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no N2O emission anticipated from this process.

Unlimited/Uncontrolled Potential to Emit (tons/yr) = (Maximum Annual Asphalt Production (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (310).

Abbreviations
CO2 = Carbon Dioxide CH4 = Methane N2O = Nitrogen Dioxide PTE = Potential to Emit

Appendix A.1: Unlimited Emissions Calculations
Dryer/Mixer Slag Processing

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

The following calculations determine the unlimited emissions from the processing of slag in the aggregate drying/mixing

Maximum Annual Blast Furnace Slag Usage* =	1,177,344	ton/yr	1.50	% sulfur
Maximum Annual Steel Slag Usage* =	1,177,344	ton/yr	0.66	% sulfur

Type of Slag	SO2 Emission Factor (lb/ton)**	Unlimited Potential to Emit SO2 (tons/yr)
Blast Furnace Slag	0.74	435.62
Steel Slag	0.0014	0.82

Methodology
* The maximum annual slag usage was provided by the source.

** Testing results for blast furnace slag, obtained January 9, 2009 from similar operations at Rieth-Riley Construction Co., Inc. facility located in Valparaiso, IN (permit #127-27075-05241), produced an Emission Factor of 0.54 lb/ton from blast furnace slag containing 1.10% sulfur content. The source has requested a safety factor of 0.20 lb/ton be added to the tested value for use at this location to allow for a sulfur content up to 1.5%.

** Testing results for steel slag, obtained June 2009 from E & B Paving, Inc. facility located in Huntington, IN. The testing results showed a steel slag emission factor of 0.0007 lb/ton from slag containing 0.33% sulfur content.

Unlimited Potential to Emit SO2 from Slag (tons/yr) = [(Maximum Annual Slag Usage (ton/yr)] * [Emission Factor (lb/ton)] * [ton/2000 lbs]

Abbreviations
SO2 = Sulfur Dioxide

Appendix A.1: Unlimited Emissions Calculations
Hot Oil Heater
Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

Maximum Hot Oil Heater Fuel Input Rate =	2.54	MMBtu/hr		
Natural Gas Usage =	22	MMCF/yr		
No. 2 Fuel Oil Usage =	158,931	gal/yr, and	0.50	% sulfur

Unlimited/Uncontrolled Emissions

	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
	Hot Oil Heater		Hot Oil Heater		
Criteria Pollutant	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	**Worse Case Fuel (tons/yr)**
PM	1.9	2.0	0.021	0.159	**0.16**
PM10/PM2.5	7.6	3.3	0.085	0.262	**0.26**
SO2	0.6	71.0	0.007	5.642	**5.64**
NOx	100	20.0	1.113	1.589	**1.59**
VOC	5.5	0.20	0.061	0.016	**0.06**
CO	84	5.0	0.935	0.397	**0.93**
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	2.2E-06	4.45E-05	**4.5E-05**
Beryllium	1.2E-05	4.2E-04	1.3E-07	3.34E-05	**3.3E-05**
Cadmium	1.1E-03	4.2E-04	1.2E-05	3.34E-05	**3.3E-05**
Chromium	1.4E-03	4.2E-04	1.6E-05	3.34E-05	**3.3E-05**
Cobalt	8.4E-05		9.3E-07		**9.3E-07**
Lead	5.0E-04	1.3E-03	5.6E-06	1.00E-04	**1.0E-04**
Manganese	3.8E-04	8.4E-04	4.2E-06	6.68E-05	**6.7E-05**
Mercury	2.6E-04	4.2E-04	2.9E-06	3.34E-05	**3.3E-05**
Nickel	2.1E-03	4.2E-04	2.3E-05	3.34E-05	**3.3E-05**
Selenium	2.4E-05	2.1E-03	2.7E-07	1.67E-04	**1.7E-04**
Benzene	2.1E-03		2.3E-05		**2.3E-05**
Dichlorobenzene	1.2E-03		1.3E-05		**1.3E-05**
Ethylbenzene					**0.0E+00**
Formaldehyde	7.5E-02	6.10E-02	8.3E-04	4.85E-03	**4.8E-03**
Hexane	1.8E+00		0.02		**2.0E-02**
Phenol					**0.0E+00**
Toluene	3.4E-03		3.8E-05		**3.8E-05**
Total PAH Haps	negl		negl		**0**
Polycyclic Organic Matter		3.30E-03		2.62E-04	**2.6E-04**
		Total HAPs =	**2.1E-02**	**5.7E-03**	**0.026**

Methodology
Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
Sources of AP-42 Emission Factors for fuel combustion:
Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
No. 2 Fuel Oil: AP-42 Chapter 1.3 (dated 5/10), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
SO2 = Sulfur Dioxide
NOx = Nitrous Oxides
VOC - Volatile Organic Compounds
CO = Carbon Monoxide
HAP = Hazardous Air Pollutant
HCl = Hydrogen Chloride
PAH = Polyaromatic Hydrocarbon

Appendix A.1: Unlimited Emissions Calculations
Greenhouse Gas (CO2e) Emissions from
Hot Oil Heater Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

Maximum Hot Oil Heater Fuel Input Rate =	2.54	MMBtu/hr		
Natural Gas Usage =	22	MMCF/yr		
No. 2 Fuel Oil Usage =	158,931	gal/yr,	0.50	% sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units)		Global Warming Potentials (GWP)	Unlimited/Uncontrolled Potential to Emit (tons/yr)	
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)		Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)
CO2	120,161.84	22,501.41	1	1,336.82	1,788.09
CH4	2.49	0.91	21	0.03	0.07
N2O	2.2	0.26	310	0.02	0.02
				1,336.88	1,788.18
CO2e Equivalent Emissions (tons/yr)				1,344.99	1,796.02

Worse Case CO2e Emissions (tons/yr)
1,796.02

Methodology

Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]

Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]

Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)

Natural Gas: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2

No. 2 Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 5/10), Table 1.3-8

Emission Factor (EF) Conversions

Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Natural Gas (MMBtu/scf) * Conversion Factor (1,000,000 scf/MMCF)]

Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of the Fuel Oil (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]

Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]

All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]

Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (310).

Abbreviations

CO2 = Carbon Dioxide
CH4 = Methane
N2O = Nitrogen Dioxide
PTE = Potential to Emit

Appendix A.1: Unlimited Emissions Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

Output Horsepower Rating (hp)	54.0
Maximum Hours Operated per Year	8,760
Potential Throughput (hp-hr/yr)	473,040
Maximum Diesel Fuel Usage (gal/yr)	24,165

Sulfur Content (S) of Fuel (% by weight) 0.50

	Pollutant						
	PM[2]	PM10[2]	direct PM2.5[2]	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Emission Factor in lb/kgal[1]	43.07	43.07	43.07	40.13	606.85	49.22	130.77
Potential Emission in tons/yr	0.52	0.52	0.52	0.48	7.33	0.59	1.58

[1] The AP-42 Chapter 3.3-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[1]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[2]PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs[3]
Emission Factor in lb/MMBtu	9.33E-04	4.09E-04	2.85E-04	3.91E-05	1.18E-03	7.67E-04	9.25E-05	1.68E-04
Emission Factor in lb/kgal[4]	1.28E-01	5.60E-02	3.91E-02	5.36E-03	1.62E-01	1.05E-01	1.27E-02	2.30E-02
Potential Emission in tons/yr	1.54E-03	6.77E-04	4.72E-04	6.47E-05	1.95E-03	1.27E-03	1.53E-04	2.78E-04

[3]PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

[4]The AP-42 Chapter 3.3-1 emission factors in lb/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[4]Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Potential Emission of Total HAPs (tons/yr)	**6.41E-03**
Potential Emission of Worst Case HAPs (tons/yr)	**1.95E-03**

Green House Gas Emissions (GHG)

	Pollutant		
	CO2[5]	CH4[6]	N2O[6]
Emission Factor in lb/hp-hr	1.15	NA	NA
Emission Factor in kg/MMBtu	NA	0.003	0.0006
Emission Factor in lb/kgal	22,512.07	0.91	0.18
Potential Emission in tons/yr	272.00	0.011	0.002

[5]The AP-42 Chapter 3.3-1 emission factor in lb/hp-hr was converted to lb/kgal emission factor using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[5]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[6]The 40 CFR 98 Subpart C emission factors in kg/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[6]Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) * 2.20462 (lb/kg) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Summed Potential Emissions in tons/yr	**272.01**
CO2e Total in tons/yr	**272.91**

Methodology

Output Horsepower Rating (hp) = [Output power rating (ekW) * (1.341 hp /1 ekW)]

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Maximum Diesel Fuel Usage (gal/yr) = Potential Throughput (hp-hr/yr) * 7000 (Btu/hp-hr) * 1/19300 (lb/Btu) * 1/7.1 (gal/lb)

Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2 and have been converted to lb/kgal

CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2 and have been converted to lb/kgal

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Potential Emissions (tons/yr) = [Maximum Diesel Fuel Usage (gal/yr) x Emission Factor (lb/kgal)] / (1,000 ga/kgal) / (2,000 lb/ton)

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A.1: Unlimited Emissions Calculations
Large Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (>600 HP)

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

Output Horsepower Rating (hp)	670.0
Maximum Hours Operated per Year	8,760
Potential Throughput (hp-hr/yr)	5,869,200
Maximum Diesel Fuel Usage (gal/yr)	299,820

Sulfur Content (S) of Fuel (% by weight) 0.50

	Pollutant						
	PM	PM10[2]	direct PM2.5[2]	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	7.00E-04			4.05E-03 *(.00809S)*	2.40E-02	7.05E-04	5.50E-03
Emission Factor in lb/MMBtu		0.0573	0.0573				
Emission Factor in lb/kgal[1]	13.70	7.85	7.85	79.18	469.82	13.80	107.67
Potential Emission in tons/yr	2.05	1.18	1.18	11.87	70.43	2.07	16.14

[1] The AP-42 Chapter 3.4-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[1]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[2]Emission factors in lb/kgal were converted from the AP-42 Chapter 3.4-1 emission factors in lb/MMBtu using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[2]Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs[3]
Emission Factor in lb/MMBtu	7.76E-04	2.81E-04	1.93E-04	7.89E-05	2.52E-05	7.88E-06	2.12E-04
Emission Factor in lb/kgal[4]	1.06E-01	3.85E-02	2.64E-02	1.08E-02	3.45E-03	1.08E-03	2.91E-02
Potential Emission in tons/yr	1.59E-02	5.77E-03	3.96E-03	1.62E-03	5.18E-04	1.62E-04	4.35E-03

[3]PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

[4]Emission factors in lb/kgal were converted from the AP-42 Chapter 3.4-1 emission factors in lb/MMBtu using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[4]Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Potential Emission of Total HAPs (tons/yr)	**3.23E-02**
Potential Emission of Worst Case HAPs (tons/yr)	**1.59E-02**

Green House Gas Emissions (GHG)

	Pollutant		
	CO2[5]	CH4[5,6]	N2O[7]
Emission Factor in lb/hp-hr	1.16	6.35E-05	NA
Emission Factor in kg/MMBtu	NA	NA	0.0006
Emission Factor in lb/kgal	22,707.83	1.24	0.18
Potential Emission in tons/yr	3,404.14	0.19	0.03

[5] The AP-42 Chapter 3.4-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[5]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[6]According to AP-42, Table 3.4-1, TOC (as CH4) is 9% methane by weight. As a result, the lb/hp-hr emission factor for TOC (as CH4) in AP-42 has been multiplied by 9% to determine the portion that is emitted as methane.

[7]The 40 CFR 98 Subpart C emission factors in kg/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[7]Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) * 2.20462 (lb/kg) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Summed Potential Emissions in tons/yr	**3,404.35**
CO2e Total in tons/yr	**3,416.47**

Methodology

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Maximum Diesel Fuel Usage (gal/yr) = Potential Throughput (hp-hr/yr) * 7000 (Btu/hp-hr) * 1/19300 (lb/Btu) * 1/7.1 (gal/lb)

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4 and have been converted to lb/kgal.

N2O Emission Factor from 40 CFR 98 Subpart C Table C-2 and have been converted to lb/kgal.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Potential Emissions (tons/yr) = [Maximum Diesel Fuel Usage (gal/yr) x Emission Factor (lb/kgal)] / (1,000 ga/kgal) / (2,000 lb/ton)
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A.1: Unlimited Emissions Calculations
Asphalt Load-Out and Yard Emissions

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

The following calculations determine the unlimited/uncontrolled fugitive emissions from hot asphalt mix load-out and on-site yard for a drum mix hot mix asphalt plant

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.50	
Maximum Annual Asphalt Production =	2,803,200	tons/yr

	Emission Factor (lb/ton asphalt)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
Pollutant	**Load-Out**	**On-Site Yard**	**Load-Out**	**On-Site Yard**	**Total**
Total PM*	5.2E-04	NA	0.73	NA	**0.73**
Organic PM	3.4E-04	NA	0.48	NA	**0.48**
TOC	0.004	0.001	5.83	1.542	**7.4**
CO	0.001	3.5E-04	1.89	0.493	**2.38**

NA = Not Applicable (no AP-42 Emission Factor)

PM/HAPs	**0.034**	**0**	**0.034**
VOC/HAPs	**0.086**	**0.023**	**0.109**
non-VOC/HAPs	**4.5E-04**	**1.2E-04**	**5.7E-04**
non-VOC/non-HAPs	**0.42**	**0.11**	**0.53**

Total VOCs	**5.48**	**1.4**	**6.9**
Total HAPs	**0.12**	**0.023**	**0.14**
		Worst Single HAP	**0.030 (formaldehyde)**

Methodology
The asphalt temperature and volatility factor were provided by the source.
Unlimited/Uncontrolled Potential to Emit (tons/yr) = (Maximum Annual Asphalt Production (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-14, 11.1-15, and 11.1-16
Plant Load-Out Emission Factor Equations (AP-42 Table 11.1-14)::
Total PM/PM10/PM2.5 Ef = 0.000181 + 0.00141(-V)e^((0.0251)(T+460)-20.43)
Organic PM Ef = 0.00141(-V)e^((0.0251)(T+460)-20.43)
TOC Ef = 0.0172(-V)e^((0.0251)(T+460)-20.43)
CO Ef = 0.00558(-V)e^((0.0251)(T+460)-20.43)
On Site Yard CO emissions estimated by multiplying the TOC emissions by 0.32
*No emission factors available for PM10 or PM2.5, therefore IDEM assumes PM10 and PM2.5 are equivalent to Total PM.

Abbreviations
TOC = Total Organic Compounds
CO = Carbon Monoxide
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound

Appendix A.1: Unlimited Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

Organic Particulate-Based Compounds (Table 11.1-15)

					Speciation Profile	Unlimited/Uncontrolled Potential to Emit (tons/yr)		
Pollutant	**CASRN**	**Category**	**HAP Type**	**Source**	**Load-out and Onsite Yard (% by weight of Total Organic PM)**	**Load-out**	**Onsite Yard**	**Total**
PAH HAPs								
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	1.2E-03	NA	1.2E-03
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	1.3E-04	NA	1.3E-04
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	3.3E-04	NA	3.3E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	9.1E-05	NA	9.1E-05
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	3.6E-05	NA	3.6E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	1.1E-05	NA	1.1E-05
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	9.1E-06	NA	9.1E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	1.1E-05	NA	1.1E-05
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	3.7E-05	NA	3.7E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	4.9E-04	NA	4.9E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	1.8E-06	NA	1.8E-06
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	2.4E-04	NA	2.4E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	3.7E-03	NA	3.7E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	2.2E-06	NA	2.2E-06
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	1.1E-02	NA	0.011
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	6.0E-03	NA	6.0E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	1.1E-04	NA	1.1E-04
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	3.9E-03	NA	3.9E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	7.2E-04	NA	7.2E-04
Total PAH HAPs						**0.028**	**NA**	**0.028**
Other semi-volatile HAPs								
Phenol		PM/HAP	---	Organic PM	1.18%	5.6E-03	0	5.6E-03

NA = Not Applicable (no AP-42 Emission Factor)

Methodology

Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Speciation Profile (%)] * [Organic PM (tons/yr)]

Speciation Profiles from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-15 and 11.1-16

Abbreviations

PM = Particulate Matter
HAP = Hazardous Air Pollutant
POM = Polycyclic Organic Matter

Appendix A.1: Unlimited Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)

Organic Volatile-Based Compounds (Table 11.1-16)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile	Unlimited/Uncontrolled Potential to Emit (tons/yr)		
					Load-out and Onsite Yard (% by weight of TOC)	Load-out	Onsite Yard	Total
VOC		VOC	---	TOC	94%	**5.48**	**1.45**	**6.93**
non-VOC/non-HAPS								
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	3.8E-01	1.0E-01	0.479
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	2.7E-03	7.1E-04	0.003
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	4.1E-02	1.1E-02	0.052
Total non-VOC/non-HAPS					7.30%	**0.426**	**0.113**	**0.54**
Volatile organic HAPs								
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	3.0E-03	8.0E-04	3.8E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	5.6E-04	1.5E-04	7.1E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	2.9E-03	7.6E-04	3.6E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	7.6E-04	2.0E-04	9.6E-04
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	1.2E-05	3.2E-06	1.5E-05
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	8.7E-04	2.3E-04	1.1E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	6.4E-03	1.7E-03	8.1E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	1.6E-02	4.3E-03	0.021
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	5.1E-03	1.4E-03	0.006
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	8.7E-03	2.3E-03	0.011
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	1.0E-04	2.8E-05	1.3E-04
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0	0	0.0E+00
MTBE	1634-04-4	VOC/HAP	---	TOC	0	0	0	0
Styrene	100-42-5	VOC/HAP	---	TOC	0.0073%	4.3E-04	1.1E-04	5.4E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	4.5E-04	1.2E-04	5.7E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	1.2E-02	3.2E-03	0.015
1,1,1-Trichloroethane	71-55-6	VOC/HAP	---	TOC	0	0	0	0
Trichloroethene	79-01-6	VOC/HAP	---	TOC	0	0	0	0
Trichlorofluoromethane	75-69-4	VOC/HAP	---	TOC	0.0013%	7.6E-05	2.0E-05	9.6E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	2.4E-02	6.3E-03	0.030
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	4.7E-03	1.2E-03	5.9E-03
Total volatile organic HAPs					1.50%	**0.087**	**0.023**	**0.111**

Methodology
Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Speciation Profile (%)] * [TOC (tons/yr)]
Speciation Profiles from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-15 and 11.1-16

Abbreviations
TOC = Total Organic Compounds
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound
MTBE = Methyl tert butyl ether

Appendix A.1: Unlimited Emissions Calculations
Material Storage Piles

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8,760 hours of use and USEPA's AP-42 (Pre 1983 Edition), Section 11.2.3.

Ef = 1.7*(s/1.5)*(365-p)/235*(f/15)
where Ef = emission factor (lb/acre/day)
s = silt content (wt %)
p = 125 days of rain greater than or equal to 0.01 inches
f = 15 % of wind greater than or equal to 12 mph

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10/PM2.5 (tons/yr)
Sand	2.6	3.01	1.51	0.829	0.290
Limestone	1.6	1.85	2.49	0.842	0.295
RAP	0.5	0.58	1.98	0.209	0.073
Gravel	1.6	1.85	0	0.000	0.000
Slag	3.8	4.40	0.57	0.458	0.160
Shingles	3.8	4.40	0.44	0.353	0.124
			Totals	**2.69**	**0.94**

Methodology
PTE of PM (tons/yr) = (Emission Factor (lb/acre/day)) * (Maximum Pile Size (acres)) * (ton/2000 lbs) * (8760 hours/yr)
PTE of PM10/PM2.5 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%
*Silt content values obtained from AP-42 Table 13.2.4-1 (dated 1/95)
**Maximum anticipated pile size (acres) provided by the source.
PM2.5 = PM10

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PTE = Potential to Emit
RAP - recycled asphalt pavement

Appendix A.1: Unlimited Emissions Calculations
Material Processing, Handling, Crushing, Screening, and Conveying

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

Batch or Continuous Drop Operations (AP-42 Section 13.2.4)

To estimate potential fugitive dust emissions from processing and handling of raw materials (batch or continuous drop operations), AP-42 emission factors for Aggregate Handling, Section 13.2.4 (fifth edition, 1/95) are utilized.

Ef = k*(0.0032)*[(U/5)^1.3 / (M/2)^1.4]

where: Ef =	Emission factor	(lb/ton)
k (PM) =	0.74	= particle size multiplier (0.74 assumed for aerodynamic diameter <=100 um)
k (PM10) =	0.35	= particle size multiplier (0.35 assumed for aerodynamic diameter <=10 um)
k (PM2.5) =	0.053	= particle size multiplier (0.053 assumed for aerodynamic diameter <=2.5 um)
U =	10.2	= worst case annual mean wind speed (Source: NOAA, 2006*)
M =	4.0	= material % moisture content of aggregate (Source: AP-42 Section 11.1.1.1)
Ef (PM) =	2.27E-03	lb PM/ton of material handled
Ef (PM10) =	1.07E-03	lb PM10/ton of material handled
Ef (PM2.5) =	1.62E-04	lb PM2.5/ton of material handled

Maximum Annual Asphalt Production =	2,803,200	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	2,663,040	tons/yr

Type of Activity	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM10 (tons/yr)	Unlimited/Uncontrolled PTE of PM2.5 (tons/yr)
Truck unloading of materials into storage piles	3.02	1.43	0.22
Front-end loader dumping of materials into feeder bins	3.02	1.43	0.22
Conveyor dropping material into dryer/mixer or batch tower	3.02	1.43	0.22
Total (tons/yr)	**9.06**	**4.28**	**0.65**

Methodology

The percent asphalt cement/binder provided by the source.
Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
Unlimited Potential to Emit (tons/yr) = (Maximum Material Handling Throughput (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Raw materials may include limestone, sand, recycled asphalt pavement (RAP), gravel, slag, and other additivies
*Worst case annual mean wind speed (Indianapolis, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2006

Material Screening and Conveying (AP-42 Section 11.19.2)

To estimate potential fugitive dust emissions from raw material crushing, screening, and conveying, AP-42 emission factors for Crushed Stone Processing Operations, Section 11.19.2 (dated 8/04) are utilized.

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM10 (lbs/ton)*	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM10/PM2.5 (tons/yr)**
Crushing	0.0054	0.0024	0	0
Screening	0.025	0.0087	33.29	11.58
Conveying	0.003	0.0011	3.99	1.46
Unlimited Potential to Emit (tons/yr) =			**37.28**	**13.05**

Methodology

Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
Unlimited Potential to Emit (tons/yr) = [Maximum Material Handling Throughput (tons/yr)] * [Emission Factor (lb/ton)] * [ton/2000 lbs]
Raw materials may include stone/gravel, slag, and recycled asphalt pavement (RAP)
Emission Factors from AP-42 Chapter 11.19.2 (dated 8/04), Table 11.19.2-2
*Uncontrolled emissions factors for PM/PM10 represent tertiary crushing of stone with moisture content ranging from 0.21 to 1.3 percent by weight (Table 11.19.2-2). The bulk moisture content of aggregate in the storage piles at a hot mix asphalt production plant typically stabilizes between 3 to 5 percent by weight (Source: AP-42 Section 11.1.1.1).
**Assumes PM10 = PM2.5

Abbreviations

PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate matter (< 2.5 um)
PTE = Potential to Emit

Appendix A.1: Unlimited Emissions Calculations
Unpaved Roads

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

Unpaved Roads at Industrial Site

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (12/2003).

Maximum Annual Asphalt Production =	2,803,200	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	2,663,040	tons/yr
Maximum Asphalt Cement/Binder Throughput =	140,160	tons/yr
Maximum No. 2 Fuel Oil Usage =	6,069,429	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.4	1.2E+05	4.7E+06	300	0.057	6754.9
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	1.2E+05	2.0E+06	300	0.057	6754.9
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	3.9E+03	1.9E+05	300	0.057	221.2
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	3.9E+03	4.7E+04	300	0.057	221.2
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	6.4E+02	2.8E+04	300	0.057	36.4
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	6.4E+02	7.7E+03	300	0.057	36.4
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	6.3E+05	1.2E+07	300	0.057	36026.0
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	6.3E+05	9.5E+06	300	0.057	36026.0
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.0	1.2E+05	4.8E+06	300	0.057	6636.4
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.0	1.2E+05	2.0E+06	300	0.057	6636.4
	Total				**1.7E+06**	**3.5E+07**			**9.9E+04**

Average Vehicle Weight Per Trip =	20.3	tons/trip
Average Miles Per Trip =	0.057	miles/trip

Unmitigated Emission Factor, Ef = k*[(s/12)^a]*[(W/3)^b] (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
W =	20.3	20.3	20.3	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [(365 - P)/365]
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	6.09	1.55	0.16	lb/mile
Mitigated Emission Factor, Eext =	4.01	1.02	0.10	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	20.59	5.25	0.52	13.54	3.45	0.34	6.77	1.72	0.17
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	20.59	5.25	0.52	13.54	3.45	0.34	6.77	1.72	0.17
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.674	0.172	0.02	0.443	0.113	0.01	0.222	0.056	0.01
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.674	0.172	0.02	0.443	0.113	0.01	0.222	0.056	0.01
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.111	0.028	0.00	0.073	0.019	0.00	0.036	0.009	0.00
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.111	0.028	0.00	0.073	0.019	0.00	0.036	0.009	0.00
Aggregate/RAP Loader Full	Front-end loader (3 CY)	109.79	27.98	2.80	72.19	18.40	1.84	36.09	9.20	0.92
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	109.79	27.98	2.80	72.19	18.40	1.84	36.09	9.20	0.92
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	20.22	5.15	0.52	13.30	3.39	0.34	6.65	1.69	0.17
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	20.22	5.15	0.52	13.30	3.39	0.34	6.65	1.69	0.17
	Totals	**302.76**	**77.16**	**7.72**	**199.08**	**50.74**	**5.07**	**99.54**	**25.37**	**2.54**

Methodology
Maximum Material Handling Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]
Maximum Weight of Vehicle and Load (tons/trip) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip)]
Maximum trips per year (trip/yr) = [Throughput (tons/yr)] / [Maximum Weight of Load (tons/trip)]
Total Weight driven per year (ton/yr) = [Maximum Weight of Vehicle and Load (tons/trip)] * [Maximum trips per year (trip/yr)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/yr) = [Maximum trips per year (trip/yr)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]
Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations
PM = Particulate Matter PM10 = Particulate Matter (<10 um) PM2.5 = Particulate Matter (<2.5 um) PM2.5 = PM10 PTE = Potential to Emit

Appendix A.1: Unlimited Emissions Calculations
Paved Roads

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

Paved Roads at Industrial Site

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (12/2003).

Maximum Annual Asphalt Production =	2,803,200	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	2,663,040	tons/yr
Maximum Asphalt Cement/Binder Throughput =	140,160	tons/yr
Maximum No. 2 Fuel Oil Usage =	6,069,429	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per day (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.40	1.2E+05	4.7E+06	0	0.000	0.0
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.00	1.2E+05	2.0E+06	0	0.000	0.0
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.00	3.9E+03	1.9E+05	0	0.000	0.0
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	3.9E+03	4.7E+04	0	0.000	0.0
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.00	6.4E+02	2.8E+04	0	0.000	0.0
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	6.4E+02	7.7E+03	0	0.000	0.0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.20	6.3E+05	1.2E+07	0	0.000	0.0
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	6.3E+05	9.5E+06	0	0.000	0.0
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.00	1.2E+05	4.8E+06	0	0.000	0.0
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.00	1.2E+05	2.0E+06	0	0.000	0.0
	Total				**1.7E+06**	**3.5E+07**			**0.0E+00**

Average Vehicle Weight Per Trip =	20.3	tons/trip
Average Miles Per Trip =	0.000	miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	20.3	20.3	20.3	tons = average vehicle weight (provided by source)
sL =	0.6	0.6	0.6	g/m^2 = Ubitiguous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)]
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]

where p =	125	days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N =	365	days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.15	0.03	0.01	lb/mile
Mitigated Emission Factor, Eext =	0.14	0.03	0.01	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.000	0.000	0.0E+00	0.000	0.000	0.0E+00	0.000	0.0E+00	0.0E+00
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.000	0.000	0.0E+00	0.000	0.000	0.0E+00	0.000	0.0E+00	0.0E+00
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Totals	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Methodology
Maximum Material Handling Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]
Maximum Weight of Vehicle and Load (tons/trip) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip)]
Maximum trips per year (trip/yr) = [Throughput (tons/yr)] / [Maximum Weight of Load (tons/trip)]
Total Weight driven per year (ton/yr) = [Maximum Weight of Vehicle and Load (tons/trip)] * [Maximum trips per year (trip/yr)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/yr) = [Maximum trips per year (trip/yr)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]
Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations
PM = Particulate Matter PM10 = Particulate Matter (<10 um) PM2.5 = Particulate Matter (<2.5 um) PM2.5 = PM10 PTE = Potential to Emit

Appendix A.1: Unlimited Emissions Calculations
Cold Mix Asphalt Production and Stockpiles

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

The following calculations determine the amount of VOC and HAP emissions created from volatilization of solvent used as diluent in the liquid binder for cold mix asphalt production

Maximum Annual Asphalt Production =	2,803,200	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Asphalt Cement/Binder Throughput =	140,160	tons/yr

Volatile Organic Compounds

	Maximum weight % of VOC solvent in binder*	Weight % VOC solvent in binder that evaporates	Maximum VOC Solvent Usage (tons/yr)	PTE of VOC (tons/yr)
Cut back asphalt rapid cure (assuming gasoline or naphtha solvent)	25.3%	95.0%	35,460.48	33,687.46
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	40,085.76	28,060.03
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	28,032.00	7,008.00
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	21,024.00	9,755.14
Other asphalt with solvent binder	25.9%	2.5%	36,301.44	907.54
			Worst Case PTE of VOC =	**33,687.46**

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%	
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0%	Xylenes
PTE of Total HAPs (tons/yr) =	**8,786.93**	
PTE of Single HAP (tons/yr) =	**3,031.87**	**Xylenes**

Hazardous Air Pollutant (HAP) Content (% by weight) For Various Petroleum Solvents*

		Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents				
Volatile Organic HAP	CAS#	Gasoline	Kerosene	Diesel (#2) Fuel Oil	No. 2 Fuel Oil	No. 6 Fuel Oil
1,3-Butadiene	106-99-0	3.70E-5%				
2,2,4-Trimethylpentane	540-84-1	2.40%				
Acenaphthene	83-32-9		4.70E-5%		1.80E-4%	
Acenaphthylene	208-96-8		4.50E-5%		6.00E-5%	
Anthracene	120-12-7		1.20E-6%	5.80E-5%	2.80E-5%	5.00E-5%
Benzene	71-43-2	1.90%		2.90E-4%		
Benzo(a)anthracene	56-55-3			9.60E-7%	4.50E-7%	5.50E-4%
Benzo(a)pyrene	50-32-8			2.20E-6%	2.10E-7%	4.40E-5%
Benzo(g,h,i)perylene	191-24-2			1.20E-7%	5.70E-8%	
Biphenyl	92-52-4			6.30E-4%	7.20E-5%	
Chrysene	218-01-9			4.50E-7%	1.40E-6%	6.90E-4%
Ethylbenzene	100-41-4	1.70%		0.07%	3.40E-4%	
Fluoranthene	206-44-0		7.10E-6%	5.90E-5%	1.40E-5%	2.40E-4%
Fluorene	86-73-7		4.20E-5%	8.60E-4%	1.90E-4%	
Indeno(1,2,3-cd)pyrene	193-39-5			1.60E-7%		1.00E-4%
Methyl-tert-butylether	1634-04-4	0.33%				
Naphthalene	91-20-3	0.25%	0.31%	0.26%	0.22%	4.20E-5%
n-Hexane	110-54-3	2.40%				
Phenanthrene	85-01-8		8.60E-6%	8.80E-4%	7.90E-4%	2.10E-4%
Pyrene	129-00-0		2.40E-6%	4.60E-5%	2.90E-5%	2.30E-5%
Toluene	108-88-3	8.10%		0.18%	6.20E-4%	
Total Xylenes	1330-20-7	9.00%		0.50%	0.23%	
Total Organic HAPs		**26.08%**	**0.33%**	**1.29%**	**0.68%**	**0.19%**
Worst Single HAP		**9.00% Xylenes**	**0.31% Naphthalene**	**0.50% Xylenes**	**0.23% Xylenes**	**0.07% Chrysene**

Methodology
Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]
Maximum VOC Solvent Usage (tons/yr) = [Maximum Asphalt Cement/Binder Throughput (tons/yr)] * [Maximum Weight % of VOC Solvent in Binder]
PTE of VOC (tons/yr) = [Weight % VOC solvent in binder that evaporates] * [Maximum VOC Solvent Usage (tons/yr)]
PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]
PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]

*Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Composition of Petroleum Mixtures. The Association for Environmental Health and Science.

Abbreviations
VOC = Volatile Organic Compounds
PTE = Potential to Emit

Appendix A.1: Unlimited Emissions Calculations
Gasoline Fuel Transfer and Dispensing Operation

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

To calculate evaporative emissions from the gasoline dispensing fuel transfer and dispensing operation handling emission factors from AP-42 Table 5.2-7 were used. The total potential emission of VOC is as follows:

Gasoline Throughput =	0	gallons/day
=	0	kgal/yr

Volatile Organic Compounds

Emission Source	Emission Factor (lb/kgal of throughput)	PTE of VOC (tons/yr)*
Filling storage tank (balanced submerged filling)	0.3	0.00
Tank breathing and emptying	1.0	0.00
Vehicle refueling (displaced losses - controlled)	1.1	0.00
Spillage	0.7	0.00
Total		**0.00**

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%	
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0%	Xylenes
Limited PTE of Total HAPs (tons/yr) =	**0.00**	
Limited PTE of Single HAP (tons/yr) =	**0.00**	**Xylenes**

Methodology
The gasoline throughput was provided by the source.
Gasoline Throughput (kgal/yr) = [Gasoline Throughput (lbs/day)] * [365 days/yr] * [kgal/1000 gal]
PTE of VOC (tons/yr) = [Gasoline Throughput (kgal/yr)] * [Emission Factor (lb/kgal)] * [ton/2000 lb]
PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]
PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]

*Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Composition of Petroleum Mixtures. The Association for Environmental Health and Science.

Abbreviations
VOC = Volatile Organic Compounds
PTE = Potential to Emit

Appendix A.2: Limited Emissions Calculations
Entire Source - Drum Mix

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

Asphalt Plant Limitations - Drum Mi

Maximum Hourly Asphalt Production =	320	ton/hr								
Annual Asphalt Production Limitation =	1,325,277	ton/yr								
Blast Furnace Slag Usage Limitation =	60,000	ton/yr	1.50	% sulfur						
Steel Slag Usage Limitation =	1,325,277	ton/yr	0.66	% sulfur						
Natural Gas Limitation =	850	MMCF/yr								
No. 2 Fuel Oil Limitation =	1,799,935	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Limitation =	0	gal/yr, and	0	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and	0	% sulfur						
Propane Limitation =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Butane Limitation =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Used/Waste Oil Limitation =	1,159,142	gal/yr, and	0.75	% sulfur	1.02	% ash	0.200	% chlorine,	0.010	% lead
Diesel Fuel Limitation - Generator < 600 HP =	24,165	gal/yr,and	0.50	% sulfur						
Diesel Fuel Limitation - Generator > 600 HP =	171,130	gal/yr	0.50	% sulfur						

PM Dryer/Mixer Limitation =	0.264	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation =	0.115	lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation =	0.134	lb/ton of asphalt production
SO2 Dryer/Mixer Limitation =	0.058	lb/ton of asphalt production
NOx Dryer/Mixer Limitation =	0.055	lb/ton of asphalt production
VOC Dryer/Mixer Limitation =	0.032	lb/ton of asphalt production
CO Dryer/Mixer Limitation =	0.130	lb/ton of asphalt production
Blast Furnace Slag SO2 Dryer/Mixer Limitation =	0.740	lb/ton of slag processed
Steel Slag SO2 Dryer/Mixer Limitation =	0.0014	lb/ton of slag processed
Cold Mix Asphalt VOC Usage Limitation =	60.70	tons/yr
HCl Limitation =	13.2	lb/kgal

Limited/Controlled Emissions

	Limited/Controlled Potential Emissions (tons/year)										
	Criteria Pollutants							Greenhouse Gas Pollutants	Hazardous Air Pollutants		
Process Description	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**CO_2e**	**Total HAPs**	**Worst Case HAP**	
Ducted Emissions											
Dryer Fuel Combustion (worst case)	37.83	30.15	30.15	63.90	42.49	2.34	35.69	51,363.96	8.95	7.65	(hydrogen chloride)
Dryer/Mixer (Process)	175.16	76.07	88.58	38.43	36.45	21.20	86.14	22,034.06	7.06	2.05	(formaldehyde)
Dryer/Mixer Slag Processing	0	0	0	22.20	0	0	0	0	0	0	
Hot Oil Heater Fuel Combustion (worst case	0.16	0.26	0.26	5.64	1.59	0.06	0.93	1,796.02	0.026	0.020	(hexane)
Diesel-Fired Generator < 600 HF	0.52	0.52	0.52	0.48	7.33	0.59	1.58	272.91	6.41E-03	1.95E-03	(formaldehyde)
Diesel-Fired Generator > 600 HF	1.17	0.67	0.67	6.78	40.20	1.18	9.21	1,950.04	0.018	0.009	(benzene)
Worst Case Emissions*	**177.01**	**77.53**	**90.04**	**99.00**	**91.61**	**23.04**	**97.87**	**55,382.93**	**9.00**	**7.65**	(hydrogen chloride)
Fugitive Emissions											
Asphalt Load-Out and On-Site Yard	0.35	0.35	0.35	0	0	3.28	1.13	0	0.068	0.014	(formaldehyde)
Material Storage Piles	2.69	0.94	0.94	0	0	0	0	0	0	0	
Material Processing and Handling	4.28	2.02	0.31	0	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	17.63	6.17	6.17	0	0	0	0	0	0	0	
Unpaved and Paved Roads (worst case)	47.04	11.99	1.20	0	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	0	60.70	0	0	15.83	5.46	(xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0	0	0	0	0	
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	0	negl	negl	
Total Fugitive Emissions	**71.99**	**21.47**	**8.96**	**0**	**0**	**63.97**	**1.13**	**0**	**15.90**	**5.46**	(xylenes)
Totals Limited/Controlled Emissions	**249.00**	**99.00**	**99.00**	**99.00**	**91.61**	**87.02**	**99.00**	**55,382.93**	**24.90**	**7.65**	**(hydrogen chloride)**

negl = negligible
Worst Case Fuel Combustion is based on the fuel with the highest emissions for each specific pollutant.
*Worst Case Emissions (tons/yr) = Worst Case Emissions from Dryer Fuel Combustion and Dryer/Mixer + Dryer/Mixer Slag Processing + Worst Case Emissions from Hot Oil Heater Fuel Combustion + Diesel-Fired Generator < 600 HP + Diesel-Fired Generator > 600 HP
Fuel component percentages provided by the source.

Appendix A.2: Limited Emissions Calculations
Dryer/Mixer Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

The following calculations determine the limited emissions created from the combustion of natural gas, fuel oil, propane, butane, or used/waste oil in the dryer/mixer and all other fuel combustion sources at the source.

Production and Fuel Limitations

Maximum Hourly Asphalt Production =	320	ton/hr								
Annual Asphalt Production Limitation =	1,325,277	ton/yr								
Natural Gas Limitation =	850	MMCF/yr								
No. 2 Fuel Oil Limitation =	1,799,935	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Limitation =	0	gal/yr, and	0	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and	0	% sulfur						
Propane Limitation =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Butane Limitation =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Used/Waste Oil Limitation =	1,159,142	gal/yr, and	0.75	% sulfur	1.02	% ash	0.200	% chlorine,	0.010	% lead

Limited Emissions

	Emission Factor (units)							Limited Potential to Emit (tons/yr)							
Criteria Pollutant	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/ Waste Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/ Waste Oil (tons/yr)	**Worse Case Fuel (tons/yr)**
PM	1.9	2.0	7.0	3.22	0.5	0.6	65.3	0.81	1.80	0	0	0	0	37.83	**37.83**
PM10	7.6	3.3	8.3	4.72	0.5	0.6	52.02	3.23	2.97	0	0	0	0	30.15	**30.15**
SO2	0.6	71.0	0	0	0	0	110.3	0.25	63.90	0	0	0	0	63.90	**63.90**
NOx	100	20.0	20.0	55.0	13.0	15.0	19.0	42.49	18.00	0	0	0	0	11.01	**42.49**
VOC	5.5	0.20	0.20	0.28	1.0	1.10	1.0	2.34	0.18	0	0	0	0	0.58	**2.34**
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	35.69	4.50	0	0	0	0	2.90	**35.69**
Hazardous Air Pollutant															
HCl							13.2							7.65	**7.65**
Antimony			5.25E-03	5.25E-03			negl			0	0			negl	**0.0E+00**
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03			1.1E-01	8.5E-05	5.04E-04	0	0			6.38E-02	**6.4E-02**
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05			negl	5.1E-06	3.78E-04	0	0			negl	**3.8E-04**
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04			9.3E-03	4.7E-04	3.78E-04	0	0			5.39E-03	**5.4E-03**
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02	5.9E-04	3.78E-04	0	0			1.16E-02	**1.2E-02**
Cobalt	8.4E-05		6.02E-03	6.02E-03			2.1E-04	3.6E-05		0	0			1.22E-04	**1.2E-04**
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03			0.55	2.1E-04	1.13E-03	0	0			3.2E-01	**0.32**
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03			6.8E-02	1.6E-04	7.56E-04	0	0			3.94E-02	**0.04**
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04				1.1E-04	3.78E-04	0	0				**3.8E-04**
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02	8.9E-04	3.78E-04	0	0			6.38E-03	**0.006**
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl	1.0E-05	1.89E-03	0	0			negl	**1.9E-03**
1.1.1-Trichloroethane			2.36E-04	2.36E-04						0	0				**0.0E+00**
1,3-Butadiene															**0.0E+00**
Acetaldehyde															**0.0E+00**
Acrolein															**0.0E+00**
Benzene	2.1E-03		2.14E-04	2.14E-04				8.9E-04		0	0				**8.9E-04**
Bis(2-ethylhexyl)phthalate							2.2E-03							1.28E-03	**1.3E-03**
Dichlorobenzene	1.2E-03						8.0E-07	5.1E-04						4.64E-07	**5.1E-04**
Ethylbenzene			6.36E-05	6.36E-05						0	0				**0.0E+00**
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				3.2E-02	5.49E-02	0	0				**0.055**
Hexane	1.8E+00							0.76							**0.765**
Phenol							2.4E-03							1.39E-03	**1.4E-03**
Toluene	3.4E-03		6.20E-03	6.20E-03				1.4E-03		0	0				**1.4E-03**
Total PAH Haps	negl		1.13E-03	1.13E-03			3.9E-02	negl		0	0			2.27E-02	**2.3E-02**
Polycyclic Organic Matter		3.30E-03							2.97E-03						**3.0E-03**
Xylene			1.09E-04	1.09E-04						0	0				**0.0E+00**
							Total HAPs	**0.80**	**0.06**	**0**	**0**	**0**	**0**	**8.12**	**8.95**

Methodology

Natural Gas: Limited Potential to Emit (tons/yr) = (Natural Gas Limitation (MMCF/yr)) * (Emission Factor (lb/MMCF)) * (ton/2000 lbs)
All Other Fuels: Limited Potential to Emit (tons/yr) = (Fuel Limitation (gals/yr)) * (Emission Factor (lb/kgal)) * (kgal/1000 gal) * (ton/2000 lbs)
Sources of AP-42 Emission Factors for fuel combustion:

Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
No. 2, No.4, and No.6 Fuel Oil: AP-42 Chapter 1.3 (dated 5/10), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11
Propane and Butane: AP-42 Chapter 1.5 (dated 7/08), Tables 1.5-1 (assuming PM = PM10)
Waste Oil: AP-42 Chapter 1.11 (dated 10/96), Tables 1.11-1, 1.11-2, 1.11-3, 1.11-4, and 1.11-5

*Since there are no specific AP-42 HAP emission factors for combustion of No. 4 fuel oil, it was assumed that HAP emissions from combustion of No. 4 fuel oil were equal to combustion of residual or No. 6 fuel oil.

Abbreviations

PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
SO2 = Sulfur Dioxide
NOx = Nitrous Oxides
VOC - Volatile Organic Compounds
CO = Carbon Monoxide
HAP = Hazardous Air Pollutant
HCl = Hydrogen Chloride
PAH = Polyaromatic Hydrocarbon

Appendix A.2: Limited Emissions Summary
Greenhouse Gas (CO2e) Emissions from the
Dryer/Mixer Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

The following calculations determine the limited emissions created from the combustion of natural gas, fuel oil, propane, butane, or used/waste oil in the dryer/mixer and all other fuel combustion sources at the source.

Production and Fuel Limitations

Maximum Hourly Asphalt Production =	320	ton/hr								
Annual Asphalt Production Limitation =	1,325,277	ton/yr								
Natural Gas Limitation =	850	MMCF/yr								
No. 2 Fuel Oil Limitation =	1,799,935	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Limitation =	0	gal/yr, and	0	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and	0	% sulfur						
Propane Limitation =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Butane Limitation =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Used/Waste Oil Limitation =	1,159,142	gal/yr, and	0.75	% sulfur	1.02	% ash	0.200	% chlorine,	0.010	% lead

Limited Emissions

	Emission Factor (units)							Global Warming Potentials (GWP)		
CO2e Fraction	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/Waste Oil (lb/kgal)	Name	Chemical Formula	Global warming potential
CO2	120,161.84	22,501.41	24,153.46	24,835.04	12,500.00	14,506.73	22,024.15	Carbon dioxide	CO_2	1
CH4	2.49	0.91	0.97	1.00	0.60	0.67	0.89	Methane	CH_4	21
N2O	2.20	0.26	0.19	0.53	0.90	0.90	0.18	Nitrous oxide	N_2O	310

	Limited Potential to Emit (tons/yr)							
CO2e Fraction	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/Waste Oil (tons/yr)	**CO2e for Worst Case Fuel* (tons/yr)**
CO2	51,051.96	20,250.54	0	0	0	0	12,764.56	**51,363.96**
CH4	1.06	0.82	0	0	0	0	0.52	
N2O	0.93	0.23	0	0	0	0	0.10	
Total	51,053.95	20,251.59	0	0	0	0	12,765.18	
CO2e Equivalent Emissions (tons/yr)	51,363.96	20,340.33	0	0	0	0	12,807.77	

Methodology
Fuel Limitations from TSD Appendix A.2, page 1 of 15.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)
Natural Gas: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2
No. 2, No. 4, and Residual (No. 5 or No. 6) Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 5/10), Table 1.3-8
Propane and Butane: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.5 (dated 7/08), Table 1.5-1
Waste Oil: Emission Factors for CO2, CH4, and N2O from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal.
Emission Factor (EF) Conversions
Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Natural Gas (MMBtu/scf) * Conversion Factor (1,000,000 scf/MMCF)]
Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of the Fuel Oil (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]
Natural Gas: Limited Potential to Emit (tons/yr) = (Natural Gas Limitation (MMCF/yr)) * (Emission Factor (lb/MMCF)) * (ton/2000 lbs)
All Other Fuels: Limited Potential to Emit (tons/yr) = (Fuel Limitation (gals/yr)) * (Emission Factor (lb/kgal)) * (kgal/1000 gal) * (ton/2000 lbs)
Limited CO2e Emissions (tons/yr) = CO2 Potential Emission of "worst case" fuel (ton/yr) x CO2 GWP (1) + CH4 Potential Emission of "worst case" fuel (ton/yr) x CH4 GWP (21) + N2O Potential Emission of "worst case" fuel (ton/yr) x N2O GWP (310).

Abbreviations
CH4 = Methane CO2 = Carbon Dioxide N2O = Nitrogen Dioxide PTE = Potential to Emit

Appendix A.2: Limited Emissions Calculations
Dryer/Mixer

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

The following calculations determine the limited emissions from the aggregate drying/mixing

Maximum Hourly Asphalt Production =	320	ton/hr
Annual Asphalt Production Limitation =	1,325,277	ton/yr
PM Dryer/Mixer Limitation =	0.264	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation =	0.115	lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation =	0.134	lb/ton of asphalt production
CO Dryer/Mixer Limitation =	0.130	lb/ton of asphalt production
VOC Dryer/Mixer Limitation =	0.032	lb/ton of asphalt production

	Emission Factor or Limitation (lb/ton) Drum-Mix Plant (dryer/mixer, controlled by fabric filter)			Limited/Controlled Potential to Emit (tons/yr) Drum-Mix Plant (dryer/mixer, controlled by fabric filter)			
Criteria Pollutant	Natural Gas	No. 2 Fuel Oil	Waste Oil	Natural Gas	No. 2 Fuel Oil	Waste Oil	**Worse Case PTE**
PM*	0.264	0.264	0.264	175.16	175.16	175.16	**175.16**
PM10*	0.115	0.115	0.115	76.07	76.07	76.07	**76.07**
PM2.5*	0.134	0.134	0.134	88.58	88.58	88.58	**88.58**
SO2**	0.003	0.011	0.058	2.25	7.29	38.43	**38.43**
NOx**	0.026	0.055	0.055	17.23	36.45	36.45	**36.45**
VOC**	0.032	0.032	0.032	21.20	21.20	21.20	**21.20**
CO***	0.130	0.130	0.130	86.14	86.14	86.14	**86.14**
Hazardous Air Pollutant							
HCl			2.10E-04			0.14	**0.14**
Antimony	1.80E-07	1.80E-07	1.80E-07	1.19E-04	1.19E-04	1.19E-04	**1.19E-04**
Arsenic	5.60E-07	5.60E-07	5.60E-07	3.71E-04	3.71E-04	3.71E-04	**3.71E-04**
Beryllium	negl	negl	negl	negl	negl	negl	**0**
Cadmium	4.10E-07	4.10E-07	4.10E-07	2.72E-04	2.72E-04	2.72E-04	**2.72E-04**
Chromium	5.50E-06	5.50E-06	5.50E-06	3.64E-03	3.64E-03	3.64E-03	**3.64E-03**
Cobalt	2.60E-08	2.60E-08	2.60E-08	1.72E-05	1.72E-05	1.72E-05	**1.72E-05**
Lead	6.20E-07	1.50E-05	1.50E-05	4.11E-04	9.94E-03	9.94E-03	**9.94E-03**
Manganese	7.70E-06	7.70E-06	7.70E-06	5.10E-03	5.10E-03	5.10E-03	**5.10E-03**
Mercury	2.40E-07	2.60E-06	2.60E-06	1.59E-04	1.72E-03	1.72E-03	**1.72E-03**
Nickel	6.30E-05	6.30E-05	6.30E-05	4.17E-02	4.17E-02	4.17E-02	**4.17E-02**
Selenium	3.50E-07	3.50E-07	3.50E-07	2.32E-04	2.32E-04	2.32E-04	**2.32E-04**
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	2.65E-02	2.65E-02	2.65E-02	**2.65E-02**
Acetaldehyde			1.30E-03			0.86	**0.86**
Acrolein			2.60E-05			1.72E-02	**1.72E-02**
Benzene	3.90E-04	3.90E-04	3.90E-04	0.26	0.26	0.26	**0.26**
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0.16	0.16	0.16	**0.16**
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	2.05	2.05	2.05	**2.05**
Hexane	9.20E-04	9.20E-04	9.20E-04	0.61	0.61	0.61	**0.61**
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0.03	0.03	0.03	**0.03**
MEK			2.00E-05			0.01	**0.01**
Propionaldehyde			1.30E-04			0.09	**0.09**
Quinone			1.60E-04			0.11	**0.11**
Toluene	1.50E-04	2.90E-03	2.90E-03	0.10	1.92	1.92	**1.92**
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0.13	0.58	0.58	**0.58**
Xylene	2.00E-04	2.00E-04	2.00E-04	0.13	0.13	0.13	**0.13**
						Total HAPs	**7.06**
						Worst Single HAP	**2.05** **(formaldehyde)**

Methodology
Limited/Controlled Potential to Emit (tons/yr) = (Annual Asphalt Production Limitation (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-3, 11.1-4, 11.1-7, 11.1-8, 11.1-10, and 11.1-12
Natural gas, No. 2 fuel oil, and waste oil represent the worst possible emissions scenario. AP-42 did not provide emission factors for any other fuels.

* PM, PM10, and PM2.5 AP-42 emission factors based on drum mix dryer fired with natural gas, propane, fuel oil, and waste oil. According to AP-42 fuel type does not significantly effect PM, PM10, and PM2.5 emissions.
** SO2, NOx, and VOC AP-42 emission factors are for natural gas, No. 2 fuel oil, and waste oil only.
*** CO AP-42 emission factor determined by combining data from drum mix dryer fired with natural gas, No. 6 fuel oil, and No. 2 fuel oil to develop single CO emission factor.

Abbreviations
VOC - Volatile Organic Compounds
HAP = Hazardous Air Pollutant
HCl = Hydrogen Chloride
PAH = Polyaromatic Hydrocarbon
SO2 = Sulfur Dioxide

Appendix A.2: Limited Emissions Summary
Greenhouse Gas (CO2e) Emissions from the
Drum-Mix Plant (Dryer/Mixer) Process Emissions

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

The following calculations determine the limited emissions from the aggregate drying/mixing

Maximum Hourly Asphalt Production =	320	ton/hr
Annual Asphalt Production Limitation =	1,325,277	ton/yr

	Emission Factor (lb/ton) Drum-Mix Plant (dryer/mixer)				Limited Potential to Emit (tons/yr) Drum-Mix Plant (dryer/mixer)			
Criteria Pollutant	Natural Gas	No. 2 Fuel Oil	Waste Oil	Global Warming Potentials (GWP)	Natural Gas	No. 2 Fuel Oil	Waste Oil	**CO2e for Worst Case Fuel (tons/yr)**
CO2	33	33	33	1	21,867.08	21,867.08	21,867.08	**22,034.06**
CH4	0.0120	0.0120	0.0120	21	7.95	7.95	7.95	
N2O				310	0	0	0	
				Total	21,875.03	21,875.03	21,875.03	
				CO2e Equivalent Emissions (tons/yr)	22,034.06	22,034.06	22,034.06	

Methodology

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-7 and 11.1-8

There are no emission factors for N20 available in either the 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no N2O emission anticipated fror this process.

Limited/Controlled Potential to Emit (tons/yr) = (Annual Asphalt Production Limitation (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)

Natural gas, No. 2 fuel oil, and waste oil represent the worst possible emissions scenario. AP-42 did not provide emission factors for any other fuels.

Limited CO2e Emissions (tons/yr) = CO2 Potential Emission of "worst case" fuel (ton/yr) x CO2 GWP (1) + CH4 Potential Emission of "worst case" fuel (ton/yr) x CH4 GWP (21) + N2O Potential Emission of "worst case" fuel (ton/yr) x N2O GWP (310).

Abbreviations

CO2 = Carbon Dioxide CH4 = Methane N2O = Nitrogen Dioxide PTE = Potential to Emit

Appendix A.2: Limited Emissions Calculations
Dryer/Mixer Slag Processing

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

The following calculations determine the limited emissions from the processing of slag in the aggregate drying/mixing

Limited Blast Furnace Slag Usage =	60,000	ton/yr	1.50	% sulfur
Limited Annual Steel Slag Usage =	1,325,277	ton/yr	0.66	% sulfur

Type of Slag	SO2 Emission Factor (lb/ton)*	Limited Potential to Emit SO2 (tons/yr)
Blast Furnace Slag	0.7400	22.20
Steel Slag	0.0014	0.93

Methodology

* Testing results for blast furnace slag, obtained January 9, 2009 from similar operations at Rieth-Riley Construction Co., Inc. facility located in Valparaiso, IN (permit #127-27075-05241), produced an Emission Factor of 0.54 lb/ton from blast furnace slag containing 1.10% sulfur content. The source has requested a safety factor of 0.20 lb/ton be added to the tested value for use at this location to allow for a sulfur content up to 1.5%.

** Testing results for steel slag, obtained June 2009 from E & B Paving, Inc. facility located in Huntington, IN. The testing results showed a steel slag emission factor of 0.0007 lb/ton from slag containing 0.33% sulfur content.

Limited Potential to Emit SO2 from Slag (tons/yr) = [(Limited Slag Usage (ton/yr)] * [Emission Factor (lb/ton)] * [ton/2000 lbs]

Abbreviations

SO2 = Sulfur Dioxide

Appendix A.2: Limited Emissions Calculations
Hot Oil Heater
Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

Maximum Hot Oil Heater Fuel Input Rate =	2.54	MMBtu/hr		
Natural Gas Usage =	22	MMCF/yr		
No. 2 Fuel Oil Usage =	158,931	gal/yr, and	0.50	% sulfur

Unlimited/Uncontrolled Emissions

	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
	Hot Oil Heater		Hot Oil Heater		
Criteria Pollutant	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	**Worse Case Fuel (tons/yr)**
PM	1.9	2.0	0.021	0.159	**0.16**
PM10/PM2.5	7.6	3.3	0.085	0.262	**0.26**
SO2	0.6	71.0	0.007	5.642	**5.64**
NOx	100	20.0	1.113	1.589	**1.59**
VOC	5.5	0.20	0.061	0.016	**0.06**
CO	84	5.0	0.935	0.397	**0.93**
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	2.2E-06	4.45E-05	**4.5E-05**
Beryllium	1.2E-05	4.2E-04	1.3E-07	3.34E-05	**3.3E-05**
Cadmium	1.1E-03	4.2E-04	1.2E-05	3.34E-05	**3.3E-05**
Chromium	1.4E-03	4.2E-04	1.6E-05	3.34E-05	**3.3E-05**
Cobalt	8.4E-05		9.3E-07		**9.3E-07**
Lead	5.0E-04	1.3E-03	5.6E-06	1.00E-04	**1.0E-04**
Manganese	3.8E-04	8.4E-04	4.2E-06	6.68E-05	**6.7E-05**
Mercury	2.6E-04	4.2E-04	2.9E-06	3.34E-05	**3.3E-05**
Nickel	2.1E-03	4.2E-04	2.3E-05	3.34E-05	**3.3E-05**
Selenium	2.4E-05	2.1E-03	2.7E-07	1.67E-04	**1.7E-04**
Benzene	2.1E-03		2.3E-05		**2.3E-05**
Dichlorobenzene	1.2E-03		1.3E-05		**1.3E-05**
Ethylbenzene					**0**
Formaldehyde	7.5E-02	6.10E-02	8.3E-04	4.85E-03	**0.005**
Hexane	1.8E+00		0.02		**0.020**
Phenol					**0**
Toluene	3.4E-03		3.8E-05		**3.8E-05**
Total PAH Haps	negl		negl		**0**
Polycyclic Organic Matter		3.30E-03		2.62E-04	**2.6E-04**
		Total HAPs =	**2.1E-02**	**5.7E-03**	**0.026**

Methodology
Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
Sources of AP-42 Emission Factors for fuel combustion:
Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
No. 2 Fuel Oil: AP-42 Chapter 1.3 (dated 5/10), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
SO2 = Sulfur Dioxide
NOx = Nitrous Oxides
VOC - Volatile Organic Compounds
CO = Carbon Monoxide
HAP = Hazardous Air Pollutant
HCl = Hydrogen Chloride
PAH = Polyaromatic Hydrocarbon

Appendix A.2: Limited Emissions Summary
Greenhouse Gas (CO2e) Emissions from
Hot Oil Heater Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

Maximum Hot Oil Heater Fuel Input Rate =	2.54	MMBtu/hr		
Natural Gas Usage =	22	MMCF/yr		
No. 2 Fuel Oil Usage =	158,931	gal/yr,	0.50	% sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units) Natural Gas (lb/MMCF)	Emission Factor (units) No. 2 Fuel Oil (lb/kgal)	Global Warming Potentials (GWP)	Unlimited/Uncontrolled Potential to Emit (tons/yr) Natural Gas (tons/yr)	Unlimited/Uncontrolled Potential to Emit (tons/yr) No. 2 Fuel Oil (tons/yr)	**Worse Case CO2e Emissions (tons/yr)**
CO2	120,161.84	22,501.41	1	1,336.82	1,788.09	**1,796.02**
CH4	2.49	0.91	21	0.028	7.25E-02	
N2O	2.20	0.26	310	0.024	2.07E-02	
			Total	1,336.88	1,788.18	
			CO2e Equivalent Emissions (tons/yr)	1,344.99	1,796.02	

Methodology

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)

Natural Gas : Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2

No. 2 Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 5/10), Table 1.3-8

Emission Factor (EF) Conversions

Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Natural Gas (MMBtu/scf) * Conversion Factor (1,000,000 scf/MMCF)]

Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of the Fuel Oil (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]

Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]

Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]

Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]

All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]

Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (310).

Abbreviations

CH4 = Methane
CO2 = Carbon Dioxide
N2O = Nitrogen Dioxide
PTE = Potential to Emit

Appendix A.2: Limited Emissions Summary
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

Output Horsepower Rating (hp)	54.0
Limited Hours Operated per Year	8,760
Limited Throughput (hp-hr/yr)	473,040
Limited Diesel Fuel Usage (gal/yr)	24,165

Sulfur Content (S) of Fuel (% by weight): 0.50

	Pollutant						
	PM[2]	PM10[2]	direct PM2.5[2]	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Emission Factor in lb/kgal[1]	43.07	43.07	43.07	40.13	606.85	49.22	130.77
Limited Emission in tons/yr	0.52	0.52	0.52	0.48	7.33	0.59	1.58

[1] The AP-42 Chapter 3.3-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[1]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[2]PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs[3]
Emission Factor in lb/MMBtu	9.33E-04	4.09E-04	2.85E-04	3.91E-05	1.18E-03	7.67E-04	9.25E-05	1.68E-04
Emission Factor in lb/kgal[4]	1.28E-01	5.60E-02	3.91E-02	5.36E-03	1.62E-01	1.05E-01	1.27E-02	2.30E-02
Limited Emission in tons/yr	1.54E-03	6.77E-04	4.72E-04	6.47E-05	1.95E-03	1.27E-03	1.53E-04	2.78E-04

[3]PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

[4]The AP-42 Chapter 3.3-1 emission factors in lb/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[4]Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Limited Emission of Total HAPs (tons/yr)	**6.41E-03**
Limited Emission of Worst Case HAPs (tons/yr)	**1.95E-03**

Green House Gas Emissions (GHG)

	Pollutant		
	CO2[5]	CH4[6]	N2O[6]
Emission Factor in lb/hp-hr	1.15	NA	NA
Emission Factor in kg/MMBtu	NA	0.003	0.0006
Emission Factor in lb/kgal	22,512.07	0.91	0.18
Limited Emission in tons/yr	272.00	0.011	0.002

[5]The AP-42 Chapter 3.3-1 emission factor in lb/hp-hr was converted to lb/kgal emission factor using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[5]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[6]The 40 CFR 98 Subpart C emission factors in kg/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[6]Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) * 2.20462 (lb/kg) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Summed Limited Emissions in tons/yr	**272.01**
CO2e Total in tons/yr	**272.91**

Methodology

Limited Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Limited Hours Operated per Year]

Limited Diesel Fuel Usage (gal/yr) = Limited Throughput (hp-hr/yr) * 7000 (Btu/hp-hr) * 1/19300 (lb/Btu) * 1/7.1 (gal/lb)

Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2 and have been converted to lb/kgal

CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2 and have been converted to lb/kgal

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Limited Emissions (tons/yr) = [Limited Diesel Fuel Usage (gal/yr) x Emission Factor (lb/kgal)] / (1,000 ga/kgal) / (2,000 lb/ton)

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A.2: Limited Emissions Summary
Large Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (>600 HP)

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

Output Horsepower Rating (hp)	670.0
Limited Hours Operated per Year	5,000
Limited Throughput (hp-hr/yr)	3,350,000
Limited Diesel Fuel Usage (gal/yr)	171,130

Sulfur Content (S) of Fuel (% by weight) 0.50

	Pollutant						
	PM	PM10[2]	direct PM2.5[2]	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	7.00E-04			4.05E-03 *(.00809S)*	2.40E-02	7.05E-04	5.50E-03
Emission Factor in lb/MMBtu		0.0573	0.0573				
Emission Factor in lb/kgal[1]	13.70	7.85	7.85	79.18	469.82	13.80	107.67
Limited Emission in tons/yr	1.17	0.67	0.67	6.78	40.20	1.18	9.21

[1] The AP-42 Chapter 3.4-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[1]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[2]Emission factors in lb/kgal were converted from the AP-42 Chapter 3.4-1 emission factors in lb/MMBtu using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[2]Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs[3]
Emission Factor in lb/MMBtu	7.76E-04	2.81E-04	1.93E-04	7.89E-05	2.52E-05	7.88E-06	2.12E-04
Emission Factor in lb/kgal[4]	1.06E-01	3.85E-02	2.64E-02	1.08E-02	3.45E-03	1.08E-03	2.91E-02
Limited Emission in tons/yr	9.10E-03	3.29E-03	2.26E-03	9.25E-04	2.95E-04	9.24E-05	2.49E-03

[3]PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

[4]Emission factors in lb/kgal were converted from the AP-42 Chapter 3.4-1 emission factors in lb/MMBtu using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[4]Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Limited Emission of Total HAPs (tons/yr)	**1.85E-02**
Limited Emission of Worst Case HAPs (tons/yr)	**9.10E-03**

Green House Gas Emissions (GHG)

	Pollutant		
	CO2[5]	CH4[5,6]	N2O[7]
Emission Factor in lb/hp-hr	1.16	6.35E-05	NA
Emission Factor in kg/MMBtu	NA	NA	0.0006
Emission Factor in lb/kgal	22,707.83	1.24	0.18
Limited Emission in tons/yr	1,943.00	0.11	0.02

[5] The AP-42 Chapter 3.4-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[5]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[6]According to AP-42, Table 3.4-1, TOC (as CH4) is 9% methane by weight. As a result, the lb/hp-hr emission factor for TOC (as CH4) in AP-42 has been multiplied by 9% to determine the portion that is emitted as methane.

[7]The 40 CFR 98 Subpart C emission factors in kg/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[7]Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) * 2.20462 (lb/kg) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Summed Potential Emissions in tons/yr	**1,943.12**
CO2e Total in tons/yr	**1,950.04**

Methodology

Limited Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Limited Hours Operated per Year]

Limited Diesel Fuel Usage (gal/yr) = Limited Throughput (hp-hr/yr) * 7000 (Btu/hp-hr) * 1/19300 (lb/Btu) * 1/7.1 (gal/lb)

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4 and have been converted to lb/kgal.

N2O Emission Factor from 40 CFR 98 Subpart C Table C-2 and have been converted to lb/kgal.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Limited Emissions (tons/yr) = [Limited Diesel Fuel Usage (gal/yr) x Emission Factor (lb/kgal)] / (1,000 ga/kgal) / (2,000 lb/ton)
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A.2: Limited Emissions Calculations
Asphalt Load-Out and Yard Emissions

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

The following calculations determine the limited fugitive emissions from hot asphalt mix load-out and on-site yard for a drum mix hot mix asphalt plant

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.5	
Annual Asphalt Production Limitation =	1,325,277	tons/yr

	Emission Factor (lb/ton asphalt)		Limited Potential to Emit (tons/yr)		
Pollutant	**Load-Out**	**On-Site Yard**	**Load-Out**	**On-Site Yard**	**Total**
Total PM*	5.2E-04	NA	0.35	NA	**0.35**
Organic PM	3.4E-04	NA	0.23	NA	**0.23**
TOC	0.004	0.001	2.76	0.729	**3.5**
CO	0.001	3.5E-04	0.89	0.233	**1.13**

NA = Not Applicable (no AP-42 Emission Factor)

PM/HAPs	**0.016**	**0**	**0.016**
VOC/HAPs	**0.041**	**0.011**	**0.051**
non-VOC/HAPs	**2.1E-04**	**5.6E-05**	**2.7E-04**
non-VOC/non-HAPs	**0.20**	**0.05**	**0.25**

Total VOCs	**2.59**	**0.7**	**3.3**
Total HAPs	**0.06**	**0.011**	**0.07**
		Worst Single HAP	**0.014 (formaldehyde)**

Methodology
The asphalt temperature and volatility factor were provided by the source.
Limited Potential to Emit (tons/yr) = (Annual Asphalt Production Limitation (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-14, 11.1-15, and 11.1-16
Plant Load-Out Emission Factor Equations (AP-42 Table 11.1-14)::
Total PM/PM10 Ef = 0.000181 + 0.00141(-V)e^((0.0251)(T+460)-20.43)
Organic PM Ef = 0.00141(-V)e^((0.0251)(T+460)-20.43)
TOC Ef = 0.0172(-V)e^((0.0251)(T+460)-20.43)
CO Ef = 0.00558(-V)e^((0.0251)(T+460)-20.43)
On Site Yard CO emissions estimated by multiplying the TOC emissions by 0.32
*No emission factors available for PM10 or PM2.5, therefore IDEM assumes PM10 and PM2.5 are equivalent to Total PM.

Abbreviations
TOC = Total Organic Compounds
CO = Carbon Monoxide
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound

Appendix A.2: Limited Emissions Calculations
Asphalt Load-Out and Yard Emissions (continued)

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

Organic Particulate-Based Compounds (Table 11.1-15)

					Speciation Profile	Limited Potential to Emit (tons/yr)		
Pollutant	**CASRN**	**Category**	**HAP Type**	**Source**	**Load-out and Onsite Yard (% by weight of Total Organic PM)**	**Load-out**	**Onsite Yard**	**Total**
PAH HAPs								
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	5.9E-04	NA	5.9E-04
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	6.3E-05	NA	6.3E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	1.6E-04	NA	1.6E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	4.3E-05	NA	4.3E-05
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	1.7E-05	NA	1.7E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	5.0E-06	NA	5.0E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	4.3E-06	NA	4.3E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	5.2E-06	NA	5.2E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	1.8E-05	NA	1.8E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	2.3E-04	NA	2.3E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	8.4E-07	NA	8.4E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	1.1E-04	NA	1.1E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.7E-03	NA	1.7E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	1.1E-06	NA	1.1E-06
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.4E-03	NA	0.005
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	2.8E-03	NA	2.8E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	5.0E-05	NA	5.0E-05
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.8E-03	NA	1.8E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	3.4E-04	NA	3.4E-04
Total PAH HAPs						**0.013**	**NA**	**0.013**
Other semi-volatile HAPs								
Phenol		PM/HAP	---	Organic PM	1.18%	2.7E-03	0	2.7E-03

NA = Not Applicable (no AP-42 Emission Factor)

Methodology

Limited Potential to Emit (tons/yr) = [Speciation Profile (%)] * [Organic PM (tons/yr)]

Speciation Profiles from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-15 and 11.1-16

Abbreviations

PM = Particulate Matter
HAP = Hazardous Air Pollutant
POM = Polycyclic Organic Matter

Appendix A.2: Emissions Calculations
Asphalt Load-Out and Yard Emissions (continued)

Organic Volatile-Based Compounds (Table 11.1-16)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile	Limited Potential to Emit (tons/yr)		
					Load-out and Onsite Yard (% by weight of TOC)	Load-out	Onsite Yard	Total
VOC		VOC	---	TOC	94%	**2.59**	**0.69**	**3.28**
non-VOC/non-HAPS								
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	1.8E-01	4.7E-02	0.227
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	1.3E-03	3.4E-04	0.002
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	2.0E-02	5.2E-03	0.025
Total non-VOC/non-HAPS					7.30%	**0.201**	**0.053**	**0.25**
Volatile organic HAPs								
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	1.4E-03	3.8E-04	1.8E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	2.6E-04	7.0E-05	3.3E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	1.4E-03	3.6E-04	1.7E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	3.6E-04	9.5E-05	4.5E-04
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	5.8E-06	1.5E-06	7.3E-06
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	4.1E-04	1.1E-04	5.2E-04
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	3.0E-03	8.0E-04	3.8E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	7.7E-03	2.0E-03	0.010
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	2.4E-03	6.4E-04	0.003
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	4.1E-03	1.1E-03	0.005
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	5.0E-05	1.3E-05	6.3E-05
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0	0	0.0E+00
MTBE	1634-04-4	VOC/HAP	---	TOC	0	0	0	0
Styrene	100-42-5	VOC/HAP	---	TOC	0.0073%	2.0E-04	5.3E-05	2.5E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	2.1E-04	5.6E-05	2.7E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	5.8E-03	1.5E-03	0.007
1,1,1-Trichloroethane	71-55-6	VOC/HAP	---	TOC	0	0	0	0
Trichloroethene	79-01-6	VOC/HAP	---	TOC	0	0	0	0
Trichlorofluoromethane	75-69-4	VOC/HAP	---	TOC	0.0013%	3.6E-05	9.5E-06	4.5E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	1.1E-02	3.0E-03	0.014
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	2.2E-03	5.8E-04	2.8E-03
Total volatile organic HAPs					1.50%	**0.041**	**0.011**	**0.052**

Methodology
Limited Potential to Emit (tons/yr) = [Speciation Profile (%)] * [TOC (tons/yr)]
Speciation Profiles from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-15 and 11.1-16

Abbreviations
TOC = Total Organic Compounds
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound
MTBE = Methyl tert butyl ether

Appendix A.2: Limited Emissions Calculations
Material Storage Piles

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

Note: Since the emissions from the storage piles are minimal, the limited emissions are equal to the unlimited emissions.

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8,760 hours of use and USEPA's AP-42 (Pre 1983 Edition), Section 11.2.3.

Ef = 1.7*(s/1.5)*(365-p)/235*(f/15)
where Ef = emission factor (lb/acre/day)
s = silt content (wt %)
p = 125 days of rain greater than or equal to 0.01 inches
f = 15 % of wind greater than or equal to 12 mph

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10/PM2.5 (tons/yr)
Sand	2.6	3.01	1.51	0.829	0.290
Limestone	1.6	1.85	2.49	0.842	0.295
RAP	0.5	0.58	1.98	0.209	0.073
Gravel	1.6	1.85	0	0.000	0.000
Slag	3.8	4.40	0.57	0.458	0.160
Shingles	3.8	4.40	0.44	0.353	0.124
			Totals	**2.69**	**0.94**

Methodology
PTE of PM (tons/yr) = (Emission Factor (lb/acre/day)) * (Maximum Pile Size (acres)) * (ton/2000 lbs) * (8760 hours/yr)
PTE of PM10/PM2.5 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%
*Silt content values obtained from AP-42 Table 13.2.4-1 (dated 1/95)
**Maximum anticipated pile size (acres) provided by the source.
PM2.5 = PM10

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PTE = Potential to Emit
RAP = recycled asphalt pavement

Appendix A.2: Limited Emissions Calculations
Material Processing, Handling, Crushing, Screening, and Conveying

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

Batch or Continuous Drop Operations (AP-42 Section 13.2.4)

To estimate potential fugitive dust emissions from processing and handling of raw materials (batch or continuous drop operations), AP-42 emission factors for Aggregate Handling, Section 13.2.4 (fifth edition, 1/95) are utilized.

Ef = k*(0.0032)*[(U/5)^1.3 / (M/2)^1.4]

where: Ef = Emission factor (lb/ton)

k (PM) =	0.74	= particle size multiplier (0.74 assumed for aerodynamic diameter <=100 um)
k (PM10) =	0.35	= particle size multiplier (0.35 assumed for aerodynamic diameter <=10 um)
k (PM2.5) =	0.053	= particle size multiplier (0.053 assumed for aerodynamic diameter <=2.5 um)
U =	10.2	= worst case annual mean wind speed (Source: NOAA, 2006*)
M =	4.0	= material % moisture content of aggregate (Source: AP-42 Section 11.1.1.1)
Ef (PM) =	2.27E-03	lb PM/ton of material handled
Ef (PM10) =	1.07E-03	lb PM10/ton of material handled
Ef (PM2.5) =	1.62E-04	lb PM2.5/ton of material handled

Annual Asphalt Production Limitation =	1,325,277	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	1,259,014	tons/yr

Type of Activity	Limited PTE of PM (tons/yr)	Limited PTE of PM10 (tons/yr)	Limited PTE of PM2.5 (tons/yr)
Truck unloading of materials into storage piles	1.43	0.67	0.10
Front-end loader dumping of materials into feeder bins	1.43	0.67	0.10
Conveyor dropping material into dryer/mixer or batch tower	1.43	0.67	0.10
Total (tons/yr)	**4.28**	**2.02**	**0.31**

Methodology
The percent asphalt cement/binder provided by the source.
Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
Limited Potential to Emit (tons/yr) = (Maximum Material Handling Throughput (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Raw materials may include limestone, sand, recycled asphalt pavement (RAP), gravel, slag, and other additivies
*Worst case annual mean wind speed (Indianapolis, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2006

Material Screening and Conveying (AP-42 Section 19.2.2)
To estimate potential fugitive dust emissions from raw material crushing, screening, and conveying, AP-42 emission factors for Crushed Stone Processing Operations, Section 19.2.2 (dated 8/04) are utilized.

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM10 (lbs/ton)*	Limited PTE of PM (tons/yr)	Limited PTE of PM10/PM2.5 (tons/yr)**
Crushing	0.0054	0.0024	0	0
Screening	0.025	0.0087	15.74	5.48
Conveying	0.003	0.0011	1.89	0.69
Limited Potential to Emit (tons/yr) =			**17.63**	**6.17**

Methodology
Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
Limited Potential to Emit (tons/yr) = [Maximum Material Handling Throughput (tons/yr)] * [Emission Factor (lb/ton)] * [ton/2000 lbs]
Raw materials may include stone/gravel, slag, and recycled asphalt pavement (RAP)
Emission Factors from AP-42 Chapter 11.19.2 (dated 8/04), Table 11.19.2-2
*Uncontrolled emissions factors for PM/PM10 represent tertiary crushing of stone with moisture content ranging from 0.21 to 1.3 percent by weight (Table 11.19.2-2). The bulk moisture content of aggregate in the storage piles at a hot mix asphalt production plant typically stabilizes between 3 to 5 percent by weight (Source: AP-42 Section 11.1.1.1).
**Assumes PM10 = PM2.5

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PTE = Potential to Emit

Appendix A.2: Limited Emissions Calculations
Unpaved Roads

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

Unpaved Roads at Industrial Site

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (12/2003).

Annual Asphalt Production Limitation =	1,325,277	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	1,259,014	tons/yr
Maximum Asphalt Cement/Binder Throughput =	66,264	tons/yr
No. 2 Fuel Oil Limitation =	1,799,935	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.4	5.6E+04	2.2E+06	300	0.057	3193.5
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	5.6E+04	9.6E+05	300	0.057	3193.5
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	1.8E+03	8.8E+04	300	0.057	104.6
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	1.8E+03	2.2E+04	300	0.057	104.6
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	1.9E+02	8.4E+03	300	0.057	10.8
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	1.9E+02	2.3E+03	300	0.057	10.8
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	3.0E+05	5.8E+06	300	0.057	17032.1
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	3.0E+05	4.5E+06	300	0.057	17032.1
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.0	5.5E+04	2.3E+06	300	0.057	3137.5
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.0	5.5E+04	9.4E+05	300	0.057	3137.5
	Total				**8.3E+05**	**1.7E+07**			**4.7E+04**

Average Vehicle Weight Per Trip =	20.3	tons/trip
Average Miles Per Trip =	0.057	miles/trip

Unmitigated Emission Factor, Ef = k*[(s/12)^a]*[(W/3)^b] (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
W =	20.3	20.3	20.3	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [(365 - P)/365]
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	6.09	1.55	0.16	lb/mile
Mitigated Emission Factor, Eext =	4.01	1.02	0.10	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	9.73	2.48	0.25	6.40	1.63	0.16	3.20	0.82	0.08
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	9.73	2.48	0.25	6.40	1.63	0.16	3.20	0.82	0.08
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.319	0.081	0.01	0.210	0.053	5.3E-03	0.105	0.027	2.7E-03
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.319	0.081	0.01	0.210	0.053	5.3E-03	0.105	0.027	2.7E-03
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.033	0.008	8.4E-04	0.022	0.006	5.5E-04	0.011	0.003	2.8E-04
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.033	0.008	8.4E-04	0.022	0.006	5.5E-04	0.011	0.003	2.8E-04
Aggregate/RAP Loader Full	Front-end loader (3 CY)	51.90	13.23	1.32	34.13	8.70	0.87	17.06	4.35	0.43
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	51.90	13.23	1.32	34.13	8.70	0.87	17.06	4.35	0.43
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	9.56	2.44	0.24	6.29	1.60	0.16	3.14	0.80	0.08
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	9.56	2.44	0.24	6.29	1.60	0.16	3.14	0.80	0.08
	Totals	**143.09**	**36.47**	**3.65**	**94.09**	**23.98**	**2.40**	**47.04**	**11.99**	**1.20**

Methodology

Maximum Material Handling Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]
Maximum Weight of Vehicle and Load (tons/trip) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip)]
Maximum trips per year (trip/yr) = [Throughput (tons/yr)] / [Maximum Weight of Load (tons/trip)]
Total Weight driven per year (ton/yr) = [Maximum Weight of Vehicle and Load (tons/trip)] * [Maximum trips per year (trip/yr)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/yr) = [Maximum trips per year (trip/yr)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]
Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations

PM = Particulate Matter PM10 = Particulate Matter (<10 um) PM2.5 = Particulate Matter (<2.5 um) PM2.5 = PM10 PTE = Potential to Emit

Appendix A.2: Limited Emissions Calculations
Paved Roads

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

Paved Roads at Industrial Site

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (12/2003).

Annual Asphalt Production Limitation =	1,325,277	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	1,259,014	tons/yr
Maximum Asphalt Cement/Binder Throughput =	66,264	tons/yr
No. 2 Fuel Oil Limitation =	1,799,935	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per day (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.40	5.6E+04	2.2E+06	0	0.000	0.0
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.00	5.6E+04	9.6E+05	0	0.000	0.0
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.00	1.8E+03	8.8E+04	0	0.000	0.0
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	1.8E+03	2.2E+04	0	0.000	0.0
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.00	1.9E+02	8.4E+03	0	0.000	0.0
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	1.9E+02	2.3E+03	0	0.000	0.0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.20	3.0E+05	5.8E+06	0	0.000	0.0
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	3.0E+05	4.5E+06	0	0.000	0.0
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.00	5.5E+04	2.3E+06	0	0.000	0.0
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.00	5.5E+04	9.4E+05	0	0.000	0.0
	Total				**8.3E+05**	**1.7E+07**			**0.0E+00**

Average Vehicle Weight Per Trip =	20.3	tons/trip
Average Miles Per Trip =	0.000	miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	20.3	20.3	20.3	tons = average vehicle weight (provided by source)
sL =	0.6	0.6	0.6	g/m^2 = Ubitiguous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)]
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]

where p =	125	days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N =	365	days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.15	0.03	0.01	lb/mile
Mitigated Emission Factor, Eext =	0.14	0.03	0.01	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.000	0.000	0.0E+00	0.000	0.000	0.0E+00	0.000	0.0E+00	0.0E+00
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.000	0.000	0.0E+00	0.000	0.000	0.0E+00	0.000	0.0E+00	0.0E+00
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Totals	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Methodology
Maximum Material Handling Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]
Maximum Weight of Vehicle and Load (tons/trip) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip)]
Maximum trips per year (trip/yr) = [Throughput (tons/yr)] / [Maximum Weight of Load (tons/trip)]
Total Weight driven per year (ton/yr) = [Maximum Weight of Vehicle and Load (tons/trip)] * [Maximum trips per year (trip/yr)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/yr) = [Maximum trips per year (trip/yr)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]
Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations
PM = Particulate Matter PM10 = Particulate Matter (<10 um) PM2.5 = Particulate Matter (<2.5 um) PM2.5 = PM10 PTE = Potential to Emit

Appendix A.2: Limited Emissions Calculations
Cold Mix Asphalt Production and Stockpiles

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

The following calculations determine the amount of VOC and HAP emissions created from volatilization of solvent used as diluent in the liquid binder for cold mix asphalt production

Limited VOC Emissions from the Sum of the Liquid Binders = 60.70 tons/yr

Volatile Organic Compounds

	Maximum weight % of VOC solvent in binder	Weight % VOC solvent in binder that evaporates	VOC Solvent Usage Limitation (tons/yr)	Limited PTE of VOC (tons/yr)	Liquid Binder Adjustment Ratio
Cut back asphalt rapid cure (assuming gasoline or naphtha solvent)	25.3%	95.0%	63.89	60.70	1.053
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	86.71	60.70	1.429
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	242.79	60.70	4.000
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	130.82	60.70	2.155
Other asphalt with solvent binder	25.9%	2.5%	2,427.93	60.70	40.0
Worst Case Limited PTE of VOC =				**60.70**	

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%	
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0%	Xylenes
Limited PTE of Total HAPs (tons/yr) =	**15.83**	
Limited PTE of Single HAP (tons/yr) =	**5.46**	**Xylenes**

Hazardous Air Pollutant (HAP) Content (% by weight) For Various Petroleum Solvents'

		Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents				
Volatile Organic HAP	CAS#	Gasoline	Kerosene	Diesel (#2) Fuel Oil	No. 2 Fuel Oil	No. 6 Fuel Oil
1,3-Butadiene	106-99-0	3.70E-5%				
2,2,4-Trimethylpentane	540-84-1	2.40%				
Acenaphthene	83-32-9		4.70E-5%		1.80E-4%	
Acenaphthylene	208-96-8		4.50E-5%		6.00E-5%	
Anthracene	120-12-7		1.20E-6%	5.80E-5%	2.80E-5%	5.00E-5%
Benzene	71-43-2	1.90%		2.90E-4%		
Benzo(a)anthracene	56-55-3			9.60E-7%	4.50E-7%	5.50E-4%
Benzo(a)pyrene	50-32-8			2.20E-6%	2.10E-7%	4.40E-5%
Benzo(g,h,i)perylene	191-24-2			1.20E-7%	5.70E-8%	
Biphenyl	92-52-4			6.30E-4%	7.20E-5%	
Chrysene	218-01-9			4.50E-7%	1.40E-6%	6.90E-4%
Ethylbenzene	100-41-4	1.70%		0.07%	3.40E-4%	
Fluoranthene	206-44-0		7.10E-6%	5.90E-5%	1.40E-5%	2.40E-4%
Fluorene	86-73-7		4.20E-5%	8.60E-4%	1.90E-4%	
Indeno(1,2,3-cd)pyrene	193-39-5			1.60E-7%		1.00E-4%
Methyl-tert-butylether	1634-04-4	0.33%				
Naphthalene	91-20-3	0.25%	0.31%	0.26%	0.22%	4.20E-5%
n-Hexane	110-54-3	2.40%				
Phenanthrene	85-01-8		8.60E-6%	8.80E-4%	7.90E-4%	2.10E-4%
Pyrene	129-00-0		2.40E-6%	4.60E-5%	2.90E-5%	2.30E-5%
Toluene	108-88-3	8.10%		0.18%	6.20E-4%	
Total Xylenes	1330-20-7	9.00%		0.50%	0.23%	
Total Organic HAPs		**26.08%**	**0.33%**	**1.29%**	**0.68%**	**0.19%**
Worst Single HAP		**9.00% Xylenes**	**0.31% Naphthalene**	**0.50% Xylenes**	**0.23% Xylenes**	**0.07% Chrysene**

Methodology
Limited PTE of VOC (tons/yr) = [Weight % VOC solvent in binder that evaporates] * [VOC Solvent Usage Limitation (tons/yr)]
Limited PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]
Limited PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]

*Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Composition of Petroleum Mixtures. The Association for Environmental Health and Science.

Abbreviations
VOC = Volatile Organic Compounds
PTE = Potential to Emit

Appendix A.2: Limited Emissions Calculations
Gasoline Fuel Transfer and Dispensing Operation

Company Name: Wabash Valley Asphalt Co., LLC
Source Address: Portable
Permit No.: F153-22594-03274
Revision No.: F005-31033-03274
Reviewer: Hannah L. Desrosiers
Date Received: 10/17/2011

Note: Since the emissions from the gasoline fuel transfer and dispensing operation are minimal, the limited emissions are equal to the unlimited emissions.

To calculate evaporative emissions from the gasoline dispensing fuel transfer and dispensing operation handling emission factors from AP-42 Table 5.2-7 were used. The total potential emission of VOC is as follows:

Gasoline Throughput =	0	gallons/day
=	0	kgal/yr

Volatile Organic Compounds

Emission Source	Emission Factor (lb/kgal of throughput)	PTE of VOC (tons/yr)*
Filling storage tank (balanced submerged filling)	0.3	0.00
Tank breathing and emptying	1.0	0.00
Vehicle refueling (displaced losses - controlled)	1.1	0.00
Spillage	0.7	0.00
Total		**0.00**

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%	
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0%	Xylenes
Limited PTE of Total HAPs (tons/yr) =	**0.00**	
Limited PTE of Single HAP (tons/yr) =	**0.00**	**Xylenes**

Methodology
The gasoline throughput was provided by the source.
Gasoline Throughput (kgal/yr) = [Gasoline Throughput (lbs/day)] * [365 days/yr] * [kgal/1000 gal]
PTE of VOC (tons/yr) = [Gasoline Throughput (kgal/yr)] * [Emission Factor (lb/kgal)] * [ton/2000 lb]
PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]
PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]

*Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Composition of Petroleum Mixtures. The Association for Environmental Health and Science.

Abbreviations
VOC = Volatile Organic Compounds
PTE = Potential to Emit

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
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SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Daniel Conley
Wabash Valley Asphalt Co., LLC
PO Box 9778
Terre Haute, IN 47808

DATE: June 22, 2012

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

SUBJECT: Final Decision
Significant Revision to FESOP
005-31033-03274

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
James L. Burdick, Responsible Official
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
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www.idem.IN.gov

June 22, 2012

TO: Bartholomew County Public Library

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

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

Applicant Name: Wabash Valley Asphalt Co., LLC
Permit Number: 005-31033-03274

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	PWAY 6/22/2012 Wabash Valley Asphalt Company, LLC 005-31033-03274 (final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
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2		James L Burdick President Wabash Valley Asphalt Company, LLC PO Box 9778 Terre Haute IN 47808 *(RO CAATS)*									
3		Mr. Elbert Held 734 Hutchins Columbus IN 47201 *(Affected Party)*									
4		Mr. Lcnfc 1039 Sycamore St Columbus IN 47201 *(Affected Party)*									
5		Bartholomew Co Public Library 536 Fifth St. Columbus IN 47201-6225 *(Library)*									
6		Bartholomew County Commissioners 440 Third Street Columbus IN 47202 *(Local Official)*									
7		Mr. Jean Terpstra 3210 Grove Pkwy Columbus IN 47203 *(Affected Party)*									
8		August Tindell 31 Reo Street Columbus IN 47201 *(Affected Party)*									
9		Terry Lowe 1039 W Jeffersons St Apt 3 Franklin IN 46131 *(Affected Party)*									
10		Mr. Charles Mitch 3210 Grove Parkway Columbus IN 47203 *(Affected Party)*									
11		Terre Haute City Council and Mayors Office 17 Harding Ave Terre Haute IN 47807 *(Local Official)*									
12		Bartholomew County Health Department 440 3rd Street, Suite 303 Columbus IN 47201 *(Health Department)*									
13		Harry & Anna Mae Knepp 10431 E Hwy 50 Cannelburg IN 47519 (Affected Party)									
14		John Patrick Hart Sr. Residuary 10063 E US Hwy 50 Cannelburg in 47519 *(Affected Party)*									
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