



# 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](http://www.idem.IN.gov)

TO: Interested Parties / Applicant

DATE: Dec. 2, 2009

RE: E & B Paving, Inc. / 049-27797-03285

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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**Federally Enforceable State Operating Permit  
OFFICE OF AIR QUALITY**

**E & B Paving, Inc.  
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 provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or 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.**

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. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-8-11.1, applicable to those conditions

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.

Operation Permit No.: F049-27797-03285	
Issued by:  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: Expiration Date: Dec. 2, 2009 Dec. 2, 2019

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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 drum hot mix asphalt plant.

Initial Source Address:	101 S 600 W, Kewanna, Indiana 46939
Mailing Address:	286 W 300 N, Anderson, IN 46012
General Source Phone Number:	(765) 643-5358
SIC Code:	2951
Current County Location:	Fulton
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program 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)]

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

- (a) One (1) hot asphalt drum mixer/dryer, identified as EU-01, constructed in 1986, capable of processing a maximum of 300 tons of raw material per hour, equipped with one 120 million British thermal units (MMBtu) per hour No. 2 distillate fuel oil burner, using natural gas, Refinery Blend Fuel oil, and Waste oil as back-up fuels, processing slag in the aggregate mix; equipped with one (1) baghouse for particulate control, and exhausting through one (1) stack, identified as stack SV-1. This source does not produce cold mix asphalt.

Under 40 CFR 60, Subpart I, this hot mix asphalt plant is considered an affected facility.

- (b) Feeding, conveying and loading operations consisting of the following:
- (1) Four (4) aggregate storage bins.
  - (2) One (1) recycled aggregate storage bin.
  - (3) Five (5) storage piles, total capacity: 18,000 tons.
- (c) One (1) hot oil heater, firing No.2 distillate oil as primary fuel, firing natural gas as backup fuel, exhausting to Stack SV-2, rated at 2.2 million British thermal units per hour.
- (d) Two (2) storage tanks, constructed in 1986, identified as Tank-01 and Tank-02, storing liquid asphalt, exhausting to vents SV-3 and SV-4, with capacities of 18,000 gallons and 25,000 gallons, respectively.
- (e) Three (3) storage tanks, constructed in 1986, identified as Tanks-03 through -05, storing No.2 distillate oil, diesel blend, or waste oil, exhausting to vent SV-5, with capacities of 15,000 gallons, 12,000 gallons and 1,000 gallons, respectively.

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:

- (a) A gasoline fuel transfer and dispensing operation handling less than or equal to one thousand three hundred (1,300) gallons per day, such as filling of tanks, locomotives, automobiles, having storage capacity less than or equal to ten thousand five hundred (10,500) gallons;  
  
Under 40 CFR 60, Subpart CCCCCC, the units comprising this operation are considered affected facilities.
- (b) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu/hr and firing fuel containing less than five-tenths (0.5) percent;
- (c) Combustion source flame safety purging on startup;
- (d) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu/hr;
- (e) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to ten thousand five hundred (10,500) gallons, and dispensing less than or equal to two hundred thousand (230,000) gallons per month;
- (f) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;
- (g) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings;
- (h) Cleaners and solvents characterized as follows:
  - (1) having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38°C (100°F) or;
  - (2) having a vapor pressure equal to or less than 0.7 kPa; 5 mm Hg; or 0.1psi measured at 20°C(68°F); the use of which for all cleaners and solvents combined does not exceed one hundred forty-five (145) gallons per twelve (12) months;
- (i) Closed loop heating and cooling systems;
- (j) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;
- (k) A laboratory as defined in 326 IAC 2-7-1(21)(D); and
- (l) Vehicle travel on paved roads, unpaved roads, and parking lots.

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) for a Federally Enforceable State Operating Permit (FESOP).

## SECTION B GENERAL CONDITIONS

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

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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)]

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- (a) This permit, F049-27797-03285, 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]

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

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

### B.4 Enforceability [326 IAC 2-8-6] [IC 13-17-12]

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

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

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

### B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

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

### B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

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- (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. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

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

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- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This

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

- (b) One (1) certification shall be included, using the attached Certification Form, 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.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]**

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

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

- (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 the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

**B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]**

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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.11 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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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within 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 the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) 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 or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) 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.12 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, and Northern Regional Office 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 Compliance and Enforcement Branch)  
Facsimile Number: 317-233-6865  
Northern Regional Office phone: (574) 245-4870; fax: (574) 245-4877.

- (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 the certification 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.

- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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

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- (a) All terms and conditions of permits established prior to F049-27797-03285 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.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]**

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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.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]**

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- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported 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

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. 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.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

**B.16 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]

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- (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 the certification 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.17 Permit Renewal [326 IAC 2-8-3(h)]**

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- (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 the certification 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 in writing by IDEM, OAQ any additional information identified as being needed to process the application.

**B.18 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]**

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- (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 shall be certified 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.19 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]**

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- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) 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) through (d). 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) Emission Trades [326 IAC 2-8-15(c)]  
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(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.20 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.21 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.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]**

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- (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

The application which shall be submitted by the Permittee does require the certification 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.23 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]**

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

**B.24 Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9]**

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- (a) The requirements to obtain a permit modification under 326 IAC 2-8-11.1 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3.
- (b) Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction, work is suspended for a continuous period of one (1) year or more.

**B.25 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]**

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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 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), 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.
- (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) 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.
- (d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

#### C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, 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 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) Clark County (Jefferson Township - Cities of Jeffersonville, Clarksville, Oak Park);
  - (b) Dearborn County (Lawrenceburg Township - Cities of Lawrenceburg and Greendale);
  - (c) Dubois County (Bainbridge Township - the City of Jasper);

- (d) 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);
  - (e) St. Joseph County (the area north of Kern Road and east of Pine Road);
  - (f) Vanderburgh County (the area included in the City of Evansville and Pigeon Township); and
  - (g) Vigo County (Indiana State University campus, 0.5km 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 non-overlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

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

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

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

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The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

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

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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.6 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

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

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

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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.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
  - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

- (2) If there is a change in the following:
  - (A) Asbestos removal or demolition start date;
  - (B) Removal or demolition contractor; or
  - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification 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.9 Performance Testing [326 IAC 3-6]**

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- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, 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 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 certification 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 certification 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.10 Compliance Requirements [326 IAC 2-1.1-11]**

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

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Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance or ninety (90) days of initial start-up, whichever is later. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, 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 the certification 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.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

---

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

**C.13 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]**

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- (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.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]**

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

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) These ERPs shall be submitted for approval to:  
  
Indiana Department of Environmental Management  
Compliance and Enforcement Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
  
within ninety (90) days after the date of issuance of this permit.  
  
The ERP does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

**C.15 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]**

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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.16 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) Upon detecting an excursion or exceedance, the Permittee shall 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 emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
  - (1) initial inspection and evaluation;
  - (2) recording that operations returned 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 within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (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 maintain the following records:
  - (1) monitoring data;
  - (2) monitor performance data, if applicable; and
  - (3) corrective actions taken.

C.17 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 take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) 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 the certification 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.18 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]**

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- (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.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance or ninety (90) days of initial start-up, whichever is later.

#### **C.19 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]**

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- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of 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
- (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) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

## Portable Source Requirement

### C.20 Relocation of Portable Sources [326 IAC 2-14-4]

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- (a) This permit is approved for operation in all areas of Indiana except in severe nonattainment areas for ozone, and Lake, Porter, and LaPorte Counties. 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 the certification 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.21 Compliance with 40 CFR 82 and 326 IAC 22-1

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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 the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) One (1) hot asphalt drum mixer/dryer, identified as EU-01, constructed in 1986, capable of processing a maximum of 300 tons of raw material per hour, equipped with one 120 million British thermal units (MMBtu) per hour No. 2 distillate fuel oil burner, using natural gas, Refinery Blend Fuel oil, and Waste oil as back-up fuels, processing slag in the aggregate mix; equipped with one (1) baghouse for particulate control, and exhausting through one (1) stack, identified as stack SV-1. This source does not produce cold mix asphalt.

Under 40 CFR 60, Subpart I, this hot mix asphalt plant is considered an affected facility.

- (b) Feeding, conveying and loading operations consisting of the following:
- (1) Four (4) aggregate storage bins.
  - (2) One (1) recycled aggregate storage bin.
  - (3) Five (5) storage piles, total capacity: 18,000 tons.
- (c) One (1) hot oil heater, firing No.2 distillate oil as primary fuel, firing natural gas as backup fuel, exhausting to Stack SV-2, rated at 2.2 million British thermal units per hour.

(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]

Pursuant to 326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the dryer/mixer shall not exceed 0.03 grain per dry standard cubic foot of exhaust air when the source is located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.

#### D.1.2 Particulate Matter (PM) [326 IAC 2-2]

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

- (a) the amount of asphalt processed shall not exceed 738,932 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) PM emissions from the dryer/mixer shall not exceed 0.223 pounds per ton of asphalt processed.

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

Note: The source has opted to limit source-wide potential to emit PM to less than 125 tons per twelve (12) consecutive month period. This would allow for the co-location of an additional asphalt plant to the same location, as long as the co-located plant has limited potential to emit equal to or less than those that are issued within this permit.

#### D.1.3 Dryer and Mixer FESOP Limits [326 IAC 2-8-4] [326 IAC 2-2]

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

- (a) The amount of asphalt processed shall not exceed 738,932 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 0.099 pounds per ton of asphalt processed.
- (c) The PM2.5 emissions from the dryer/mixer shall not exceed 0.117 pounds per ton of asphalt processed.
- (d) The CO emissions from the dryer/mixer shall not exceed 0.13 pounds per ton of asphalt processed.
- (e) The VOC emissions from the dryer/mixer shall not exceed 0.032 pounds per ton of asphalt processed.
- (f) The SO2 emissions from the dryer/mixer shall not exceed 0.540 pounds per ton of Blast Furnace slag processed in the aggregate mix.
- (g) Blast Furnace slag usage shall not exceed 73,900 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (h) The SO2 emissions from the dryer/mixer shall not exceed 0.0014 pounds per ton of Steel slag processed in the aggregate mix.

Compliance with these limitations, combined with the limited PTE from other emission units at this source, shall limit the source-wide total potential to emit PM10, PM2.5, CO, VOC, and SO2 to less than 100 tons per twelve (12) consecutive month period, and shall render 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD) not applicable.

Note: The source has opted to limit source-wide potential to emit PM10, PM2.5, CO, VOC, and SO2 to less than 50 tons per twelve (12) consecutive month period. This would allow for the co-location of an additional asphalt plant to the same location, as long as the co-located plant has limited potentials to emit equal to or less than those that are issued within this permit.

#### D.1.4 Hazardous Air Pollutants (HAPs) [326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-4.1]

Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following fuel limitations combusted in the dryer/mixer burner and all other combustion equipment:

- (a) The HCl emissions shall not exceed 13.2 pounds of HCl per 1,000 gallons of waste oil burned.
- (b) The waste oil combusted shall not contain more than 0.50% ash, 0.20% chlorine, and 0.01% Lead.

Compliance with these limits, combined with the limited PTE from all other emission units at this source, shall limit the source-wide total potential to emit HCL to less than 10 tons per twelve (12) consecutive month period, and any combination of HAPs to less than 25 tons per twelve (12) consecutive month period, and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (PSD), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable.

Note: The source has opted to limit source-wide potential to emit any single hazardous air to less than 5 tons per twelve (12) consecutive month period, and any combination of HAPs to less than 12.5 tons per twelve (12) consecutive month period. This would allow for the co-location of an additional asphalt plant to the same location, as long as the co-located plant has limited potential to emit equal to or less than those that are issued within this permit.

D.1.5 Fuel and Slag Usage Limitations [326 IAC 2-8-4][326 IAC 2-2]

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Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following fuel limitations combusted in the dryer/mixer burner and all other combustion equipment:

(a) Sulfur Content Specifications

- (1) The sulfur content of No.2 fuel oil shall not exceed 0.50 percent by weight.
- (2) The sulfur content of the refinery blend fuel oil shall not exceed 1.00 percent by weight.
- (3) The sulfur content of the waste fuel oil shall not exceed 1.00 percent by weight.
- (4) The sulfur content of the Blast Furnace slag shall not exceed 1.10 percent by weight, with compliance demonstrated on a calendar month average.
- (5) The sulfur content of the Steel slag shall not exceed 0.66 percent by weight.

(b) Single Fuel Usage and Slag Usage Limitations:

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

- (1) Natural gas usage shall not exceed 510.77 million cubic feet per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (2) No. 2 fuel oil usage shall not exceed 638,476 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (3) Refinery blend fuel oil usage shall not exceed 319,238 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month; and
- (4) Waste oil usage shall not exceed 340,955 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (5) Blast Furnace slag usage shall not exceed 73,900 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(c) Multiple Fuel Usage and Slag Usage Limitation:

When combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner in conjunction with the use of slag, emissions from the dryer/mixer shall be limited as follows:

- (1) NO<sub>x</sub> emissions from the dryer/mixer and all other combustion equipment shall be less than 49.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (2) SO<sub>2</sub> emissions from the dryer/mixer and all other combustion equipment shall be less than 49.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits, combined with the limited PTE from all other emission units at this source, shall limit the source-wide total potential to emit NO<sub>x</sub> and SO<sub>2</sub> 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 (PSD), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable.

Note: The source has opted to limit source-wide potential to emit NO<sub>x</sub> to less than 50 tons per twelve (12) consecutive month period. This would allow for the co-location of an additional asphalt plant to the same location, as long as the co-located plant has limited potential to emit equal to or less than those that are issued within this permit.

#### D.1.6 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1-1][326 IAC 7-2-1]

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

- (a) The sulfur dioxide (SO<sub>2</sub>) emissions from the dryer/mixer burner shall not exceed 0.5 pounds per million Btu heat input when using distillate oil.
- (b) The sulfur dioxide (SO<sub>2</sub>) emissions from the dryer/mixer burner shall not exceed 1.60 pounds per million Btu heat input when using residual oil.
- (c) Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

#### D.1.7 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

In order to render the requirements of 326 IAC 8-1-6 not applicable, the dryer/mixer shall be limited as follows:

- (a) The amount of asphalt processed shall not exceed 738,932 tons per twelve (12) consecutive month period
- (b) The VOC emissions from the dryer/mixer shall not exceed 0.032 pounds per ton of asphalt processed.

Compliance with this limit shall limit the VOC PTE from the dryer/mixer to less than twenty-five (25) tons per 12 consecutive month period and shall render 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities) not applicable.

#### D.1.8 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

### **Compliance Determination Requirements**

#### 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.1.2(b), D.1.3(b), and D.1.3(c), the Permittee shall perform PM, PM<sub>10</sub>, and PM<sub>2.5</sub> testing for the aggregate dryer/mixer utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. PM<sub>10</sub> and PM<sub>2.5</sub> includes filterable and condensable particulate matter. Testing shall be conducted in accordance with Section C- Performance Testing.
- (b) In order to demonstrate compliance with Conditions D.1.3(f) and D.1.5(a)(4), when using Blast Furnace slag, the Permittee shall perform SO<sub>2</sub> 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 be conducted in accordance with Section C- Performance Testing.

#### D.1.10 Particulate Control

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- (a) In order to comply with Conditions D.1.1, D.1.2(b), D.1.3(b), and D.1.3(c), the baghouse for the dryer/mixer shall be in operation and control emissions from the emission unit 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.1.11 Multiple Fuel Usage and Slag Limitation

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- (a) In order to comply with Condition D.1.5(c) when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, in conjunction with the use of slag, the Permittee shall limit fuel usage in the dryer/mixer burner according to the following formulas:

- (1) NO<sub>x</sub> emissions from the dryer/mixer shall be less than 49.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

where:

- N = tons of nitrogen oxide emissions for a 12-month consecutive period  
G = million cubic feet of natural gas used in the last 12 months  
O = gallons of No. 2 fuel oil used in last 12 months  
R = gallons of Refinery Blend fuel oil used in last 12 months  
W = gallons of Waste oil used for last 12 months  
E<sub>G</sub> = 190 lb/million cubic feet of natural gas  
E<sub>O</sub> = 24 lb/1000 gallons of No. 2 fuel oil  
E<sub>R</sub> = 47 lb/1000 gallons of Refinery Blend fuel oil  
E<sub>W</sub> = 19 lb/1000 gallons of Waste oil

- (2) SO<sub>2</sub> emissions from the dryer/mixer shall be less than 49.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

where:

- S = tons of sulfur dioxide emissions for a 12-month consecutive period  
G = million cubic feet of natural gas used in the last 12 months  
O = gallons of No. 2 fuel oil used in last 12 months  
R = gallons of Refinery Blend fuel oil used in last 12 months  
W = gallons of Waste oil used in last 12 months  
B = tons of Blast Furnace slag used in last 12 months  
T = tons of Steel slag used in last 12 months  
E<sub>G</sub> = 0.60 lb/million cubic feet of natural gas  
E<sub>O</sub> = 71.00 lb/1000 gallons of No. 2 fuel oil  
E<sub>R</sub> = 157 lb/1000 gallons of Refinery Blend fuel oil  
E<sub>W</sub> = 147 lb/1000 gallons of Waste oil  
E<sub>B</sub> = 0.54 lb/ton of Blast Furnace slag used  
E<sub>T</sub> = 0.0014 lb/ton of Steel slag used

## D.1.12 Sulfur Dioxide (SO<sub>2</sub>) Emissions and Sulfur Content

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### Blast Furnace Slag

- (a) Compliance with the Blast Furnace slag limitations established in Condition D.1.5(a)(4) shall be determined utilizing one of the following options. Pursuant to 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements), 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 one hundred twenty (120) million British thermal units per hour 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

- (b) Compliance with the Steel slag limitations established in Condition D.1.5(a)(5) shall be determined utilizing one of the following options. Pursuant to 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements), compliance shall be demonstrated on a thirty (30) day calendar-month average.
- (1) Maintaining all records of vendor analyses or certifications of 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 one hundred twenty (120) million British thermal units per hour 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.

### Fuel Oil

- (c) Compliance with the fuel limitations established in Conditions D.1.5(a) and D.1.6 shall be determined utilizing one of the following options. Pursuant to 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements), compliance shall be demonstrated on a thirty (30) day calendar-month average.

- (1) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million British thermal units heat input when combusting No. 2 fuel oil, or one (1.00) pound per million British thermal units heat input when combusting either refinery blend or waste fuel oils, by:
  - (A) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
  - (B) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
    - (i) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
    - (ii) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (2) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the one hundred twenty (120) million British thermal units 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 (1) or (2) 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.1.13 Visible Emissions Notations**

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- (a) Daily visible emission notations of the aggregate dryer, mixer, and burner baghouse stack exhaust and the conveying, material transfer points, and screening shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

##### **D.1.14 Parametric Monitoring**

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The Permittee shall record the pressure drop across the baghouse used in conjunction with the aggregate dryer/mixer, once per day when the process is in operation and venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Response to

Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

#### D.1.15 Broken or Failed Bag Detection

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- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emission 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.1.16 Record Keeping Requirements

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- (a) To document compliance with Conditions D.1.2(a), D.1.3(a) and D.1.7(a) the Permittee shall keep records of the amount of asphalt processed through the dryer/mixer. Records necessary to demonstrate compliance shall be available within thirty (30) days of the end of each compliance period.
- (b) To document compliance with Condition D.1.5(b)(6), the Permittee shall keep records of the amount of Blast Furnace slag processed through the dryer/mixer. Records necessary to demonstrate compliance shall be available within thirty (30) days of the end of each compliance period.
- (c) To document compliance with Conditions D.1.5(a)(4) and D.1.5(a)(5), the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken daily and shall be complete and sufficient to establish compliance with the SO<sub>2</sub> emission limits established in Conditions D.1.5(a)(4) and D.1.5(a)(5). For the sulfur content limit, the compliance determination period is each calendar month.
  - (1) Calendar dates covered in the compliance determination period;
  - (2) Actual slag usage, sulfur content and equivalent sulfur dioxide emission rates for all slag used at the source per month;
  - (3) A certification, signed by the owner or operator, that the records of the slag supplier certifications represent all of the slag used during the period; and

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

- (4) Slag supplier certifications;
  - (5) The name of the slag supplier; and
  - (6) A statement from the slag supplier that certifies the sulfur content of the slag.
- (d) To document compliance with Conditions D.1.4, D.1.5, and D.1.6, the Permittee shall maintain records in accordance with (1) through (7) below.
- (1) Calendar dates covered in the compliance determination period;
  - (2) Actual fuel usage, sulfur content, heat content, and equivalent sulfur dioxide emission rates for each fuel used at the source per month;
  - (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; and

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

- (5) Fuel supplier certifications;
  - (6) The name of the fuel suppliers; and
  - (7) A statement from the fuel supplier that certifies the sulfur content of the No. 2 fuel oil, Refinery Blend fuel oil, and/or the Waste oil.
- (e) To document compliance with Conditions D.1.5(c) and D.1.11 when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, the Permittee shall maintain records of actual fuel usage, and equivalent nitrogen oxides and sulfur dioxide emission rates for each fuel used at the source per month.
- (f) To document compliance with Condition D.1.13, the Permittee shall maintain daily records of the visible emission notations from each of the conveyors, screens, material transfer points, and dryer/mixer stack (SV-1) exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the plant did not operate that day).
- (g) To document compliance with Condition D.1.14, the Permittee shall maintain the daily records of the pressure drop across the baghouse controlling the dryer/mixer. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g., the dryer/mixer did not operate that day).
- (h) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.1.17 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.2(a), D.1.3(a), D.1.7(a), D.1.5(b), D.1.5(c), and D.1.11 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

## SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (d) Two (2) storage tanks, constructed in 1986, identified as Tank-01 and Tank-02, storing liquid asphalt, exhausting to vents SV-3 and SV-4, with capacities of 18,000 gallons and 25,000 gallons, respectively.
- (e) Three (3) storage tanks, constructed in 1986, identified as Tanks-03 through -05, storing No.2 distillate oil, diesel blend, or waste oil, exhausting to vent SV-5, with capacities of 15,000 gallons, 12,000 gallons and 1,000 gallons, respectively.

(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 Liquid Storage Vessels [326 IAC 8-9]

Pursuant to 326 IAC 8-9-6 (Volatile Organic Liquid Storage Vessels), the Permittee shall record and submit to IDEM, OAQ a report containing the following information for Tank-01, Tank-02, Tank-03, Tank-04, and Tank-05:

- (a) The vessel identification number.
- (b) The vessel dimensions.
- (c) The vessel capacity.

The Permittee shall keep all records as described in (a) through (c) for the life of the vessel.

## SECTION E.1

## FACILITY OPERATION CONDITIONS

### Emissions Unit Description: Hot-Mix Asphalt Plant

- (a) One (1) hot asphalt drum mixer/dryer, identified as EU-01, constructed in 1986, capable of processing a maximum of 300 tons of raw material per hour, equipped with one 120 million British thermal units (MMBtu) per hour No. 2 distillate fuel oil burner, using natural gas, Refinery Blend Fuel oil, and Waste oil as back-up fuels, processing slag in the aggregate mix; equipped with one (1) baghouse for particulate control, and exhausting through one (1) stack, identified as stack SV-1. This source does not produce cold mix asphalt.

Under 40 CFR 60, Subpart I, this hot mix asphalt plant 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 NSPS Subpart I Requirements - Standards of Performance for Hot Mix Asphalt Facilities [40 CFR Part 60, Subpart I] [326 IAC 12-1]

Pursuant to CFR Part 60, Subpart I, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart I, which are incorporated by reference as 326 IAC 12-1 for the asphalt plant as specified as follows. Pursuant to 40 CFR 60.90(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.

#### § 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 (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]

**SECTION E.2**

**FACILITY OPERATION CONDITIONS**

**Emissions Unit Description:** Gasoline Dispensing Facility

- (a) A gasoline fuel transfer and dispensing operation handling less than or equal to one thousand three hundred (1,300) gallons per day, such as filling of tanks, locomotives, automobiles, having storage capacity less than or equal to ten thousand five hundred (10,500) gallons;

Under 40 CFR 60, Subpart CCCCCC, the units comprising this operation are considered affected facilities.

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

**National Emission Standards for Hazardous Air Pollutants Requirements [326 IAC 2-7-5(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 63.11130, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, as specified in Table 3 of 40 CFR Part 63, Subpart CCCCCC in accordance with schedule in 40 CFR 63 Subpart CCCCCC

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

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

**E.2.2 National Emissions Standards for Hazardous Air Pollutants for Source Category Gasoline Dispensing Facilities [40 CFR Part 63, Subpart CCCCCC]**

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart CCCCCC (included as Attachment A), beginning on January 10, 2011, as follows:

- (1) 40 CFR 63. 11110
- (2) 40 CFR 63. 11111(a)(b)(e)(f)
- (3) 40 CFR 63. 11112(a)(d)
- (4) 40 CFR 63. 11113(b)(c)
- (5) 40 CFR 63. 11116
- (6) 40 CFR 63. 11130
- (7) 40 CFR 63. 11131
- (8) 40 CFR 63. 11132
- (9) Table 3

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

### FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: E & B Paving, Inc.  
Source Address: Portable  
Mailing Address: 286 W 300 N, Anderson, IN 46012  
FESOP Permit No.: F049-27797-03285

**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  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
Phone: (317) 233-0178  
Fax: (317) 233-6865**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
EMERGENCY OCCURRENCE REPORT**

Source Name: E & B Paving, Inc.  
Source Address: Portable  
Mailing Address: 286 W 300 N, Anderson, IN 46012  
FESOP Permit No.: F049-27797-03285

**This form consists of 2 pages**

**Page 1 of 2**

- This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
  - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16

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

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

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

Page 2 of 2

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

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

A certification is not required for this report.

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

**FESOP Quarterly Report**

Source Name: E & B Paving, Inc.  
Source Address: Portable  
Mailing Address: 286 W 300 N, Anderson, IN 46012  
FESOP Permit No.: F049-27797-03285  
Facility: Drum mixer and dryer  
Parameter: Annual Asphalt Production  
Limit: The amount of hot mix asphalt produced in the dryer/burner shall not exceed 738,932 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
	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: \_\_\_\_\_

Attach a signed certification to complete this report.

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

**Fuel / Slag Usage Quarterly Report**

Page 1 of 2

Source Name: E & B Paving, Inc.  
Source Address: Portable  
Mailing Address: 286 W 300 N, Anderson, IN 46012  
FESOP Permit No.: F049-27797-03285  
Facility: Drum mixer and dryer  
Parameters: Nitrogen Oxides (NOx) and Sulfur Dioxide (SO<sub>2</sub>) Emissions

Limit: Nitrogen oxides (NOx) emissions shall be less than 49.9 tons per twelve (12) consecutive month period based on the following equation:

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

where:

N = tons of nitrogen oxide emissions for a 12-month consecutive period  
G = million cubic feet of natural gas used in the last 12 months  
O = gallons of No. 2 fuel oil used in last 12 months  
R = gallons of Refinery Blend fuel oil used in last 12 months  
W = gallons of Waste oil used for last 12 months  
E<sub>G</sub> = 190 lb/million cubic feet of natural gas  
E<sub>O</sub> = 24 lb/1000 gallons of No. 2 fuel oil  
E<sub>R</sub> = 47 lb/1000 gallons of Refinery Blend fuel oil  
E<sub>W</sub> = 19 lb/1000 gallons of Waste oil

Limit: Sulfur dioxide (SO<sub>2</sub>) emissions shall be less than 49.9 tons per twelve (12) consecutive month period based on the following equation:

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

where:

S = tons of sulfur dioxide emissions for a 12-month consecutive period  
G = million cubic feet of natural gas used in the last 12 months  
O = gallons of No. 2 fuel oil used in last 12 months  
R = gallons of Refinery Blend fuel oil used in last 12 months  
W = gallons of Waste oil used in last 12 months  
B = tons of Blast Furnace slag used in last 12 months  
T = tons of Steel slag used in last 12 months  
E<sub>G</sub> = 0.60 lb/million cubic feet of natural gas  
E<sub>O</sub> = 71.00 lb/1000 gallons of No. 2 fuel oil  
E<sub>R</sub> = 157 lb/1000 gallons of Refinery Blend fuel oil  
E<sub>W</sub> = 147 lb/1000 gallons of Waste oil  
E<sub>B</sub> = 0.54 lb/ton of Blast Furnace slag used  
E<sub>T</sub> = 0.0014 lb/ton of Steel slag used

**Multiple Fuel / Slag Usage Quarterly Report**

QUARTER: \_\_\_\_\_ YEAR: \_\_\_\_\_

Month		Column 1	Column 2	Column 1 + Column 2	Equation Results
	Fuel Types / Slag (units)	Usage This Month	Usage Previous 11 Months	Usage 12 Month Total	Emissions (tons per 12 months)
Month 1	Natural Gas (million cubic feet)				Nitrogen Oxides = Sulfur Dioxide =
	No. 2 Fuel Oil (gallons)				
	Refinery Blend Fuel Oil (gallons)				
	Waste Fuel Oil (gallons)				
	Blast Furnace Slag (tons)				
	Steel Slag Usage (tons)				
Month 2	Natural Gas (million cubic feet)				Nitrogen Oxides = Sulfur Dioxide =
	No. 2 Fuel Oil (gallons)				
	Refinery Blend Fuel Oil (gallons)				
	Waste Fuel Oil (gallons)				
	Blast Furnace Slag (tons)				
	Steel Slag Usage (tons)				
Month 3	Natural Gas (million cubic feet)				Nitrogen Oxides = Sulfur Dioxide =
	No. 2 Fuel Oil (gallons)				
	Refinery Blend Fuel Oil (gallons)				
	Waste 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: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH  
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: E & B Paving, Inc.  
Source Address: Portable  
Mailing Address: 286 W 300 N, Anderson, IN 46012  
FESOP Permit No.: F049-27797-03285

**Months:** \_\_\_\_\_ **to** \_\_\_\_\_ **Year:** \_\_\_\_\_

Page 1 of 2

<p>This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, 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".</p>	
<p><input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.</p>	
<p><input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD</p>	
<p><b>Permit Requirement</b> (specify permit condition #)</p>	
<p><b>Date of Deviation:</b></p>	<p><b>Duration of Deviation:</b></p>
<p><b>Number of Deviations:</b></p>	
<p><b>Probable Cause of Deviation:</b></p>	
<p><b>Response Steps Taken:</b></p>	
<p><b>Permit Requirement</b> (specify permit condition #)</p>	
<p><b>Date of Deviation:</b></p>	<p><b>Duration of Deviation:</b></p>
<p><b>Number of Deviations:</b></p>	
<p><b>Probable Cause of Deviation:</b></p>	
<p><b>Response Steps Taken:</b></p>	

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

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

## ATTACHMENT A

**Source Name:** E & B Paving, Inc.  
**Source Address:** Portable  
**Mailing Address:** 286 W 300 N, Anderson, IN 46012  
**FESOP Permit No.:** F049-27797-03285

### ASPHALT PLANT SITE FUGITIVE DUST CONTROL PLAN

1. Fugitive particulate matter (dust) emissions from interior roads and parking lots shall be controlled by one or more of the following measures:
  - A. Paving with asphalt.
  - B. Treating with emulsified asphalt on an as needed basis.
  - C. Treating with calcium chloride on an as needed basis.
  - D. Treating with water on an as needed basis.
2. Fugitive particulate matter (dust) emissions from aggregate stockpiles shall be controlled by one or more of the following measures:
  - A. Clean and maintain stockpile areas.
  - B. Treating around the stockpile areas with water on an as needed basis.
  - C. Treating the stockpiles with water on an as needed basis.
3. Fugitive particulate matter (dust) emissions from conveying of aggregates shall be controlled by treating with water on an as needed basis.
4. Fugitive particulate matter (dust) emissions from the transferring of aggregates shall be controlled by one of the following measures:
  - A. Locate stockpiles as close as possible to feed bins.
  - B. Limit transfer points to three foot drops or less.
  - C. Apply water on an as needed basis.
5. Fugitive particulate matter (dust) emissions from transporting of aggregates shall be controlled by one of the following measures:
  - A. Tarping the aggregate hauling vehicles.
  - B. Ensure tailgates are tight and do not leak.
  - C. Maintain a 10 MPH speed limit on site.
6. Fugitive particulate matter (dust) emissions from the loading and unloading of aggregates shall be controlled by one or more of the following measures:
  - A. Limit free fall distance.
  - B. Limit the rate of discharge of the aggregate.
  - C. Apply water on an as needed basis.
7. **Material Handling Operations**

The size of the aggregate stockpiles will vary. Materials delivered to the plant site will be kept reasonably balanced with plant production. The actual drying and mixing of the aggregate mixture is done inside the asphalt plant. Emissions are controlled, at this point, by plant dust control systems.

**Indiana Department of Environmental Management  
Office of Air Quality**

**Attachment B**

**Title 40: Protection of Environment**

**PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS**

**Subpart CCCCCC—National Emission Standards for Hazardous Air Pollutants for Source Category:  
Gasoline Dispensing Facilities**

**Source:** 73 FR 1945, Jan. 10, 2008, unless otherwise noted.

**What This Subpart Covers**

**§ 63.11110 What is the purpose of this subpart?**

This subpart establishes national emission limitations and management practices for hazardous air pollutants (HAP) emitted from the loading of gasoline storage tanks at gasoline dispensing facilities (GDF). This subpart also establishes requirements to demonstrate compliance with the emission limitations and management practices.

**§ 63.11111 Am I subject to the requirements in this subpart?**

- (a) The affected source to which this subpart applies is each GDF that is located at an area source. The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank.
- (b) If your GDF has a monthly throughput of less than 10,000 gallons of gasoline, you must comply with the requirements in §63.11116.
- (c) If your GDF has a monthly throughput of 10,000 gallons of gasoline or more, you must comply with the requirements in §63.11117.
- (d) If your GDF has a monthly throughput of 100,000 gallons of gasoline or more, you must comply with the requirements in §63.11118.
- (e) An affected source shall, upon request by the Administrator, demonstrate that their average monthly throughput is less than the 10,000-gallon or the 100,000-gallon threshold level, as applicable.
- (f) If you are an owner or operator of affected sources, as defined in paragraph (a) of this section, you are not required to obtain a permit under 40 CFR part 70 or 40 CFR part 71 as a result of being subject to this subpart. However, you must still apply for and obtain a permit under 40 CFR part 70 or 40 CFR part 71 if you meet one or more of the applicability criteria found in 40 CFR 70.3(a) and (b) or 40 CFR 71.3(a) and (b).
- (g) The loading of aviation gasoline storage tanks at airports is not subject to this subpart and the aviation gasoline is not included in the gasoline throughput specified in paragraphs (b) through (e) of this section.

**§ 63.11112 What parts of my affected source does this subpart cover?**

- (a) The emission sources to which this subpart applies are gasoline storage tanks and associated equipment components in vapor or liquid gasoline service at new, reconstructed, or existing GDF that meet the criteria specified in §63.11111. Pressure/Vacuum vents on gasoline storage tanks and the equipment necessary to unload product from cargo tanks into the storage tanks at GDF are covered emission sources. The equipment used for the refueling of motor vehicles is not covered by this subpart.
- (b) An affected source is a new affected source if you commenced construction on the affected source after November 9, 2006, and you meet the applicability criteria in §63.11111 at the time you commenced operation.
- (c) An affected source is reconstructed if you meet the criteria for reconstruction as defined in §63.2.
- (d) An affected source is an existing affected source if it is not new or reconstructed.

**§ 63.11113 When do I have to comply with this subpart?**

- (a) If you have a new or reconstructed affected source, you must comply with this subpart according to paragraphs (a)(1) and (2) of this section, except as specified in paragraph (d) of this section.
  - (1) If you start up your affected source before January 10, 2008, you must comply with the standards in this subpart no later than January 10, 2008.
  - (2) If you start up your affected source after January 10, 2008, you must comply with the standards in this subpart upon startup of your affected source.
- (b) If you have an existing affected source, you must comply with the standards in this subpart no later than January 10, 2011.
- (c) If you have an existing affected source that becomes subject to the control requirements in this subpart because of an increase in the average monthly throughput, as specified in §63.11111(c) or §63.11111(d), you must comply with the standards in this subpart no later than 3 years after the affected source becomes subject to the control requirements in this subpart.
- (d) If you have a new or reconstructed affected source and you are complying with Table 1 to this subpart, you must comply according to paragraphs (d)(1) and (2) of this section.
  - (1) If you start up your affected source from November 9, 2006 to September 23, 2008, you must comply no later than September 23, 2008.
  - (2) If you start up your affected source after September 23, 2008, you must comply upon startup of your affected source.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 35944, June 25, 2008]

## **Emission Limitations and Management Practices**

### **§ 63.11116 Requirements for facilities with monthly throughput of less than 10,000 gallons of gasoline.**

- (a) You must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:
  - (1) Minimize gasoline spills;
  - (2) Clean up spills as expeditiously as practicable;
  - (3) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;
  - (4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.
- (b) You are not required to submit notifications or reports, but you must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.
- (c) You must comply with the requirements of this subpart by the applicable dates specified in §63.11113.

### **§ 63.11117 Requirements for facilities with monthly throughput of 10,000 gallons of gasoline or more.**

- (a) You must comply with the requirements in section §63.11116(a).
- (b) Except as specified in paragraph (c), you must only load gasoline into storage tanks at your facility by utilizing submerged filling, as defined in §63.11132, and as specified in paragraph (b)(1) or paragraph (b)(2) of this section.
  - (1) Submerged fill pipes installed on or before November 9, 2006, must be no more than 12 inches from the bottom of the storage tank.
  - (2) Submerged fill pipes installed after November 9, 2006, must be no more than 6 inches from the bottom of the storage tank.
- (c) Gasoline storage tanks with a capacity of less than 250 gallons are not required to comply with the submerged fill requirements in paragraph (b) of this section, but must comply only with all of the requirements in §63.11116.
- (d) You must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.
- (e) You must submit the applicable notifications as required under §63.11124(a).
- (f) You must comply with the requirements of this subpart by the applicable dates contained in §63.11113.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008]

**§ 63.11118 Requirements for facilities with monthly throughput of 100,000 gallons of gasoline or more.**

- (a) You must comply with the requirements in §§63.11116(a) and 63.11117(b).
- (b) Except as provided in paragraph (c) of this section, you must meet the requirements in either paragraph (b)(1) or paragraph (b)(2) of this section.
  - (1) Each management practice in Table 1 to this subpart that applies to your GDF.
  - (2) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(2)(i) and (ii) of this section, you will be deemed in compliance with this subsection.
    - (i) You operate a vapor balance system at your GDF that meets the requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.
      - (A) Achieves emissions reduction of at least 90 percent.
      - (B) Operates using management practices at least as stringent as those in Table 1 to this subpart.
    - (ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.
- (c) The emission sources listed in paragraphs (c)(1) through (3) of this section are not required to comply with the control requirements in paragraph (b) of this section, but must comply with the requirements in §63.11117.
  - (1) Gasoline storage tanks with a capacity of less than 250 gallons that are constructed after January 10, 2008.
  - (2) Gasoline storage tanks with a capacity of less than 2,000 gallons that were constructed before January 10, 2008.
  - (3) Gasoline storage tanks equipped with floating roofs, or the equivalent.
- (d) Cargo tanks unloading at GDF must comply with the management practices in Table 2 to this subpart.
- (e) You must comply with the applicable testing requirements contained in §63.11120.
- (f) You must submit the applicable notifications as required under §63.11124.
- (g) You must keep records and submit reports as specified in §§63.11125 and 63.11126.
- (h) You must comply with the requirements of this subpart by the applicable dates contained in §63.11113.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008]

## Testing and Monitoring Requirements

### § 63.11120 What testing and monitoring requirements must I meet?

- (a) Each owner or operator, at the time of installation of a vapor balance system required under §63.11118(b)(1), and every 3 years thereafter, must comply with the requirements in paragraphs (a)(1) and (2) of this section.
  - (1) You must demonstrate compliance with the leak rate and cracking pressure requirements, specified in item 1(g) of Table 1 to this subpart, for pressure-vacuum vent valves installed on your gasoline storage tanks using the test methods identified in paragraph (a)(1)(i) or paragraph (a)(1)(ii) of this section.
    - (i) California Air Resources Board Vapor Recovery Test Procedure TP-201.1E,— Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves, adopted October 8, 2003 (incorporated by reference, see §63.14).
    - (ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in §63.7(f).
  - (2) You must demonstrate compliance with the static pressure performance requirement, specified in item 1(h) of Table 1 to this subpart, for your vapor balance system by conducting a static pressure test on your gasoline storage tanks using the test methods identified in paragraph (a)(2)(i) or paragraph (a)(2)(ii) of this section.
    - (i) California Air Resources Board Vapor Recovery Test Procedure TP-201.3,— Determination of 2-Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities, adopted April 12, 1996, and amended March 17, 1999 (incorporated by reference, see §63.14).
    - (ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in §63.7(f).
- (b) Each owner or operator choosing, under the provisions of §63.6(g), to use a vapor balance system other than that described in Table 1 to this subpart must demonstrate to the Administrator or delegated authority under paragraph §63.11131(a) of this subpart, the equivalency of their vapor balance system to that described in Table 1 to this subpart using the procedures specified in paragraphs (b)(1) through (3) of this section.
  - (1) You must demonstrate initial compliance by conducting an initial performance test on the vapor balance system to demonstrate that the vapor balance system achieves 95 percent reduction using the California Air Resources Board Vapor Recovery Test Procedure TP-201.1,—Volumetric Efficiency for Phase I Vapor Recovery Systems, adopted April 12, 1996, and amended February 1, 2001, and October 8, 2003, (incorporated by reference, see §63.14).
  - (2) You must, during the initial performance test required under paragraph (b)(1) of this section, determine and document alternative acceptable values for the leak rate and cracking pressure requirements specified in item 1(g) of Table 1 to this subpart and for the static pressure performance requirement in item 1(h) of Table 1 to this subpart.

- (3) You must comply with the testing requirements specified in paragraph (a) of this section.

### **Notifications, Records, and Reports**

#### **§ 63.11124 What notifications must I submit and when?**

- (a) Each owner or operator subject to the control requirements in §63.11117 must comply with paragraphs (a)(1) through (3) of this section.
- (1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in §63.11117, unless you meet the requirements in paragraph (a)(3) of this section. The Initial Notification must contain the information specified in paragraphs (a)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in §63.13.
- (i) The name and address of the owner and the operator.
- (ii) The address (i.e., physical location) of the GDF.
- (iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of §63.11117 that apply to you.
- (2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in §63.13, by the compliance date specified in §63.11113 unless you meet the requirements in paragraph (a)(3) of this section. The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy and must indicate whether the source has complied with the requirements of this subpart. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (a)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (a)(1) of this section.
- (3) If, prior to January 10, 2008, you are operating in compliance with an enforceable State, local, or tribal rule or permit that requires submerged fill as specified in §63.11117(b), you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (a)(1) or paragraph (a)(2) of this section.
- (b) Each owner or operator subject to the control requirements in §63.11118 must comply with paragraphs (b)(1) through (5) of this section.
- (1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in §63.11118. The Initial Notification must contain the information specified in paragraphs (b)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and the delegated State authority as specified in §63.13.
- (i) The name and address of the owner and the operator.
- (ii) The address (i.e., physical location) of the GDF.
- (iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of §63.11118 that apply to you.

- (2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in §63.13, by the compliance date specified in §63.11113. The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy and must indicate whether the source has complied with the requirements of this subpart. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (b)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (b)(1) of this section.
- (3) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(3)(i) and (ii) of this section, you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (b)(1) or paragraph (b)(2) of this subsection.
  - (i) You operate a vapor balance system at your gasoline dispensing facility that meets the requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.
    - (A) Achieves emissions reduction of at least 90 percent.
    - (B) Operates using management practices at least as stringent as those in Table 1 to this subpart.
  - (ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.
- (4) You must submit a Notification of Performance Test, as specified in §63.9(e), prior to initiating testing required by §63.11120(a) and (b).
- (5) You must submit additional notifications specified in §63.9, as applicable.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008]

#### **§ 63.11125 What are my recordkeeping requirements?**

- (a) Each owner or operator subject to the management practices in §63.11118 must keep records of all tests performed under §63.11120(a) and (b).
- (b) Records required under paragraph (a) of this section shall be kept for a period of 5 years and shall be made available for inspection by the Administrator's delegated representatives during the course of a site visit.

#### **§ 63.11126 What are my reporting requirements?**

Each owner or operator subject to the management practices in §63.11118 shall report to the Administrator the results of all volumetric efficiency tests required under §63.11120(b). Reports submitted under this paragraph must be submitted within 180 days of the completion of the performance testing.

## Other Requirements and Information

### § 63.11130 What parts of the General Provisions apply to me?

Table 3 to this subpart shows which parts of the General Provisions apply to you.

### § 63.11131 Who implements and enforces this subpart?

- (a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority such as the applicable State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or tribal agency.
- (b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or tribal agency.
- (c) The authorities that cannot be delegated to State, local, or tribal agencies are as specified in paragraphs (c)(1) through (3) of this section.
  - (1) Approval of alternatives to the requirements in §§63.11116 through 63.11118 and 63.11120.
  - (2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.
  - (3) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.

### § 63.11132 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act (CAA), or in subparts A and BBBB of this part. For purposes of this subpart, definitions in this section supersede definitions in other parts or subparts.

**Dual-point vapor balance system** means a type of vapor balance system in which the storage tank is equipped with an entry port for a gasoline fill pipe and a separate exit port for a vapor connection.

**Gasoline cargo tank** means a delivery tank truck or railcar which is loading gasoline or which has loaded gasoline on the immediately previous load.

**Gasoline dispensing facility (GDF)** means any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle.

**Monthly throughput** means the total volume of gasoline that is loaded into all gasoline storage tanks during a month, as calculated on a rolling 30-day average.

**Submerged filling** means, for the purposes of this subpart, the filling of a gasoline storage tank through a submerged fill pipe whose discharge is no more than the applicable distance specified in §63.11117(b) from the bottom of the tank. Bottom filling of gasoline storage tanks is included in this definition.

**Vapor balance system** means a combination of pipes and hoses that create a closed system between the vapor spaces of an unloading gasoline cargo tank and a receiving storage tank such that vapors displaced from the storage tank are transferred to the gasoline cargo tank being unloaded.

**Vapor-tight** means equipment that allows no loss of vapors. Compliance with vapor-tight requirements can be determined by checking to ensure that the concentration at a potential leak source is not equal to or greater than 100 percent of the Lower Explosive Limit when measured with a combustible gas detector, calibrated with propane, at a distance of 1 inch from the source.

**Table 1 to Subpart CCCCC of Part 63—Applicability Criteria and Management Practices for Gasoline Dispensing Facilities With Monthly Throughput of 100,000 Gallons of Gasoline or More**

If you own or operate	Then you must
1. A new, reconstructed, or existing GDF subject to §63.11118	Install and operate a vapor balance system on your gasoline storage tanks that meets the design criteria in paragraphs (a) through (h).
	(a) All vapor connections and lines on the storage tank shall be equipped with closures that seal upon disconnect.
	(b) The vapor line from the gasoline storage tank to the gasoline cargo tank shall be vapor-tight, as defined in §63.11132.
	(c) The vapor balance system shall be designed such that the pressure in the tank truck does not exceed 18 inches water pressure or 5.9 inches water vacuum during product transfer.
	(d) The vapor recovery and product adaptors, and the method of connection with the delivery elbow, shall be designed so as to prevent the over-tightening or loosening of fittings during normal delivery operations.
	(e) If a gauge well separate from the fill tube is used, it shall be provided with a submerged drop tube that extends the same distance from the bottom of the storage tank as specified in §63.11117(b).
	(f) Liquid fill connections for all systems shall be equipped with vapor-tight caps.
	(g) Pressure/vacuum (PV) vent valves shall be installed on the storage tank vent pipes. The pressure specifications for PV vent valves shall be: a positive pressure setting of 2.5 to 6.0 inches of water and a negative pressure setting of 6.0 to 10.0 inches of water. The total leak rate of all PV vent valves at an affected facility, including connections, shall not exceed 0.17 cubic foot per hour at a pressure of 2.0 inches of water and 0.63 cubic foot per hour at a vacuum of 4 inches of water.
	(h) The vapor balance system shall be capable of meeting the static pressure performance requirement of the following equation:
	$P_f = 2e^{-500.887/v}$
	Where:
	P <sub>f</sub> = Minimum allowable final pressure, inches of water.
	v = Total ullage affected by the test, gallons.
	e = Dimensionless constant equal to approximately 2.718.
	2 = The initial pressure, inches water.
2. For new or reconstructed GDF, or new storage tank(s) at an existing affected facility subject to §63.11118	Equip your gasoline storage tanks with a dual-point vapor balance system, as defined in §63.11132, and comply with the requirements of item 1 in this Table.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 35944, June 25, 2008]

**Table 2 to Subpart CCCCC of Part 63—Applicability Criteria and Management Practices for Gasoline Cargo Tanks Unloading at Gasoline Dispensing Facilities With Monthly Throughput of 100,000 Gallons of Gasoline or More**

If you own or operate	Then you must
A gasoline cargo tank	Not unload gasoline into a storage tank at a GDF subject to the control requirements in this subpart unless the following conditions are met:
	(i) All hoses in the vapor balance system are properly connected,
	(ii) The adapters or couplers that attach to the vapor line on the storage tank have closures that seal upon disconnect,
	(iii) All vapor return hoses, couplers, and adapters used in the gasoline delivery are vapor-tight,
	(iv) All tank truck vapor return equipment is compatible in size and forms a vapor-tight connection with the vapor balance equipment on the GDF storage tank, and
	(v) All hatches on the tank truck are closed and securely fastened.
	(vi) The filling of storage tanks at GDF shall be limited to unloading by vapor-tight gasoline cargo tanks. Documentation that the cargo tank has met the specifications of EPA Method 27 shall be carried on the cargo tank.

**Table 3 to Subpart CCCCC of Part 63—Applicability of General Provisions**

Citation	Subject	Brief description	Applies to subpart CCCCC
§63.1	Applicability	Initial applicability determination; applicability after standard established; permit requirements; extensions, notifications	Yes, specific requirements given in §63.11111.
§63.1(c)(2)	Title V Permit	Requirements for obtaining a title V permit from the applicable permitting authority	Yes, §63.11111(f) of subpart CCCCC exempts identified area sources from the obligation to obtain title V operating permits.
§63.2	Definitions	Definitions for part 63 standards	Yes, additional definitions in §63.11132.
§63.3	Units and Abbreviations	Units and abbreviations for part 63 standards	Yes.
§63.4	Prohibited Activities and Circumvention	Prohibited activities; Circumvention, severability	Yes.
§63.5	Construction/Reconstruction	Applicability; applications; approvals	Yes.
§63.6(a)	Compliance with Standards/Operation & Maintenance—Applicability	General Provisions apply unless compliance extension; General Provisions apply to area sources that become major	Yes.
§63.6(b)(1)–(4)	Compliance Dates for New and	Standards apply at effective date; 3 years after	Yes.

	Reconstructed Sources	effective date; upon startup; 10 years after construction or reconstruction commences for CAA section 112(f)	
§63.6(b)(5)	Notification	Must notify if commenced construction or reconstruction after proposal	Yes.
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major	Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source	No.
§63.6(c)(1)–(2)	Compliance Dates for Existing Sources	Comply according to date in this subpart, which must be no later than 3 years after effective date; for CAA section 112(f) standards, comply within 90 days of effective date unless compliance extension	No, §63.11113 specifies the compliance dates.
§63.6(c)(3)–(4)	[Reserved]		
§63.6(c)(5)	Compliance Dates for Existing Area Sources That Become Major	Area sources That become major must comply with major source standards by date indicated in this subpart or by equivalent time period (e.g., 3 years)	No.
§63.6(d)	[Reserved]		
§63.6(e)(1)	Operation & Maintenance	Operate to minimize emissions at all times; correct malfunctions as soon as practicable; and operation and maintenance requirements independently enforceable; information Administrator will use to determine if operation and maintenance requirements were met	Yes.
§63.6(e)(2)	[Reserved]		
§63.6(e)(3)	Startup, Shutdown, and Malfunction (SSM) Plan	Requirement for SSM plan; content of SSM plan; actions during SSM	No.
§63.6(f)(1)	Compliance Except During SSM	You must comply with emission standards at all times except during SSM	No.
§63.6(f)(2)–(3)	Methods for Determining Compliance	Compliance based on performance test, operation and maintenance plans, records, inspection	Yes.
§63.6(g)(1)–(3)	Alternative Standard	Procedures for getting an alternative standard	Yes.
§63.6(h)(1)	Compliance with Opacity/Visible Emission (VE) Standards	You must comply with opacity/VE standards at all times except during SSM	No.
§63.6(h)(2)(i)	Determining Compliance with Opacity/VE Standards	If standard does not State test method, use EPA Method 9 for opacity in appendix A of part 60 of this chapter and EPA Method 22 for VE in appendix A of part 60 of this chapter	No.
§63.6(h)(2)(ii)	[Reserved]		
§63.6(h)(2)(iii)	Using Previous Tests To Demonstrate Compliance With Opacity/VE Standards	Criteria for when previous opacity/VE testing can be used to show compliance with this subpart	No.
§63.6(h)(3)	[Reserved]		
§63.6(h)(4)	Notification of Opacity/VE	Must notify Administrator of anticipated date of	No.

	Observation Date	observation	
§63.6(h)(5)(i), (iii)-(v)	Conducting Opacity/VE Observations	Dates and schedule for conducting opacity/VE observations	No.
§63.6(h)(5)(ii)	Opacity Test Duration and Averaging Times	Must have at least 3 hours of observation with 30 6-minute averages	No.
§63.6(h)(6)	Records of Conditions During Opacity/VE Observations	Must keep records available and allow Administrator to inspect	No.
§63.6(h)(7)(i)	Report Continuous Opacity Monitoring System (COMS) Monitoring Data From Performance Test	Must submit COMS data with other performance test data	No.
§63.6(h)(7)(ii)	Using COMS Instead of EPA Method 9	Can submit COMS data instead of EPA Method 9 results even if rule requires EPA Method 9 in appendix A of part 60 of this chapter, but must notify Administrator before performance test	No.
§63.6(h)(7)(iii)	Averaging Time for COMS During Performance Test	To determine compliance, must reduce COMS data to 6-minute averages	No.
§63.6(h)(7)(iv)	COMS Requirements	Owner/operator must demonstrate that COMS performance evaluations are conducted according to §63.8(e); COMS are properly maintained and operated according to §63.8(c) and data quality as §63.8(d)	No.
§63.6(h)(7)(v)	Determining Compliance with Opacity/VE Standards	COMS is probable but not conclusive evidence of compliance with opacity standard, even if EPA Method 9 observation shows otherwise. Requirements for COMS to be probable evidence-proper maintenance, meeting Performance Specification 1 in appendix B of part 60 of this chapter, and data have not been altered	No.
§63.6(h)(8)	Determining Compliance with Opacity/VE Standards	Administrator will use all COMS, EPA Method 9 (in appendix A of part 60 of this chapter), and EPA Method 22 (in appendix A of part 60 of this chapter) results, as well as information about operation and maintenance to determine compliance	No.
§63.6(h)(9)	Adjusted Opacity Standard	Procedures for Administrator to adjust an opacity standard	No.
§63.6(i)(1)-(14)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension	Yes.
§63.6(j)	Presidential Compliance Exemption	President may exempt any source from requirement to comply with this subpart	Yes.
§63.7(a)(2)	Performance Test Dates	Dates for conducting initial performance testing; must conduct 180 days after compliance date	Yes.
§63.7(a)(3)	CAA Section 114 Authority	Administrator may require a performance test under CAA section 114 at any time	Yes.
§63.7(b)(1)	Notification of Performance Test	Must notify Administrator 60 days before the test	Yes.
§63.7(b)(2)	Notification of Re-scheduling	If have to reschedule performance test, must notify Administrator of rescheduled date as soon as practicable and without delay	Yes.

§63.7(c)	Quality Assurance (QA)/Test Plan	Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with; test plan approval procedures; performance audit requirements; internal and external QA procedures for testing	Yes.
§63.7(d)	Testing Facilities	Requirements for testing facilities	Yes.
§63.7(e)(1)	Conditions for Conducting Performance Tests	Performance tests must be conducted under representative conditions; cannot conduct performance tests during SSM	Yes.
§63.7(e)(2)	Conditions for Conducting Performance Tests	Must conduct according to this subpart and EPA test methods unless Administrator approves alternative	Yes.
§63.7(e)(3)	Test Run Duration	Must have three test runs of at least 1 hour each; compliance is based on arithmetic mean of three runs; conditions when data from an additional test run can be used	Yes.
§63.7(f)	Alternative Test Method	Procedures by which Administrator can grant approval to use an intermediate or major change, or alternative to a test method	Yes.
§63.7(g)	Performance Test Data Analysis	Must include raw data in performance test report; must submit performance test data 60 days after end of test with the Notification of Compliance Status; keep data for 5 years	Yes.
§63.7(h)	Waiver of Tests	Procedures for Administrator to waive performance test	Yes.
§63.8(a)(1)	Applicability of Monitoring Requirements	Subject to all monitoring requirements in standard	Yes.
§63.8(a)(2)	Performance Specifications	Performance Specifications in appendix B of 40 CFR part 60 apply	Yes.
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring of Flares	Monitoring requirements for flares in §63.11 apply	Yes.
§63.8(b)(1)	Monitoring	Must conduct monitoring according to standard unless Administrator approves alternative	Yes.
§63.8(b)(2)–(3)	Multiple Effluents and Multiple Monitoring Systems	Specific requirements for installing monitoring systems; must install on each affected source or after combined with another affected source before it is released to the atmosphere provided the monitoring is sufficient to demonstrate compliance with the standard; if more than one monitoring system on an emission point, must report all monitoring system results, unless one monitoring system is a backup	No.
§63.8(c)(1)	Monitoring System Operation and Maintenance	Maintain monitoring system in a manner consistent with good air pollution control practices	No.
§63.8(c)(1)(i)–(iii)	Routine and Predictable SSM	Follow the SSM plan for routine repairs; keep parts for routine repairs readily available; reporting requirements for SSM when action is described in SSM plan	No.

§63.8(c)(2)–(8)	Continuous Monitoring System (CMS) Requirements	Must install to get representative emission or parameter measurements; must verify operational status before or at performance test	No.
§63.8(d)	CMS Quality Control	Requirements for CMS quality control, including calibration, etc.; must keep quality control plan on record for 5 years; keep old versions for 5 years after revisions	No.
§63.8(e)	CMS Performance Evaluation	Notification, performance evaluation test plan, reports	No.
§63.8(f)(1)–(5)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring	No.
§63.8(f)(6)	Alternative to Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for continuous emissions monitoring system (CEMS)	No.
§63.8(g)	Data Reduction	COMS 6-minute averages calculated over at least 36 evenly spaced data points; CEMS 1 hour averages computed over at least 4 equally spaced data points; data that cannot be used in average	No.
§63.9(a)	Notification Requirements	Applicability and State delegation	Yes.
§63.9(b)(1)–(2), (4)–(5)	Initial Notifications	Submit notification within 120 days after effective date; notification of intent to construct/reconstruct, notification of commencement of construction/reconstruction, notification of startup; contents of each	Yes.
§63.9(c)	Request for Compliance Extension	Can request if cannot comply by date or if installed best available control technology or lowest achievable emission rate	Yes.
§63.9(d)	Notification of Special Compliance Requirements for New Sources	For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date	Yes.
§63.9(e)	Notification of Performance Test	Notify Administrator 60 days prior	Yes.
§63.9(f)	Notification of VE/Opacity Test	Notify Administrator 30 days prior	No.
§63.9(g)	Additional Notifications when Using CMS	Notification of performance evaluation; notification about use of COMS data; notification that exceeded criterion for relative accuracy alternative	Yes, however, there are no opacity standards.
§63.9(h)(1)–(6)	Notification of Compliance Status	Contents due 60 days after end of performance test or other compliance demonstration, except for opacity/VE, which are due 30 days after; when to submit to Federal vs. State authority	Yes, however, there are no opacity standards.
§63.9(i)	Adjustment of Submittal Deadlines	Procedures for Administrator to approve change when notifications must be submitted	Yes.
§63.9(j)	Change in Previous Information	Must submit within 15 days after the change	Yes.
§63.10(a)	Recordkeeping/Reporting	Applies to all, unless compliance extension; when to submit to Federal vs. State authority; procedures for owners of more than one source	Yes.
§63.10(b)(1)	Recordkeeping/Reporting	General requirements; keep all records readily available; keep for 5 years	Yes.

§63.10(b)(2)(i)–(iv)	Records Related to SSM	Occurrence of each for operations (process equipment); occurrence of each malfunction of air pollution control equipment; maintenance on air pollution control equipment; actions during SSM	No.
§63.10(b)(2)(vi)–(xi)	CMS Records	Malfunctions, inoperative, out-of-control periods	No.
§63.10(b)(2)(xii)	Records	Records when under waiver	Yes.
§63.10(b)(2)(xiii)	Records	Records when using alternative to relative accuracy test	Yes.
§63.10(b)(2)(xiv)	Records	All documentation supporting Initial Notification and Notification of Compliance Status	Yes.
§63.10(b)(3)	Records	Applicability determinations	Yes.
§63.10(c)	Records	Additional records for CMS	No.
§63.10(d)(1)	General Reporting Requirements	Requirement to report	Yes.
§63.10(d)(2)	Report of Performance Test Results	When to submit to Federal or State authority	Yes.
§63.10(d)(3)	Reporting Opacity or VE Observations	What to report and when	No.
§63.10(d)(4)	Progress Reports	Must submit progress reports on schedule if under compliance extension	Yes.
§63.10(d)(5)	SSM Reports	Contents and submission	Yes.
§63.10(e)(1)–(2)	Additional CMS Reports	Must report results for each CEMS on a unit; written copy of CMS performance evaluation; two-three copies of COMS performance evaluation	No.
§63.10(e)(3)(i)–(iii)	Reports	Schedule for reporting excess emissions	Yes, note that §63.11130(K) specifies excess emission events for this subpart.
§63.10(e)(3)(iv)–(v)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in §§63.8(c)(7)–(8) and 63.10(c)(5)–(13)	No, §63.11130(K) specifies excess emission events for this subpart.
§63.10(e)(3)(vi)–(viii)	Excess Emissions Report and Summary Report	Requirements for reporting excess emissions for CMS; requires all of the information in §§63.10(c)(5)–(13) and 63.8(c)(7)–(8)	No.
§63.10(e)(4)	Reporting COMS Data	Must submit COMS data with performance test data	No.
§63.10(f)	Waiver for	Procedures for Administrator to waive	Yes.

	Recordkeeping/Reporting		
§63.11(b)	Flares	Requirements for flares	No.
§63.12	Delegation	State authority to enforce standards	Yes.
§63.13	Addresses	Addresses where reports, notifications, and requests are sent	Yes.
§63.14	Incorporations by Reference	Test methods incorporated by reference	Yes.
§63.15	Availability of Information	Public and confidential information	Yes.

**Indiana Department of Environmental Management  
Office of Air Quality**

Addendum to the Technical Support Document (ATSD) for a  
General Asphalt Federally Enforceable State Operating Permit (FESOP)  
transitioning to a FESOP.

**Source Background and Description**

<b>Source Name:</b>	<b>E &amp; B Paving, Inc.</b>
<b>Current Location:</b>	<b>101 S 600 W, Kewanna, IN 46939</b>
<b>Current County:</b>	<b>Fulton</b>
<b>SIC Code:</b>	<b>2951</b>
<b>Operation Permit No.:</b>	<b>F 049-27797-03285</b>
<b>Permit Reviewer:</b>	<b>Jason R. Krawczyk</b>

On October 31, 2009, the Office of Air Quality (OAQ) had a notice published in the Rochester Sentinel, Rochester, Indiana, stating that E & B Paving, Inc. had applied for a Federally Enforceable State Operating Permit. The notice also stated that the OAQ proposed to issue a FESOP for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

**Comments and Responses**

No comments were received during the public notice period.

**Additional Changes**

IDEM, OAQ has decided to make additional revisions to the permit as described below, with deleted language as ~~strikeouts~~ and new language **bolded**.

- (a) IDEM has revised the NOx emission factors used in the Multiple Fuel Usage and Slag Usage Limitation equation to reflect the AP-42 emission factors used in the potential to emit calculation appendices.

...  
D.1.11 Multiple Fuel Usage and Slag Limitation

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

where:  
N = tons of nitrogen oxide emissions for a 12-month consecutive period  
G = million cubic feet of natural gas used in the last 12 months  
O = gallons of No. 2 fuel oil used in last 12 months  
R = gallons of Refinery Blend fuel oil used in last 12 months  
W = gallons of Waste oil used for last 12 months  
E<sub>G</sub> = ~~400~~ **190** lb/million cubic feet of natural gas  
E<sub>O</sub> = ~~20~~ **24** lb/1000 gallons of No. 2 fuel oil  
E<sub>R</sub> = ~~55~~ **47** lb/1000 gallons of Refinery Blend fuel oil  
E<sub>W</sub> = 19 lb/1000 gallons of Waste oil

...

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

Fuel / Slag Usage Quarterly Report

Page 1 of 2

Source Name: E & B Paving, Inc.

...

Limit: Nitrogen oxides (NOx) emissions shall be less than 49.9 tons per twelve (12) consecutive month period based on the following equation:

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

where:

N = tons of nitrogen oxide emissions for a 12-month consecutive period

G = million cubic feet of natural gas used in the last 12 months

O = gallons of No. 2 fuel oil used in last 12 months

R = gallons of Refinery Blend fuel oil used in last 12 months

W = gallons of Waste oil used for last 12 months

E<sub>G</sub> = ~~400~~ **190** lb/million cubic feet of natural gas

E<sub>O</sub> = ~~20~~ **24** lb/1000 gallons of No. 2 fuel oil

E<sub>R</sub> = ~~55~~ **47** lb/1000 gallons of Refinery Blend fuel oil

E<sub>W</sub> = 19 lb/1000 gallons of Waste oil

...

<b>IDEM Contact</b>
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- (a) Questions regarding this proposed Federally Enforceable State Operating Permit can be directed to Jason R. Krawczyk at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 232-8427 or toll free at 1-800-451-6027 extension 2-8427.
- (b) A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.idem.in.gov](http://www.idem.in.gov)

## Indiana Department of Environmental Management Office of Air Quality

### Technical Support Document (TSD) for a General Asphalt Federally Enforceable State Operating Permit (FESOP) Transitioning to a FESOP

#### Source Description and Location

<b>Source Name:</b>	<b>E &amp; B Paving, Inc.</b>
<b>Current Source Location:</b>	<b>101 S 600 W, Kewanna, IN 46939</b>
<b>Current County:</b>	<b>Fulton</b>
<b>SIC Code:</b>	<b>2951</b>
<b>Operation Permit No.:</b>	<b>F 049-27797-03285</b>
<b>Permit Reviewer:</b>	<b>Jason R. Krawczyk</b>

On April 17, 2009, the Office of Air Quality (OAQ) received an application from E & B Paving, inc. related to the renewal of its General Asphalt FESOP. IDEM, OAQ is no longer issuing the General FESOP permit until the permit can be updated to coincide with current environmental standards and regulations. Therefore, E & B Paving will be issued a Federally Enforceable State Operating Permit (FESOP).

#### Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) Relocation No. 049-22711-03285, issued on March 7, 2006.
- (b) Relocation No. 049-20761-03285, issued on February 23, 2005.
- (c) General Asphalt FESOP 049-20496-03285, issued February 4, 2005.

Due to this application, the source is transitioning from a General Asphalt FESOP to a FESOP.

#### County Attainment Status

This portable source is currently located in Fulton County.

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. <sup>1</sup>
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Not designated.
<sup>1</sup> Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM2.5.	

- (a) Ozone Standards

Volatile organic compounds (VOC) and Nitrogen Oxides (NO<sub>x</sub>) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to ozone. Fulton 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**  
Fulton County has been classified as attainment for PM2.5. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, and the effective date of these rules was July 15<sup>th</sup>, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM2.5 emissions until 326 IAC 2-2 is revised.
- (c) **Other Criteria Pollutants**  
Fulton County has been classified as attainment or unclassifiable in Indiana for all 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.

### Background and Description of Permitted Emission Units

The Office of Air Quality (OAQ) has reviewed an application, submitted by E & B Paving, Inc. on April 17, 2009, relating to the renewal of a General FESOP. IDEM, OAQ is no longer issuing the General FESOP permit until the permit can be updated to coincide with current environmental standards and regulations. Therefore, E & B Paving will be issued a Federally Enforceable State Operating Permit (FESOP).

This portable source consists of the following permitted emission unit(s):

- (a) One (1) hot asphalt drum mixer/dryer, identified as EU-01, constructed in 1986, capable of processing a maximum of 300 tons of raw material per hour, equipped with one 120 million British thermal units (MMBtu) per hour No. 2 distillate fuel oil burner, using natural gas, Refinery Blend Fuel oil, and Waste oil as back-up fuels, processing slag in the aggregate mix; equipped with one (1) baghouse for particulate control, and exhausting through one (1) stack, identified as stack SV-1. This source does not produce cold mix asphalt.

Under 40 CFR 60, Subpart I, this hot mix asphalt plant is considered an affected facility.

- (b) Feeding, conveying and loading operations consisting of the following:
- (1) Four (4) aggregate storage bins.
  - (2) One (1) recycled aggregate storage bin.
  - (3) Five (5) storage piles, total capacity: 18,000 tons.
- (c) One (1) hot oil heater, firing No.2 distillate oil as primary fuel, firing natural gas as backup fuel, exhausting to Stack SV-2, rated at 2.2 million British thermal units per hour.
- (d) Two (2) storage tanks, constructed in 1986, identified as Tank-01 and Tank-02, storing liquid asphalt, exhausting to vents SV-3 and SV-4, with capacities of 18,000 gallons and 25,000 gallons, respectively.
- (e) Three (3) storage tanks, constructed in 1986, identified as Tanks-03 through -05, storing No.2 distillate oil, diesel blend, or waste oil, exhausting to vent SV-5, with capacities of 15,000 gallons,

12,000 gallons and 1,000 gallons, respectively.

This portable source consists of the following insignificant activities:

- (a) A gasoline fuel transfer and dispensing operation handling less than or equal to one thousand three hundred (1,300) gallons per day, such as filling of tanks, locomotives, automobiles, having storage capacity less than or equal to ten thousand five hundred (10,500) gallons;  
  
Under 40 CFR 60, Subpart CCCCCC, the units comprising this operation are considered affected facilities.
- (b) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu/hr and firing fuel containing less than five-tenths (0.5) percent;
- (c) Combustion source flame safety purging on startup;
- (d) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu/hr;
- (e) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to ten thousand five hundred (10,500) gallons, and dispensing less than or equal to two hundred thousand (230,000) gallons per month;
- (f) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;
- (g) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings;
- (h) Cleaners and solvents characterized as follows:
  - (1) having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38°C (100°F) or;
  - (2) having a vapor pressure equal to or less than 0.7 kPa; 5 mm Hg; or 0.1psi measured at 20°C(68°F); the use of which for all cleaners and solvents combined does not exceed one hundred forty-five (145) gallons per twelve (12) months;
- (i) Closed loop heating and cooling systems;
- (j) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;
- (k) A laboratory as defined in 326 IAC 2-7-1(21)(D); and
- (l) Vehicle travel on paved roads, unpaved roads, and parking lots.

<b>Unpermitted Emission Units and Pollution Control Equipment</b>
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There are no unpermitted emission units operating at this source at the time of this review.

<b>Enforcement Issues</b>
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There are no pending enforcement actions related to this source.

**Emission Calculations**

See Appendices A.1 and A.2 of this TSD for detailed emission calculations.

**Permit Level Determination – FESOP**

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	Greater than 250
PM10 <sup>(1)</sup>	Greater than 250
PM2.5	Greater than 250
SO <sub>2</sub>	Greater than 250
NO <sub>x</sub>	Greater than 250
VOC	Greater than 100, Less than 250
CO	Greater than 250

(1) Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

HAPs	Potential To Emit (tons/year)
Single (HCl)	Greater than 10
Combined	Greater than 25

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of PM10, PM2.5, SO<sub>2</sub>, NO<sub>x</sub>, VOC, and CO is greater than one hundred (100) tons per year. The PTE of all other regulated criteria pollutants are less than one hundred (100) tons per year. The source would have been subject to the provisions of 326 IAC 2-7. However, the source will be issued a Federally Enforceable State Operating Permit (FESOP) (326 IAC 2-8), because the source will limit emissions to less than the Title V major source threshold levels.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of any single HAP is greater than ten (10) tons per year and the PTE of a combination of HAPs is greater than twenty-five (25) tons per year. Therefore, the source would have been subject to the provisions of 326 IAC 2-7. However, the source will be issued a FESOP (326 IAC 2-8), because the source will limit emissions of HAPs to less than the Title V major source threshold levels.

**PTE of the Entire Source After Issuance of the FESOP**

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

Process Description	Potential to Emit of the Entire Source After Issuance of the FESOP (tons/year) Limited/Controlled Potential Emissions								
	Criteria Pollutants							Hazardous Air Pollutants	
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Single HAP
<b>Ducted Emissions</b>									
Fuel Combustion (worst case)	5.46	4.35	4.35	25.06	48.52	3.85	21.45	2.91	2.25 HCl
Dryer/Mixer	82.56	36.55	43.37	21.43	20.32	11.82	48.03	3.94	1.15 HCOH
Dryer/Mixer Slag Processing	-	-	-	19.95	-	-	-	-	-
Hot Oil Heater	0.14	0.23	0.23	4.89	1.38	0.05	0.81	0.02	0.017 Hexane
<b>Worst Case Emissions</b>	<b>82.70</b>	<b>36.78</b>	<b>43.60</b>	<b>49.90</b>	<b>49.90</b>	<b>11.88</b>	<b>48.84</b>	<b>3.96</b>	<b>2.25 HCl</b>
<b>Fugitive Emissions</b>									
Asphalt Load-Out, Silo Filling, On-Site Yard	0.41	0.41	0.41	-	-	6.33	1.06	0.11	0.03 HCOH
Material Storage Piles	1.60	0.56	0.56	-	-	-	-	-	-
Material Processing and Handling	2.51	1.19	0.18	-	-	-	-	-	-
Material Crushing, Screening, and Conveying	12.34	4.51	4.51	-	-	-	-	-	-
Paved and Unpaved Roads (worst case)	25.34	6.46	0.65	-	-	-	-	-	-
Gasoline Dispensing	-	-	-	-	-	0.17	-	0.19	0.07 Xylenes
Volatile Organic Liquid Storage Vessels	-	-	-	-	-	negl.	-	negl.	negl.
<b>Total Fugitive Emissions</b>	<b>42.20</b>	<b>13.12</b>	<b>6.30</b>	<b>-</b>	<b>-</b>	<b>6.50</b>	<b>1.06</b>	<b>0.30</b>	<b>0.07 Xylenes</b>
<b>Totals Limited/Controlled Emissions</b>	<b>124.90</b>	<b>49.90</b>	<b>49.90</b>	<b>49.90</b>	<b>49.90</b>	<b>18.37</b>	<b>49.90</b>	<b>4.26</b>	<b>2.25 HCl</b>
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA
negl. = negligible * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. ** Source requested limits that would allow for the co-location of an additional asphalt plant to the same location, as long as the co-located plant has limited potential to emit equal to or less than those that are issued within this permit  Note: <ul style="list-style-type: none"> <li>This portable hot mix drum asphalt plant is not permitted to locate in Lake, Porter, or LaPorte counties or areas designated as severe nonattainment for ozone.</li> </ul>									

- (a) **FESOP Status**  
 This existing source is not a Title V major stationary source, because the potential to emit criteria pollutants from the entire source will be limited to less than the Title V major source threshold levels. In addition, this existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the potential to emit HAPs is limited to less than ten (10) tons per year for a single HAP and twenty-five (25) tons per year of total HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act and is 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), the source shall comply with the following:

(a) Fuel and Sulfur Content Specifications

- (1) The sulfur content of No.2 fuel oil shall not exceed 0.50 percent by weight.
- (2) The sulfur content of the refinery blend fuel oil shall not exceed 1.00 percent by weight.
- (3) The sulfur content of the waste fuel oil shall not exceed 1.00 percent by weight.
- (4) The HCl emissions shall not exceed 13.2 pounds of HCl per 1,000 gallons of waste oil burned.
- (5) The waste oil combusted shall not contain more than 0.50% ash, 0.20% chlorine, and 0.01% Lead.
- (6) The sulfur content of the Blast Furnace slag shall not exceed 1.10 percent by weight.
- (7) The sulfur content of the Steel slag shall not exceed 0.66 percent by weight.

(b) Single Fuel Usage and Slag Usage Limitations:

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

- (1) Natural gas usage shall not exceed 510.77 million cubic feet per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (2) No. 2 fuel oil usage shall not exceed 638,476 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (3) Refinery blend fuel oil usage shall not exceed 319,238 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month; and
- (4) Waste oil usage shall not exceed 340,955 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (5) The Blast Furnace slag usage shall not exceed 73,900 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(c) Multiple Fuel Usage and Slag Usage Limitation:

When combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, in conjunction with the use of slag, emissions from the

dryer/mixer shall be limited as follows:

- (1) NO<sub>x</sub> emissions from the dryer/mixer shall be less than 49.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

The Permittee shall limit fuel usage in the dryer/mixer burner according to the following formula:

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

where:

- N = tons of nitrogen oxide emissions for a 12-month consecutive period
- G = million cubic feet of natural gas used in the last 12 months
- O = gallons of No. 2 fuel oil used in last 12 months
- R = gallons of Refinery Blend fuel oil used in last 12 months
- W = gallons of Waste oil used for last 12 months
- E<sub>G</sub> = 100 lb/million cubic feet of natural gas
- E<sub>O</sub> = 20 lb/1000 gallons of No. 2 fuel oil
- E<sub>R</sub> = 55 lb/1000 gallons of Refinery Blend fuel oil
- E<sub>W</sub> = 19 lb/1000 gallons of Waste oil

- (2) SO<sub>2</sub> emissions from the dryer/mixer shall be less than 49.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

The Permittee shall limit fuel usage in the dryer/mixer burner according to the following formula:

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

where:

- S = tons of sulfur dioxide emissions for a 12-month consecutive period
- G = million cubic feet of natural gas used in the last 12 months
- O = gallons of No. 2 fuel oil used in last 12 months
- R = gallons of Refinery Blend fuel oil used in last 12 months
- W = gallons of Waste oil used in last 12 months
- B = tons of Blast Furnace slag used in last 12 months
- T = tons of Steel slag used in last 12 months
- E<sub>G</sub> = 0.60 lb/million cubic feet of natural gas
- E<sub>O</sub> = 71.00 lb/1000 gallons of No. 2 fuel oil
- E<sub>R</sub> = 157 lb/1000 gallons of Refinery Blend fuel oil
- E<sub>W</sub> = 147 lb/1000 gallons of Waste oil
- E<sub>B</sub> = 0.54 lb/ton of Blast Furnace slag used
- E<sub>T</sub> = 0.0014 lb/ton of Steel slag used

Compliance with these limits, combined with the limited PTE from all other emission units at this source, shall limit the source-wide total potential to emit NO<sub>x</sub> and SO<sub>2</sub> to less than 100 tons per 12 consecutive month period, each, HCL to less than 10 tons per 12 consecutive month period, and any combination of HAPs to less than 25 tons per 12 consecutive month period, and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (PSD), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable.

- (2) Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following:
- (a) The amount of asphalt processed shall not exceed 738,932 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 0.099 pounds per ton of asphalt processed.
  - (c) The PM2.5 emissions from the dryer/mixer shall not exceed 0.117 pounds per ton of asphalt processed.
  - (d) The CO emissions from the dryer/mixer shall not exceed 0.13 pounds per ton of asphalt processed.
  - (e) The VOC emissions from the dryer/mixer shall not exceed 0.032 pounds per ton of asphalt processed.
  - (f) The SO2 emissions from the dryer/mixer shall not exceed 0.540 pounds per ton of Blast Furnace slag processed in the aggregate mix.
  - (g) The SO2 emissions from the dryer/mixer shall not exceed 0.0014 pounds per ton of Steel slag processed in the aggregate mix.

Compliance with these limits, combined with the emissions from all other emission units at this source, will render 326 IAC 2-7 (Part 70 Permit Program), and 326 IAC 2-2 (PSD) not applicable.

Note: The source has opted to limit source-wide potential to emit PM10, PM2.5, CO, VOC, and SO2 to less than 50 tons per twelve (12) consecutive month period. This would allow for the co-location of an additional asphalt plant to the same location, as long as the co-located plant has limited potentials to emit equal to or less than those that are issued within this permit.

- (3) Pursuant to 326 IAC 2-8, the Permittee shall control PM, PM10, and PM2.5 emissions from the unpaved roads according to the fugitive dust plan, included as Attachment A to the permit.

(b) PSD Minor Source

This new source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit PM is limited to less than 250 tons per year and the potential to emit all other attainment regulated pollutants are less than 250 tons per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1). 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 asphalt processed shall not exceed 738,932 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (2) PM emissions from the dryer/mixer shall not exceed 0.223 pounds per ton of asphalt processed.

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 12 consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

Note: The source has opted to limit source-wide potential to emit PM to less than 125 tons per twelve (12) consecutive month period. This would allow for the co-location of an additional asphalt plant to the same location, as long as the co-located plant has limited potential to emit equal to or less than those that are issued within this permit.

#### Federal Rule Applicability Determination

- (a) This drum hot-mix asphalt plant, is subject to the New Source Performance Standard for Hot-mix Asphalt Facilities (40 CFR 60.90, Subpart I), which is incorporated by reference as 326 IAC 12, because it meets the definition of a hot-mix asphalt facility pursuant to the rule and it was constructed after June 11, 1973. This rule limits particulate matter emissions to 0.04 grains per dry standard cubic foot (gr/dscf) and also limits visible emissions to 20% opacity.

The source will be able to comply with this rule by using a baghouse to limit particulate matter emissions from the dryer/mixer to less than 0.04 gr/dscf.

The dryer/mixer is subject to the following portions of 40 CFR 60, Subpart I:

- (1) 40 CFR 60.90.
- (2) 40 CFR 60.91.
- (3) 40 CFR 60.92.
- (4) 40 CFR 60.93.

Nonapplicable portions of the NSPS will not be included in the permit.

The provisions of 40 CFR 60 Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the dryer/mixer except when otherwise specified in 40 CFR 60 Subpart I.

- (b) The requirements of the New Source Performance Standard for Asphalt Processing and Asphalt Roofing Manufacture, 40 CFR 60, Subpart UU (326 IAC 12), are not included in the permit, since pursuant to 40 CFR 60.471, the portable drum hot-mix asphalt plant is not an asphalt processing plant because it does not blow asphalt, or an asphalt roofing plant because it does not produce asphalt roofing products, and pursuant to 40 CFR 60.101(a) the portable drum hot-mix asphalt plant is not a petroleum refinery because it is not engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of petroleum or through redistillation, cracking or reforming of unfinished petroleum derivatives.
- (c) The requirements of the New Source Performance Standard for Bulk Gasoline Terminals (40 CFR 60, Subpart XX)(326 IAC 12), are not included in the permit, since the source is not considered a bulk gasoline terminal under 40 CFR 60.500. The source has an insignificant gasoline fuel transfer and dispensing operation.
- (d) The requirements of the New Source Performance Standard for Nonmetallic Mineral Processing Plants (40 CFR 60, Subpart OOO) (326 IAC 12), are not included in the permit, since the Recycled Asphalt Pavement (RAP) system does not contain a crusher or grinding mill. The source will be receiving pre-crushed/pre-sized RAP materials, therefore, pursuant to 40 CFR 60.670(a)(2) stand-alone screening operations at plants without crushers or grinding mills are exempt.
- (e) The requirements of the New Source Performance Standard for Calciners and Dryers in Mineral Industries, 40 CFR 60, Subpart UUU (326 IAC 12), are not included in the permit, since a portable

drum hot-mix asphalt plant is not a mineral processing plant, meaning that it does not process or produce any of the following minerals, their concentrates or any mixture of which the majority (>50 percent) is any of the following minerals or a combination of these minerals: alumina, ball clay, bentonite, diatomite, feldspar, fire clay, fuller's earth, gypsum, industrial sand, kaolin, lightweight aggregate, magnesium compounds, perlite, roofing granules, talc, titanium dioxide, and vermiculite.

- (f) There are no other New Source Performance Standards (NSPS)(40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63, Subpart LLLLLL (326 IAC 20-71, are not included in the permit, since the portable drum hot-mix asphalt plant is not a major source of HAPs, is not located at and is not part of a major source of HAP emissions, and does not engage in the preparation of asphalt flux or asphalt roofing materials.
- (h) The gasoline fuel transfer and dispensing operation is subject to the National Emission Standards for Hazardous Air Pollutants for Source Category Gasoline Dispensing Facilities (40 CFR 63, Subpart CCCCCC), because the source has a gasoline dispensing facility (GDF) and is considered an area source. The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank.

The units subject to this rule include the following:

A gasoline fuel transfer and dispensing operation handling less than or equal to one thousand three hundred (1,300) gallons per day, such as filling of tanks, locomotives, automobiles, having storage capacity less than or equal to ten thousand five hundred (10,500) gallons;

Applicable portions of the NESHAP are the following:

- (1) 40 CFR 63. 11110
- (2) 40 CFR 63. 11111(a)(b)(e)(f)
- (3) 40 CFR 63. 11112(a)(d)
- (4) 40 CFR 63. 11113(b)(c)
- (5) 40 CFR 63. 11116
- (6) 40 CFR 63. 11130
- (7) 40 CFR 63. 11131
- (8) 40 CFR 63. 11132
- (9) Table 3

Nonapplicable portions of the NESHAP will not be included in the permit.

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the unit except as otherwise specified in 40 CFR 63, Subpart CCCCCC.

- (i) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

- (j) 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.

<b>State Rule Applicability Determination</b>
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The following state rules are applicable to the source:

- (a) 326 IAC 2-8-4 (FESOP)  
FESOP applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))  
PSD applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.
- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))  
The unlimited potential to emit of HAPs from the source is greater than ten (10) tons per year for any single HAP and/or greater than twenty-five (25) tons per year of a combination of HAPs. However, the source shall limit the potential to emit of HAPs from the source 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, the source is not subject to the requirements of 326 IAC 2-4.1. See PTE of the Entire Source After Issuance of the FESOP Section above.
- (d) 326 IAC 2-6 (Emission Reporting)  
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not allowed to locate in 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, 326 IAC 2-6 does not apply.
- (e) 326 IAC 5-1 (Opacity Limitations)  
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, 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 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) Clark County (Jefferson Township - Cities of Jeffersonville, Clarksville, Oak Park);
    - (b) Dearborn County (Lawrenceburg Township - Cities of Lawrenceburg and Greendale);
    - (c) Dubois County (Bainbridge Township - the City of Jasper);
    - (d) 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);
    - (e) St. Joseph County (the area north of Kern Road and east of Pine Road);
    - (f) Vanderburgh County (the area included in the City of Evansville and Pigeon Township); and

- (g) Vigo County (Indiana State University campus, 0.5km 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 non-overlapping integrated averages for a continuous opacity monitor in a six (6) hour period.
- (f) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)  
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), 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.
- (g) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)  
The source is subject to the requirements of 326 IAC 6-5, because the paved and unpaved roadways have potential fugitive particulate emissions greater than 25 tons per year. Pursuant to 326 IAC 6-5, fugitive particulate matter emissions shall be controlled according to the Fugitive Dust Control Plan, which is included as Attachment A to the permit.
- (h) 326 IAC 6.5-1-2(a) (Nonattainment Area PM Limitations)  
This portable asphalt plant has the potential to emit PM before controls greater than 100 tons per year and may be relocated to Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties. Pursuant to 6.5-1-2(a), PM emissions from the dryer/mixer 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 the source is located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.  
  
In order to comply with the requirements of 326 IAC 6.5-1-2, particulate from the dryer/mixer shall be controlled by the baghouse at all times that the dryer/mixer is in operation.
- (i) 326 IAC 6.8 (Particulate Matter Limitations)  
This portable source is not permitted to locate in Lake or Porter Counties; therefore, the requirements of 326 IAC 6.8 do not apply.
- (h) 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)  
The asphalt drum mixer/dryer, identified as emission unit EU-01, is subject to 326 IAC 7-1.1 because it has potential SO<sub>2</sub> emissions of greater than 25 tons per year (limited potential emissions are 49.90 tons per year). Pursuant to this rule, sulfur dioxide emissions from the dryer/mixer burner shall be limited to five-tenths (0.5) pounds per million Btu for distillate oil combustion (including No. 2 fuel oil). This equates to a maximum allowable sulfur content of (0.5% by weight) for the distillate fuel oils.
- (i) 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements)  
Pursuant to this rule, the source shall submit reports of calendar month average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate (pounds SO<sub>2</sub> per MMBtu), to the OAQ upon request.
- (j) 326 IAC 8-1-6 (New Facilities; General Reduction Requirements)  
In order to render the requirements of 326 IAC 8-1-6 not applicable, the dryer/mixer shall be limited as follows:
  - (a) The amount of asphalt processed shall not exceed 738,932 tons per twelve (12) consecutive month period and a VOC limit of 0.032 pound of VOC per ton of hot mix asphalt produced.

Compliance with this limit shall limit the VOC PTE from the dryer/mixer to less than twenty-five (25) tons per 12 consecutive month period and shall render 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities) not applicable.

- (j) 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)  
 Pursuant to 326 IAC 8-4-1 (Applicability) and 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities), all petroleum liquid storage vessels with capacities greater than one hundred fifty thousand (150,000) liters (39,000 gallons) containing VOC whose true vapor pressure is greater than 10.5 kPa (1.52 psi) shall comply with the requirements for external fixed and floating roof tanks and the specified record keeping and reporting requirements. Tank-03, Tank-04, and Tank-05 have maximum capacities less than 39,000 gallons, each. Therefore, the requirements of this rule are not applicable to this facility and are not included in this permit.
- (k) 326 IAC 8-5-2 (Miscellaneous operations: asphalt paving)  
 Any paving application made after January 1, 1980, is subject to the requirements of 326 IAC 8-5-2. Pursuant to this rule, no person shall cause or allow the use of cutback asphalt or asphalt emulsion containing 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.

The owner or operator will not process emulsified or cutback asphalt at this source unless proper approval has been obtained from IDEM, OAQ. Therefore, this source is not subject to this rule.

- (l) 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)  
 Tanks-01 through -05 each has a capacity of less than thirty-nine thousand (39,000) gallons. Pursuant to 326 IAC 8-9-1(b), the storage tanks (Tanks-01 through -03) are subject to reporting and recordkeeping provisions of section 6(a) and 6(b) of this rule and are exempt from all other provisions of this rule when the source is located in Clark and Floyd Counties.
- (m) 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category)  
 This source does not operate a Portland cement kiln or a blast furnace gas boiler with a heat input greater than two hundred fifty million (250,000,000) British thermal units per hour. The one (1) 120 million Btu dryer/mixer burner is not subject to this rule, therefore the requirements of 326 IAC 10-3 are not included in the permit for this source.
- (n) 326 IAC 12-1 (New Source Performance Standards)  
 The hot-mix asphalt plant is required to comply with the requirements of 40 CFR 60.90, Subpart I, Standards of Performance for Hot-mix Asphalt Facilities, as described in the "Federal Rule Applicability" section of this TSD.

<b>Compliance Determination, Monitoring and Testing Requirements</b>
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- (a) The compliance determination and monitoring requirements applicable to this source are as follows:

Control	Parameter	Frequency	Range	Excursions and Exceedances
Conveyors, screening, material transfer points and dryer/mixer stack (SV-1) exhaust	Visible Emissions	Daily	Normal-Abnormal	Response Steps

Baghouse for the dryer/mixer	Pressure Drop	Daily	2.0 to 6.0 inches	Response Steps
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(b) The testing requirements applicable to this source are as follows:

Emission Unit	Control Device	Timeframe for Testing	Pollutant	Frequency of Testing	Limit or Requirement (lb/ton of asphalt)
EU-01	Baghouse	Within five (5) years of the date of the last valid compliance demonstration	PM	Once every five (5) years	0.223 lb PM/ton
			PM10		0.099 lb PM10/ton
			PM2.5		0.117 lb PM2.5/ton
		180 days after initial use of Blast Furnace slag	SO2	One Time	0.54 lb SO2/ton

The Permittee shall perform PM2.5 testing of the aggregate dryer/mixer at least once every five (5) years from the date of the last valid compliance demonstration, to be run concurrently with the PM and PM10 testing.

The Permittee shall perform SO2 testing for the aggregate dryer within one hundred eighty days (180) of initial use of Blast Furnace slag in the aggregate mix.

**Note:**

The source previously performed PM and PM10 testing on the EU-01 mixer/dryer on May 21, 2009. The test results were well below the proposed particulate limits. Therefore, PM10 and PM2.5 testing will not be required to be performed within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008, and will be performed concurrently with the PM testing once every five years from the date of the last valid compliance demonstration.

**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 April 17, 2009.

The operation of this source shall be subject to the conditions of the attached proposed FESOP No. 049-27797-03285. The staff recommends to the Commissioner that this FESOP be approved.

**IDEM Contact**

- (a) Questions regarding this proposed permit can be directed to Jason R. Krawczyk at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 232-8427 or toll free at 1-800-451-6027 extension 2-8427.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.idem.in.gov](http://www.idem.in.gov)

**Appendix A.1: Unlimited Emissions Calculations  
Entire Source**

**Company Name:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

**Asphalt Plant Maximum Capacity**

Maximum Hourly Asphalt Production =	300	ton/hr									
Maximum Annual Asphalt Production =	2,628,000	ton/yr									
Maximum Annual Blast Furnace Slag Usage =	1,314,000	ton/yr		1.10	% sulfur						
Maximum Annual Steel Slag Usage =	1,314,000			0.66	% sulfur						
Maximum Dryer Fuel Input Rate =	120.0	MMBtu/hr									
Natural Gas Usage =	1,051	MMCF/yr									
No. 2 Fuel Oil Usage =	7,508,571	gal/yr, and		0.50	% sulfur						
No. 4 Fuel Oil Usage =	0	gal/yr, and		0.50	% sulfur						
Refinery Blend Fuel Oil Usage =	7,508,571	gal/yr, and		0.50	% sulfur						
Propane Usage =	0	gal/yr, and		0.20	gr/100 ft3 sulfur						
Butane Usage =	0	gal/yr, and		0.22	gr/100 ft3 sulfur						
Used/Waste Oil Usage =	7,508,571	gal/yr, and		1.00	% sulfur	0.50	% ash	0.200	% chlorine,	0.010	% lead
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 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 Steel Slag SO2 Dryer/Mixer Emission Factor =	0.54	lb/ton of blast furnace slag processed									
Unlimited Blast Furnace Slag SO2 Dryer/Mixer Emission Factor =	0.0014	lb/ton of steel slag processed									

**Unlimited/Uncontrolled Emissions**

Process Description	Unlimited/Uncontrolled Potential to Emit (tons/year)									
	Criteria Pollutants						Hazardous Air Pollutants			
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Case HAP	
<b>Ducted Emissions</b>										
Dryer Fuel Combustion (worst case)	120.14	95.73	95.73	551.88	176.45	3.75	44.15	54.15	49.56	(hydrogen chloride)
Dryer/Mixer (Process)	36792.00	8541.00	1971.00	76.21	72.27	42.05	170.82	14.01	4.07	(formaldehyde)
Dryer/Mixer Slag Processing (worst case)	0	0	0	354.78	0	0	0	0	0	
Hot Oil Heater Fuel Combustion (worst case)	0.14	0.23	0.23	4.89	1.38	0.05	0.81	0.022	0.017	(hexane)
<b>Worst Case Emissions*</b>	<b>36792.14</b>	<b>8541.23</b>	<b>1971.23</b>	<b>911.55</b>	<b>177.83</b>	<b>42.10</b>	<b>171.63</b>	<b>54.17</b>	<b>49.56</b>	(hydrogen chloride)
<b>Fugitive Emissions</b>										
Asphalt Load-Out, Silo Filling, On-Site Yard	1.46	1.46	1.46	0	0	22.51	3.79	0.38	0.12	(formaldehyde)
Material Storage Piles	1.60	0.56	0.56	0	0	0	0	0	0	
Material Processing and Handling	8.94	4.23	0.64	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	43.89	16.03	16.03	0	0	0	0	0	0	
Unpaved and Paved Roads (worst case)	90.20	22.99	2.30	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	0	0.00	0	0.00	0.00	(xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0.74	0	0.19	0.07	(xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	negl	0	
<b>Total Fugitive Emissions</b>	<b>146.08</b>	<b>45.26</b>	<b>20.99</b>	<b>0</b>	<b>0.00</b>	<b>23.24</b>	<b>3.79</b>	<b>0.57</b>	<b>0.07</b>	(xylenes)
<b>Totals Unlimited/Uncontrolled PTE</b>	<b>36938.21</b>	<b>8586.49</b>	<b>1992.21</b>	<b>911.55</b>	<b>177.83</b>	<b>65.35</b>	<b>175.42</b>	<b>54.74</b>	<b>49.56</b>	(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 + Dryer/Mixer Slag Processing + Worst Case Emissions from Hot Oil Heater Fuel Combustion

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:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kawanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

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 =	300	ton/hr
Maximum Annual Asphalt Production =	2,628,000	ton/yr
Maximum Fuel Input Rate =	120	MMBtu/hr
Natural Gas Usage =	1,051	MMCF/yr
No. 2 Fuel Oil Usage =	7,508,571	gal/yr, and
No. 4 Fuel Oil Usage =	0	gal/yr, and
Refinery Blend Fuel Oil Usage =	7,508,571	gal/yr, and
Propane Usage =	0	gal/yr, and
Butane Usage =	0	gal/yr, and
Used/Waste Oil Usage =	7,508,571	gal/yr, and
		0.50 % sulfur
		0.50 % sulfur
		0.50 % sulfur
		0.20 gr/100 ft3 sulfur
		0.22 gr/100 ft3 sulfur
		1.00 % sulfur
		0.50 % ash
		0.200 % chlorine
		0.010 % lead

**Unlimited/Uncontrolled Emissions**

Criteria Pollutant	Emission Factor (units)							Unlimited/Uncontrolled Potential to Emit (tons/yr)							Worse Case Fuel (tons/yr)
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Refinery Blend 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)	Refinery Blend Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/Waste Oil (tons/yr)	
PM	1.9	2.0	7.0	7.815	0.5	0.6	32.0	1.00	7.51	0.00	29.34	0.000	0.000	120.14	<b>120.14</b>
PM10/PM2.5	7.6	3.3	8.3	9.315	0.5	0.6	25.5	3.99	12.39	0.00	34.97	0.000	0.000	95.73	<b>95.73</b>
SO2	0.6	71.0	75.0	78.5	0.020	0.020	147.0	0.32	266.55	0.00	294.71	0.000	0.000	551.88	<b>551.88</b>
NOx	190	24.0	47.0	47.0	13.0	15.0	19.0	99.86	90.10	0.00	176.45	0.00	0.00	71.33	<b>176.45</b>
VOC	5.5	0.20	0.20	0.28	1.00	1.10	1.0	2.89	0.75	0.00	1.05	0.00	0.00	3.75	<b>3.75</b>
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	44.1504	18.77	0.00	18.77	0.00	0.00	18.77	<b>44.15</b>
<b>Hazardous Air Pollutant</b>															
HCl							13.2							49.56	<b>49.56</b>
Antimony			5.25E-03	5.25E-03			negl			0.00E+00	1.97E-02			negl	<b>2.0E-02</b>
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03			1.1E-01	1.1E-04	2.10E-03	0.00E+00	4.96E-03			4.13E-01	<b>4.1E-01</b>
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05			negl	6.3E-06	1.58E-03	0.00E+00	1.04E-04			negl	<b>1.6E-03</b>
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04			9.3E-03	5.8E-04	1.58E-03	0.00E+00	1.49E-03			3.49E-02	<b>3.5E-02</b>
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02	7.4E-04	1.58E-03	0.00E+00	3.17E-03			7.51E-02	<b>7.5E-02</b>
Cobalt	8.4E-05		6.02E-03	6.02E-03			2.1E-04	4.4E-05		0.00E+00	2.26E-02			7.88E-04	<b>2.3E-02</b>
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03			0.55	2.6E-04	4.73E-03	0.00E+00	5.67E-03			2.1E+00	<b>2.06</b>
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03			6.8E-02	2.0E-04	3.15E-03	0.00E+00	1.13E-02			2.55E-01	<b>0.26</b>
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04				1.4E-04	1.58E-03	0.00E+00	4.24E-04				<b>1.6E-03</b>
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02	1.1E-03	1.58E-03	0.00E+00	3.17E-01			4.13E-02	<b>0.317</b>
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl	1.3E-05	7.88E-03	0.00E+00	2.56E-03			negl	<b>7.9E-03</b>
1,1,1-Trichloroethane			2.36E-04	2.36E-04						0.00E+00	8.86E-04				<b>8.9E-04</b>
1,3-Butadiene															<b>0.0E+00</b>
Acetaldehyde															<b>0.0E+00</b>
Acrolein															<b>0.0E+00</b>
Benzene	2.1E-03		2.14E-04	2.14E-04				1.1E-03		0.00E+00	8.03E-04				<b>1.1E-03</b>
Bis(2-ethylhexyl)phthalate							2.2E-03							8.26E-03	<b>8.3E-03</b>
Dichlorobenzene	1.2E-03						8.0E-07	6.3E-04						3.00E-06	<b>6.3E-04</b>
Ethylbenzene			6.36E-05	6.36E-05						0.00E+00	2.39E-04				<b>2.4E-04</b>
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				3.9E-02	2.29E-01	0.00E+00	1.24E-01				<b>0.229</b>
Hexane	1.8E+00							0.95							<b>0.946</b>
Phenol							2.4E-03							9.01E-03	<b>9.0E-03</b>
Toluene	3.4E-03		6.20E-03	6.20E-03				1.8E-03		0.00E+00	2.33E-02				<b>2.3E-02</b>
Total PAH Haps	negl		1.13E-03	1.13E-03				negl		0.00E+00	4.24E-03			1.47E-01	<b>1.5E-01</b>
Polycyclic Organic Matter		3.30E-03													<b>1.2E-02</b>
Xylene			1.09E-04	1.09E-04						0.00E+00	4.09E-04				<b>4.1E-04</b>
<b>Total HAPs</b>								<b>0.99</b>	<b>0.27</b>	<b>0.00</b>	<b>0.54</b>	<b>0</b>	<b>0</b>	<b>52.61</b>	<b>54.15</b>

**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 9/98), 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

**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

\* Emission Factors for Refinery Blend Fuel Oil not available in AP-42 Chapter 11.1. Therefore, assumes Refinery Blend Fuel Oil emission factors equal to No. 6 Fuel Oil emission factors.

**Appendix A.1: Unlimited Emissions Calculations  
Dryer/Mixer**

**Company Name: E & B Paving, Inc.  
Source Address: 101 S 600 W, Kewanna, IN 46939  
Permit Number: 049-27797-03285  
Reviewer: Jason R. Krawczyk**

The following calculations determine the unlimited/uncontrolled emissions from the aggregate drying/mixing

Maximum Hourly Asphalt Production = 300 ton/hr  
Maximum Annual Asphalt Production = 2,628,000 ton/yr

Criteria Pollutant	Uncontrolled Emission Factors (lb/ton)			Unlimited/Uncontrolled Potential to Emit (tons/yr)			Worse Case PTE
	Drum-Mix Plant (dryer/mixer)			Drum-Mix Plant (dryer/mixer)			
	Natural Gas	No. 2 Fuel Oil	Waste Oil	Natural Gas	No. 2 Fuel Oil	Waste Oil	
PM*	28	28	28	36792	36792	36792	36792
PM10*	6.5	6.5	6.5	8541	8541	8541	8541
PM2.5*	1.5	1.5	1.5	1971	1971	1971	1971
SO2**	0.0034	0.011	0.058	4.5	14.5	76.2	76.2
NOx**	0.026	0.055	0.055	34.2	72.3	72.3	72.3
VOC**	0.032	0.032	0.032	42.0	42.0	42.0	42.0
CO***	0.13	0.13	0.13	170.8	170.8	170.8	170.8
<b>Hazardous Air Pollutant</b>							
HCl			2.10E-04			2.76E-01	0.28
Antimony	1.80E-07	1.80E-07	1.80E-07	2.37E-04	2.37E-04	2.37E-04	2.37E-04
Arsenic	5.60E-07	5.60E-07	5.60E-07	7.36E-04	7.36E-04	7.36E-04	7.36E-04
Beryllium	negl	negl	negl	negl	negl	negl	0.00E+00
Cadmium	4.10E-07	4.10E-07	4.10E-07	5.39E-04	5.39E-04	5.39E-04	5.39E-04
Chromium	5.50E-06	5.50E-06	5.50E-06	7.23E-03	7.23E-03	7.23E-03	7.23E-03
Cobalt	2.60E-08	2.60E-08	2.60E-08	3.42E-05	3.42E-05	3.42E-05	3.42E-05
Lead	6.20E-07	1.50E-05	1.50E-05	8.15E-04	1.97E-02	1.97E-02	1.97E-02
Manganese	7.70E-06	7.70E-06	7.70E-06	1.01E-02	1.01E-02	1.01E-02	1.01E-02
Mercury	2.40E-07	2.60E-06	2.60E-06	3.15E-04	3.42E-03	3.42E-03	3.42E-03
Nickel	6.30E-05	6.30E-05	6.30E-05	0.08	0.08	0.08	0.08
Selenium	3.50E-07	3.50E-07	3.50E-07	4.60E-04	4.60E-04	4.60E-04	4.60E-04
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	0.05	0.05	0.05	0.05
Acetaldehyde			1.30E-03			1.71	1.71
Acrolein			2.60E-05			3.42E-02	3.42E-02
Benzene	3.90E-04	3.90E-04	3.90E-04	0.51	0.51	0.51	0.51
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0.32	0.32	0.32	0.32
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	4.07	4.07	4.07	4.07
Hexane	9.20E-04	9.20E-04	9.20E-04	1.21	1.21	1.21	1.21
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0.06	0.06	0.06	0.06
MEK			2.00E-05			0.03	0.03
Propionaldehyde			1.30E-04			0.17	0.17
Quinone			1.60E-04			0.21	0.21
Toluene	1.50E-04	2.90E-03	2.90E-03	0.20	3.81	3.81	3.81
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0.25	1.16	1.16	1.16
Xylene	2.00E-04	2.00E-04	2.00E-04	0.26	0.26	0.26	0.26
<b>Total HAPs</b>							<b>14.01</b>
<b>Worst Single HAP</b>							<b>4.07 (formaldehyde)</b>

**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, 11.1-7, 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  
Dryer/Mixer Slag Processing  
Limited Emissions**

**Company Name:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

The following calculations determine the limited emissions from the processing of slag in the aggregate drying/mixing

**Blast Furnace Slag:**

Maximum Slag Usage =  ton/yr  
 Unlimited Emission Factor =  lb/ton of slag processed  % sulfur

	Emission Factor or Limitation (lb/ton)*	Limited Potential to Emit (tons/yr)
Criteria Pollutant	Slag Processing	Slag Processing
SO2	0.540	354.78

**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 slag containing Limited Potential to Emit SO2 from Blast Furnace Slag (tons/yr) = (Blast Furnace Slag Usage Limitation (ton/yr)) \* [Limited Emission Factor (lb/ton)] \* [ton/2000 lbs]

**Steel Slag:**

Maximum Steel Slag Usage =  ton/yr  
 Unlimited Emission Factor =  lb/ton of slag processed  % sulfur

	Emission Factor (lb/ton)**	Potential to Emit (tons/yr)
Criteria Pollutant	Slag Processing	Slag Processing
SO2	0.0014	0.92

**Note:**

Maximum steel slag usage has been set equal to annual asphalt plant limitation as a worst case scenario.

**Methodology:**

\*\* Testing results for steel slag, obtained June 2009 from similar operations at an 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. A safety multiplier of two (2) was used as a worse case emissions scenario. Potential to Emit SO2 from Steel Slag (tons/yr) = Maximum Steel 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: **E & B Paving, Inc.**  
 Source Location: **101 S 600 W, Kewanna, IN 46939**  
 Permit Number: **049-27797-03285**  
 Reviewer: **Jason R. Krawczyk**

Maximum Hot Oil Heater Fuel Input Rate =  MMBtu/hr  
 Natural Gas Usage =  MMCF/yr  
 No. 2 Fuel Oil Usage =  gal/yr, and  % sulfur

**Unlimited/Uncontrolled Emissions**

Criteria Pollutant	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		Worse Case Fuel (tons/yr)
	Hot Oil Heater		Hot Oil Heater		
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	
PM	1.9	2.0	0.018	0.138	0.14
PM10/PM2.5	7.6	3.3	0.073	0.227	0.23
SO2	0.6	71.0	0.006	4.887	4.89
NOx	100	20.0	0.964	1.377	1.38
VOC	5.5	0.20	0.053	0.014	0.05
CO	84	5.0	0.809	0.344	0.81
<b>Hazardous Air Pollutant</b>					
Arsenic	2.0E-04	5.6E-04	1.9E-06	3.85E-05	3.9E-05
Beryllium	1.2E-05	4.2E-04	1.2E-07	2.89E-05	2.9E-05
Cadmium	1.1E-03	4.2E-04	1.1E-05	2.89E-05	2.9E-05
Chromium	1.4E-03	4.2E-04	1.3E-05	2.89E-05	2.9E-05
Cobalt	8.4E-05		8.1E-07		8.1E-07
Lead	5.0E-04	1.3E-03	4.8E-06	8.67E-05	8.7E-05
Manganese	3.8E-04	8.4E-04	3.7E-06	5.78E-05	5.8E-05
Mercury	2.6E-04	4.2E-04	2.5E-06	2.89E-05	2.9E-05
Nickel	2.1E-03	4.2E-04	2.0E-05	2.89E-05	2.9E-05
Selenium	2.4E-05	2.1E-03	2.3E-07	1.45E-04	1.4E-04
Benzene	2.1E-03		2.0E-05		2.0E-05
Dichlorobenzene	1.2E-03		1.2E-05		1.2E-05
Ethylbenzene					0.0E+00
Formaldehyde	7.5E-02	6.10E-02	7.2E-04	4.20E-03	4.2E-03
Hexane	1.8E+00		0.02		1.7E-02
Phenol					0.0E+00
Toluene	3.4E-03		3.3E-05		3.3E-05
Total PAH Haps	negl		negl		0.0E+00
Polycyclic Organic Matter		3.30E-03		2.27E-04	2.3E-04
<b>Total HAPs =</b>			<b>1.8E-02</b>	<b>4.9E-03</b>	<b>0.022</b>

**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 9/98), 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  
Asphalt Load-Out, Silo Filling, and Yard Emissions**

**Company Name:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

The following calculations determine the unlimited/uncontrolled fugitive emissions from hot asphalt mix load-out, silo filling, and on-site yard for a drum mix hot mix asphalt plant

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.5	
Maximum Annual Asphalt Production =	2,628,000	tons/yr

Pollutant	Emission Factor (lb/ton asphalt)			Unlimited/Uncontrolled Potential to Emit (tons/yr)			
	Load-Out	Silo Filling	On-Site Yard	Load-Out	Silo Filling	On-Site Yard	Total
Total PM*	5.2E-04	5.9E-04	NA	0.69	0.77	NA	1.46
Organic PM	3.4E-04	2.5E-04	NA	0.45	0.334	NA	0.78
TOC	0.004	0.012	0.001	5.46	16.01	1.445	22.9
CO	0.001	0.001	3.5E-04	1.77	1.550	0.463	3.79

NA = Not Applicable (no AP-42 Emission Factor)

<b>PM/HAPs</b>	<b>0.032</b>	<b>0.038</b>	<b>0</b>	<b>0.069</b>
<b>VOC/HAPs</b>	<b>0.081</b>	<b>0.204</b>	<b>0.021</b>	<b>0.306</b>
<b>non-VOC/HAPs</b>	<b>4.2E-04</b>	<b>4.3E-05</b>	<b>1.1E-04</b>	<b>5.8E-04</b>
<b>non-VOC/non-HAPs</b>	<b>0.40</b>	<b>0.23</b>	<b>0.10</b>	<b>0.73</b>

  

<b>Total VOCs</b>	<b>5.14</b>	<b>16.01</b>	<b>1.4</b>	<b>22.5</b>
<b>Total HAPs</b>	<b>0.11</b>	<b>0.24</b>	<b>0.021</b>	<b>0.38</b>
		<b>Worst Single HAP</b>		<b>0.117</b>
				<b>(formaldehyde)</b>

**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<sup>-(0.0251)(T+460)-20.43</sup>

Organic PM Ef = 0.00141(-V)e<sup>-(0.0251)(T+460)-20.43</sup>

TOC Ef = 0.0172(-V)e<sup>-(0.0251)(T+460)-20.43</sup>

CO Ef = 0.00558(-V)e<sup>-(0.0251)(T+460)-20.43</sup>

Silo Filling Emission Factor Equations (AP-42 Table 11.1-14):

PM/PM10 Ef = 0.000332 + 0.00105(-V)e<sup>-(0.0251)(T+460)-20.43</sup>

Organic PM Ef = 0.00105(-V)e<sup>-(0.0251)(T+460)-20.43</sup>

TOC Ef = 0.0504(-V)e<sup>-(0.0251)(T+460)-20.43</sup>

CO Ef = 0.00488(-V)e<sup>-(0.0251)(T+460)-20.43</sup>

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:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

**Organic Particulate-Based Compounds (Table 11.1-15)**

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Unlimited/Uncontrolled Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of Total Organic PM)	Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)	Load-out	Silo Filling	Onsite Yard	Total
<b>PAH HAPs</b>										
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	0.47%	1.2E-03	1.6E-03	NA	2.7E-03
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	1.3E-04	4.7E-05	NA	1.7E-04
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	3.1E-04	4.3E-04	NA	7.5E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	8.5E-05	1.9E-04	NA	2.7E-04
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	3.4E-05	0	NA	3.4E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	9.9E-06	0	NA	9.9E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	8.5E-06	0	NA	8.5E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	1.0E-05	0	NA	1.0E-05
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	3.5E-05	3.2E-05	NA	6.7E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	4.6E-04	7.0E-04	NA	1.2E-03
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	1.7E-06	0	NA	1.7E-06
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	2.2E-04		NA	2.2E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	3.4E-03	3.4E-03	NA	6.8E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	2.1E-06	0	NA	2.1E-06
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	1.1E-02	1.8E-02	NA	0.028
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	5.6E-03	6.1E-03	NA	1.2E-02
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	9.9E-05	1.0E-04	NA	2.0E-04
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	3.6E-03	6.0E-03	NA	9.6E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	6.7E-04	1.5E-03	NA	2.1E-03
<b>Total PAH HAPs</b>							<b>0.027</b>	<b>0.038</b>	<b>NA</b>	<b>0.064</b>
<b>Other semi-volatile HAPs</b>										
Phenol		PM/HAP	---	Organic PM	1.18%	0	5.3E-03	0	0	5.3E-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)	Silo Filling and Asphalt Storage Tank (% by weight of TOC)	Load-out	Silo Filling	Onsite Yard	Total
<b>VOC</b>		VOC	---	TOC	94%	100%	<b>5.14</b>	<b>16.01</b>	<b>1.36</b>	<b>22.51</b>
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	3.6E-01	4.2E-02	9.4E-02	0.491
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	2.5E-03	8.8E-03	6.6E-04	0.012
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	3.9E-02	1.8E-01	1.0E-02	0.225
<b>Total non-VOC/non-HAPS</b>					<b>7.30%</b>	<b>1.40%</b>	<b>0.399</b>	<b>0.224</b>	<b>0.106</b>	<b>0.73</b>
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	2.8E-03	5.1E-03	7.5E-04	8.7E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	5.2E-04	7.8E-04	1.4E-04	1.4E-03
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	2.7E-03	6.2E-03	7.1E-04	9.6E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	7.1E-04	2.6E-03	1.9E-04	3.5E-03
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	1.1E-05	6.4E-04	3.0E-06	6.6E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	8.2E-04	3.7E-03	2.2E-04	4.7E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	6.0E-03	0	1.6E-03	7.6E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	1.5E-02	6.1E-03	4.0E-03	0.025
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	4.8E-03	1.1E-01	1.3E-03	0.117
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	8.2E-03	1.6E-02	2.2E-03	0.026
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	9.8E-05	5.0E-05	2.6E-05	1.7E-04
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	4.3E-05	0	4.3E-05
MTBE	1634-04-4	VOC/HAP	---	TOC	0	0	0	0	0	0
Styrene	100-42-5	VOC/HAP	---	TOC	0.0073%	0.0054%	4.0E-04	8.6E-04	1.1E-04	1.4E-03
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	4.2E-04	0	1.1E-04	5.3E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	1.1E-02	9.9E-03	3.0E-03	0.024
1,1,1-Trichloroethane	71-55-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichloroethene	79-01-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichlorofluoromethane	75-69-4	VOC/HAP	---	TOC	0.0013%	0	7.1E-05	0	1.9E-05	9.0E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	2.2E-02	3.2E-02	5.9E-03	0.060
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	4.4E-03	9.1E-03	1.2E-03	1.5E-02
<b>Total volatile organic HAPs</b>					<b>1.50%</b>	<b>1.30%</b>	<b>0.082</b>	<b>0.208</b>	<b>0.022</b>	<b>0.312</b>

**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:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

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.

$E_f = 1.7 \cdot (s/1.5) \cdot (365-p)/235 \cdot (f/15)$ <p>where <math>E_f</math> = emission factor (lb/acre/day)  <math>s</math> = silt content (wt %)  <math>p</math> = <input type="text" value="125"/> days of rain greater than or equal to 0.01 inches  <math>f</math> = <input type="text" value="15"/> % of wind greater than or equal to 12 mph</p>
---

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	0.75	0.412	0.144
Limestone	1.6	1.85	0.75	0.253	0.089
RAP	0.5	0.58	0.75	0.079	0.028
Gravel	1.6	1.85	0.75	0.253	0.089
Slag	3.8	4.40	0.75	0.602	0.211
<b>Totals</b>				<b>1.60</b>	<b>0.56</b>

**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.

RAP - recycled asphalt pavement

**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  
Material Processing, Handling, Crushing, Screening, and Conveying**

**Company Name:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

**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.

$$E_f = k \cdot (0.0032)^{0.74} \cdot (U/5)^{1.3} / (M/2)^{1.4}$$

where:  $E_f$  = Emission factor (lb/ton)

$k$ (PM) = 0.74	= particle size multiplier (0.74 assumed for aerodynamic diameter $\leq 100$ $\mu$ m)
$k$ (PM10) = 0.35	= particle size multiplier (0.35 assumed for aerodynamic diameter $\leq 10$ $\mu$ m)
$k$ (PM2.5) = 0.053	= particle size multiplier (0.053 assumed for aerodynamic diameter $\leq 2.5$ $\mu$ m)
$U$ = 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)
$E_f$ (PM) = 2.27E-03	lb PM/ton of material handled
$E_f$ (PM10) = 1.07E-03	lb PM10/ton of material handled
$E_f$ (PM2.5) = 1.62E-04	lb PM2.5/ton of material handled

Maximum Annual Asphalt Production =	2,628,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	0.0%	
Maximum Material Handling Throughput =	2,628,000	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	2.98	1.41	0.21
Front-end loader dumping of materials into feeder bins	2.98	1.41	0.21
Conveyor dropping material into dryer/mixer or batch tower	2.98	1.41	0.21
<b>Total (tons/yr)</b>	<b>8.94</b>	<b>4.23</b>	<b>0.64</b>

**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 additives

\*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	7.10	3.15
Screening	0.025	0.0087	32.85	11.43
Conveying	0.003	0.0011	3.94	1.45
<b>Unlimited Potential to Emit (tons/yr) =</b>			<b>43.89</b>	<b>16.03</b>

**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  $\mu$ m)

PM2.5 = Particulate matter (< 2.5  $\mu$ m)

PTE = Potential to Emit

**Appendix A.1: Unlimited Emissions Calculations  
Unpaved Roads**

**Company Name:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

**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	2,628,000	tons/yr
Percent Asphalt Cement/Binder (weight %)	0.0%	
Maximum Material Handling Throughput	2,628,000	tons/yr
Maximum Asphalt Cement/Binder Throughput	0	tons/yr
Maximum No. 2 Fuel Oil Usage	7,508,571	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 distance (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.4	1.2E+05	4.6E+06	330	0.063	7332.6
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	1.2E+05	2.0E+06	330	0.063	7332.6
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	0.0E+00	0.0E+00	330	0.063	0.0
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	0.0E+00	0.0E+00	330	0.063	0.0
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	7.9E+02	3.5E+04	330	0.063	49.6
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	7.9E+02	9.5E+03	330	0.063	49.6
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	6.3E+05	1.2E+07	330	0.063	39107.1
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	6.3E+05	9.4E+06	330	0.063	39107.1
<b>Total</b>					<b>1.5E+06</b>	<b>2.8E+07</b>			<b>9.3E+04</b>

Average Vehicle Weight Per Trip	18.9	tons/trip
Average Miles Per Trip	0.063	miles/trip

Unmitigated Emission Factor,  $E_f = k \cdot [(s/12)^a] \cdot [(W/3)^b]$  (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 =	18.9	18.9	18.9	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,  $E_{ext} = E_f \cdot [(365 - P)/365]$   
 Mitigated Emission Factor,  $E_{ext} = E_f \cdot [(365 - P)/365]$

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, $E_f$	5.90	1.50	0.15	lb/mile
Mitigated Emission Factor, $E_{ext}$	3.88	0.99	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)	21.64	5.51	0.55	14.23	3.63	0.36	7.11	1.81	0.18
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	21.64	5.51	0.55	14.23	3.63	0.36	7.11	1.81	0.18
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.000	0.000	0.00	0.000	0.000	0.00	0.000	0.000	0.00
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.000	0.000	0.00	0.000	0.000	0.00	0.000	0.000	0.00
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.146	0.037	0.00	0.096	0.025	0.00	0.048	0.012	0.00
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.146	0.037	0.00	0.096	0.025	0.00	0.048	0.012	0.00
Aggregate/RAP Loader Full	Front-end loader (3 CY)	115.39	29.41	2.94	75.87	19.34	1.93	37.94	9.67	0.97
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	115.39	29.41	2.94	75.87	19.34	1.93	37.94	9.67	0.97
<b>Totals</b>		<b>274.35</b>	<b>69.92</b>	<b>6.99</b>	<b>180.39</b>	<b>45.98</b>	<b>4.60</b>	<b>90.20</b>	<b>22.99</b>	<b>2.30</b>

**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: Unlimited Emissions Calculations  
Paved Roads**

**Company Name:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

**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	2,628,000	tons/yr
Percent Asphalt Cement/Binder (weight %)	0.0%	
Maximum Material Handling Throughput	2,628,000	tons/yr
Maximum Asphalt Cement/Binder Throughput	0	tons/yr
Maximum No. 2 Fuel Oil Usage	7,508,571	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)	0.0	0.0	0.00	0.0E+00	0.0E+00	330	0.063	0.0
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.0	0.0	0.00	0.0E+00	0.0E+00	330	0.063	0.0
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.0	0.0	0.00	0.0E+00	0.0E+00	330	0.063	0.0
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.0	0.0	0.00	0.0E+00	0.0E+00	330	0.063	0.0
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.0	0.0	0.00	0.0E+00	0.0E+00	330	0.063	0.0
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.0	0.0	0.00	0.0E+00	0.0E+00	330	0.063	0.0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0.0	0.0	0.00	0.0E+00	0.0E+00	330	0.063	0.0
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0.0	0.0	0.00	0.0E+00	0.0E+00	330	0.063	0.0
<b>Total</b>						<b>0.0E+00</b>	<b>0.0E+00</b>		<b>0.0E+00</b>

Average Vehicle Weight Per Trip = 0.0 tons/trip  
 Average Miles Per Trip = 0.000 miles/trip

Unmitigated Emission Factor,  $E_f = [k * (sL/2)^{0.65} * (W/3)^{1.5} - C]$  (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.082	0.016	0.0024	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	0.0	0.0	0.0	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	0.00036	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)
sL =	0.6	0.6	0.6	g/m <sup>2</sup> = Ubiquitous 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,  $E_{ext} = E_f * [1 - (p/4N)]$

Mitigated Emission Factor,  $E_{ext} = E_f * [1 - (p/4N)]$   
 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, $E_f$	0.00	0.00	0.00	lb/mile
Mitigated Emission Factor, $E_{ext}$	0.00	0.00	0.00	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
<b>Totals</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**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: E & B Paving, Inc.**  
**Source Address: 101 S 600 W, Kewanna, IN 46939**  
**Permit Number: 049-27797-03285**  
**Reviewer: Jason R. Krawczyk**

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 =	2,628,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	0.0%	
Maximum Asphalt Cement/Binder Throughput =	0	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%	0.0	0.0
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	0.0	0.0
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	0.0	0.0
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	0.0	0.0
Other asphalt with solvent binder	25.9%	2.5%	0.0	0.0
<b>Worst Case PTE of VOC =</b>				<b>0.0</b>

**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
<b>PTE of Total HAPs (tons/yr) =</b>	<b>0.00</b>
<b>PTE of Single HAP (tons/yr) =</b>	<b>0.00 Xylenes</b>

**Hazardous Air Pollutant (HAP) Content (% by weight) For Various Petroleum Solvents\***

Volatile Organic HAP	CAS#	Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents				
		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%	
<b>Total Organic HAPs</b>		<b>26.08%</b>	<b>0.33%</b>	<b>1.29%</b>	<b>0.68%</b>	<b>0.19%</b>
<b>Worst Single HAP</b>		<b>9.00%</b>	<b>0.31%</b>	<b>0.50%</b>	<b>0.23%</b>	<b>0.07%</b>
		<b>Xylenes</b>	<b>Naphthalene</b>	<b>Xylenes</b>	<b>Xylenes</b>	<b>Chrysene</b>

**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, Available on the Internet at: <http://www.aehs.com/publications/catalog/contents/tp.htm>

**Abbreviations**

VOC = Volatile Organic Compounds  
 PTE = Potential to Emit

**Appendix A.1: Unlimited Emissions Calculations  
Gasoline Fuel Transfer and Dispensing Operation**

**Company Name:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

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:

$$\begin{aligned} \text{Gasoline Throughput} &= \frac{1,300}{474.5} \text{ gallons/day} \\ &= \text{kgal/yr} \end{aligned}$$

**Volatile Organic Compounds**

Emission Source	Emission Factor (lb/kgal of throughput)	PTE of VOC (tons/yr)*
Filling storage tank (balanced submerged filling)	0.3	0.07
Tank breathing and emptying	1.0	0.24
Vehicle refueling (displaced losses - controlled)	1.1	0.26
Spillage	0.7	0.17
<b>Total</b>		<b>0.74</b>

**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
<b>Limited PTE of Total HAPs (tons/yr) =</b>	<b>0.19</b>
<b>Limited PTE of Single HAP (tons/yr) =</b>	<b>0.07 Xylenes</b>

**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. Available on the Internet at: <http://www.aehs.com/publications/catalog/contents/tph.htm>

**Abbreviations**

VOC = Volatile Organic Compounds

PTE = Potential to Emit

**Appendix A.2: Limited Emissions Summary  
Entire Source**

**Company Name:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

**Asphalt Plant Limitations**

Maximum Hourly Asphalt Production =	300	ton/hr								
Annual Asphalt Production Limitation =	738,932	ton/yr								
Blast Furnace Slag Usage Limitation =	73,900	ton/yr	1.10	% sulfur						
Maximum Annual Steel Slag Usage =	738,932	ton/yr	0.66	% sulfur						
Natural Gas Limitation =	510.77	MMCF/yr								
No. 2 Fuel Oil Limitation =	705,920	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Limitation =	0	gal/yr, and	0.50	% sulfur						
Refinery Blend Fuel Oil Limitation =	319,238	gal/yr, and	0.50	% sulfur						
Propane Limitation =	0	gal/yr, and	0.20	gr/100 ft3 sulfur						
Butane Limitation =	0	gal/yr, and	0.22	gr/100 ft3 sulfur						
Used/Waste Oil Limitation =	340,955	gal/yr, and	1.00	% sulfur	0.50	% ash	0.200	% chlorine,	0.010	% lead
PM Dryer/Mixer Limitation =	0.223	lb/ton of asphalt production								
PM10 Dryer/Mixer Limitation =	0.099	lb/ton of asphalt production								
PM2.5 Dryer/Mixer Limitation =	0.117	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								
Blast Furnace Slag SO2 Dryer/Mixer Limitation =	0.540	lb/ton of slag processed								
Steel Slag SO2 Dryer/Mixer Maximum =	0.0014	lb/ton of slag processed								
Cold Mix Asphalt VOC Usage Limitation =	0.00	tons/yr								
HCl Limitation =	13.2	lb/kgal								

**Limited/Controlled Emissions**

Process Description	Limited/Controlled Potential Emissions (tons/year)								
	Criteria Pollutants						Hazardous Air Pollutants		
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Case HAP
<b>Ducted Emissions</b>									
Dryer Fuel Combustion (worst case)	5.46	4.35	4.35	25.06	48.52	1.40	21.45	2.89	2.25 (hydrogen chloride)
Dryer/Mixer (Process)	82.56	36.55	43.37	21.43	20.32	11.82	48.03	3.94	1.15 (formaldehyde)
Dryer/Mixer Slag Processing (worst case)	0	0	0	19.95	0	0	0	0	0
Hot Oil Heater Fuel Combustion (worst case)	0.14	0.23	0.23	4.89	1.38	0.05	0.81	0.02	0.017 (hexane)
<b>Worst Case Emissions*</b>	<b>82.70</b>	<b>36.78</b>	<b>43.60</b>	<b>49.90</b>	<b>49.90</b>	<b>11.88</b>	<b>48.84</b>	<b>3.96</b>	<b>2.25 (hydrogen chloride)</b>
<b>Fugitive Emissions</b>									
Asphalt Load-Out, Silo Filling, On-Site Yard	0.41	0.41	0.41	0	0	6.33	1.06	0.11	0.03 (formaldehyde)
Material Storage Piles	1.60	0.56	0.56	0	0	0	0	0	0
Material Processing and Handling	2.51	1.19	0.18	0	0	0	0	0	0
Material Crushing, Screening, and Conveying	12.34	4.51	4.51	0	0	0	0	0	0
Unpaved and Paved Roads (worst case)	25.34	6.46	0.65	0	0	0	0	0	0
Cold Mix Asphalt Production	0	0	0	0	0	0.00	0	0.00	0.00 (xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0.17	0	0.19	0.07 (xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	negl	negl
<b>Total Fugitive Emissions</b>	<b>42.20</b>	<b>13.12</b>	<b>6.30</b>	<b>0</b>	<b>0</b>	<b>6.50</b>	<b>1.06</b>	<b>0.30</b>	<b>0.07 (xylenes)</b>
<b>Totals Limited/Controlled Emissions</b>	<b>124.90</b>	<b>49.90</b>	<b>49.90</b>	<b>49.90</b>	<b>49.90</b>	<b>18.37</b>	<b>49.90</b>	<b>4.26</b>	<b>2.25 (HCl)</b>

negl = negligible

\*Worst Case Emissions (tons/yr) = Worst Case Emissions from Dryer Fuel Combustion and Dryer/Mixer + Worst Case Dryer/Mixer Slag Processing + Worst Case Emissions from Hot Oil Heater Fuel Combustion

Worst Case Fuel Combustion is based on the fuel with the highest emissions for each specific pollutant.

Worst Case Dryer/Mixer Slag Processing is based on the slag with the highest emissions for SO2.

Fuel component percentages provided by the source.

**Appendix A.2: Limited Emissions Summary**  
**Dryer/Mixer Fuel Combustion with Maximum Capacity > 100 MMBtu/hr**

**Company Name:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

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 =	300	ton/hr
Annual Asphalt Production Limitation =	738,932	ton/yr
Natural Gas Limitation =	511	MMCF/yr
No. 2 Fuel Oil Limitation =	705,920	gal/yr, and
No. 4 Fuel Oil Limitation =	0	gal/yr, and
Residual (No. 5 or No. 6) Fuel Oil Limitation =	319,238	gal/yr, and
Propane Limitation =	0	gal/yr, and
Butane Limitation =	0	gal/yr, and
Used/Waste Oil Limitation =	340,955	gal/yr, and

  

	0.50	% sulfur
	0.50	% sulfur
	1.00	% sulfur
	0.20	gr/100 ft3 sulfur
	0.22	gr/100 ft3 sulfur
	1.00	% sulfur
	0.50	% ash
	0.200	% chlorine
	0.010	% lead

**Limited Emissions**

Criteria Pollutant	Emission Factor (units)							Limited Potential to Emit (tons/yr)							
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Refinery Blend 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)	Refinery Blend Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/Waste Oil (tons/yr)	Worse Case Fuel (tons/yr)
PM	1.9	2	7	12.41	0.5	0.6	32	0.49	0.71	0.00	1.98	0.000	0.000	5.46	5.46
PM10	7.6	3.3	8.3	13.91	0.5	0.6	25.5	1.94	1.16	0.00	2.22	0.000	0.000	4.35	4.35
SO2	0.6	71.0	75.0	157.0	0.020	0.020	147.0	0.15	25.06	0.00	25.06	0.000	0.000	25.06	25.06
NOx	190	24.0	47.0	47.0	13.0	15.0	19.0	48.52	8.47	0.00	7.50	0.00	0.00	3.24	48.52
VOC	5.5	0.20	0.20	0.28	1.00	1.10	1.0	1.40	0.07	0.00	0.04	0.00	0.00	0.17	1.40
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	21.45	1.76	0.00	0.80	0.00	0.00	0.85	21.45
<b>Hazardous Air Pollutant</b>															
HCl							13.2				0.00E+00	8.38E-04		2.25	2.25
Antimony			5.25E-03	5.25E-03			negl				0.00E+00	8.38E-04		negl	8.4E-04
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03			1.1E-01	5.1E-05	1.98E-04	0.00E+00	2.11E-04			1.88E-02	1.9E-02
Beryllium	1.2E-05	4.2E-04	2.79E-05	2.79E-05			negl	3.1E-06	1.48E-04	0.00E+00	4.44E-06			negl	1.5E-04
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04			9.3E-03	2.8E-04	1.48E-04	0.00E+00	6.35E-05			1.59E-03	1.6E-03
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02	3.6E-04	1.48E-04	0.00E+00	1.35E-04			3.41E-03	3.4E-03
Cobalt	8.4E-05		6.02E-03	6.02E-03			2.1E-04	2.1E-05		0.00E+00	9.61E-04			3.58E-05	9.6E-04
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03			0.55	1.3E-04	4.45E-04	0.00E+00	2.41E-04			9.4E-02	0.09
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03			6.8E-02	9.7E-05	2.96E-04	0.00E+00	4.79E-04			1.16E-02	0.01
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04				6.6E-05	1.48E-04	0.00E+00	1.80E-05				1.5E-04
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02	5.4E-04	1.48E-04	0.00E+00	1.35E-02			1.88E-03	0.013
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl	6.1E-06	7.41E-04	0.00E+00	1.09E-04			negl	7.4E-04
1,1,1-Trichloroethane			2.36E-04	2.36E-04						0.00E+00	3.77E-05				3.8E-05
1,3-Butadiene															0.0E+00
Acetaldehyde															0.0E+00
Acrolein															0.0E+00
Benzene	2.1E-03		2.14E-04	2.14E-04				5.4E-04		0.00E+00	3.42E-05				5.4E-04
Bis(2-ethylhexyl)phthalate							2.2E-03							3.75E-04	3.8E-04
Dichlorobenzene	1.2E-03						8.0E-07	3.1E-04						1.36E-07	3.1E-04
Ethylbenzene			6.36E-05	6.36E-05						0.00E+00	1.02E-05				1.0E-05
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				1.9E-02	2.15E-02	0.00E+00	5.27E-03				0.022
Hexane	1.8E+00							0.46							0.460
Phenol							2.4E-03						4.09E-04		4.1E-04
Toluene	3.4E-03		6.20E-03	6.20E-03				8.7E-04		0.00E+00	9.90E-04				9.9E-04
Total PAH Haps	negl		1.13E-03	1.13E-03			3.9E-02	negl		0.00E+00	1.80E-04			6.67E-03	6.7E-03
Polycyclic Organic Matter		3.30E-03							1.16E-03						1.2E-03
Xylene			1.09E-04	1.09E-04						0.00E+00	1.74E-05				1.7E-05
<b>Total HAPs</b>								<b>0.48</b>	<b>0.03</b>	<b>0.00</b>	<b>0.02</b>	<b>0</b>	<b>0</b>	<b>2.39</b>	<b>2.89</b>

**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 Fuel Oil: AP-42 Chapter 1.3 (dated 9/98), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11
- 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

\* Emission Factors for Refinery Blend not available in AP-42 Chapter 11.1. Therefore, assumes Refinery Blend Fuel Oil emission factors equal to No. 6 Fuel Oil emission factors.

**Abbreviations**

- PM = Particulate Matter
- PM10 = Particulate Matter (<10 um)
- SO2 = Sulfur Dioxide
- NOx = Nitrous Oxides
- HAP = Hazardous Air Pollutant

- HCl = Hydrogen Chloride
- PAH = Polyaromatic Hydrocarbon
- VOC = Volatile Organic Compounds
- CO = Carbon Monoxide

**Appendix A.2: Limited Emissions Summary  
Dryer/Mixer**

**Company Name:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

The following calculations determine the limited emissions from the aggregate drying/mixing

Maximum Hourly Asphalt Production =	300	ton/hr
Annual Asphalt Production Limitation =	738,932	ton/yr
PM Dryer/Mixer Limitation =	0.223	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation =	0.099	lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation =	0.117	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

Criteria Pollutant	Emission Factor or Limitation (lb/ton)			Limited/Controlled Potential to Emit (tons/yr)			Worse Case PTE
	Drum-Mix Plant (dryer/mixer, controlled by fabric filter)			Drum-Mix Plant (dryer/mixer, controlled by fabric filter)			
	Natural Gas	No. 2 Fuel Oil	Waste Oil	Natural Gas	No. 2 Fuel Oil	Waste Oil	
PM*	0.223	0.223	0.223	82.6	82.6	82.6	<b>82.6</b>
PM10*	0.099	0.099	0.099	36.5	36.5	36.5	<b>36.5</b>
PM2.5*	0.117	0.117	0.117	43.4	43.4	43.4	<b>43.4</b>
SO2**	0.003	0.011	0.058	1.3	4.1	21.4	<b>21.4</b>
NOx**	0.026	0.055	0.055	9.6	20.3	20.3	<b>20.3</b>
VOC**	0.032	0.032	0.032	11.8	11.8	11.8	<b>11.8</b>
CO***	0.130	0.130	0.130	48.0	48.0	48.0	<b>48.0</b>
<b>Hazardous Air Pollutant</b>							
HCl			2.10E-04			0.08	<b>0.08</b>
Antimony	1.80E-07	1.80E-07	1.80E-07	6.65E-05	6.65E-05	6.65E-05	<b>6.65E-05</b>
Arsenic	5.60E-07	5.60E-07	5.60E-07	2.07E-04	2.07E-04	2.07E-04	<b>2.07E-04</b>
Beryllium	negl	negl	negl	negl	negl	negl	<b>0.00E+00</b>
Cadmium	4.10E-07	4.10E-07	4.10E-07	1.51E-04	1.51E-04	1.51E-04	<b>1.51E-04</b>
Chromium	5.50E-06	5.50E-06	5.50E-06	2.03E-03	2.03E-03	2.03E-03	<b>2.03E-03</b>
Cobalt	2.60E-08	2.60E-08	2.60E-08	9.61E-06	9.61E-06	9.61E-06	<b>9.61E-06</b>
Lead	6.20E-07	1.50E-05	1.50E-05	2.29E-04	5.54E-03	5.54E-03	<b>5.54E-03</b>
Manganese	7.70E-06	7.70E-06	7.70E-06	2.84E-03	2.84E-03	2.84E-03	<b>2.84E-03</b>
Mercury	2.40E-07	2.60E-06	2.60E-06	8.87E-05	9.61E-04	9.61E-04	<b>9.61E-04</b>
Nickel	6.30E-05	6.30E-05	6.30E-05	2.33E-02	2.33E-02	2.33E-02	<b>2.33E-02</b>
Selenium	3.50E-07	3.50E-07	3.50E-07	1.29E-04	1.29E-04	1.29E-04	<b>1.29E-04</b>
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	1.48E-02	1.48E-02	1.48E-02	<b>1.48E-02</b>
Acetaldehyde			1.30E-03			0.48	<b>0.48</b>
Acrolein			2.60E-05			9.61E-03	<b>9.61E-03</b>
Benzene	3.90E-04	3.90E-04	3.90E-04	0.14	0.14	0.14	<b>0.14</b>
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0.09	0.09	0.09	<b>0.09</b>
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	1.15	1.15	1.15	<b>1.15</b>
Hexane	9.20E-04	9.20E-04	9.20E-04	0.34	0.34	0.34	<b>0.34</b>
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0.02	0.02	0.02	<b>0.02</b>
MEK			2.00E-05			0.01	<b>0.01</b>
Propionaldehyde			1.30E-04			0.05	<b>0.05</b>
Quinone			1.60E-04			0.06	<b>0.06</b>
Toluene	1.50E-04	2.90E-03	2.90E-03	0.06	1.07	1.07	<b>1.07</b>
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0.07	0.33	0.33	<b>0.33</b>
Xylene	2.00E-04	2.00E-04	2.00E-04	0.07	0.07	0.07	<b>0.07</b>
<b>Total HAPs</b>							<b>3.94</b>
<b>Worst Single HAP</b>							<b>1.15 (formaldehyde)</b>

**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  
Dryer/Mixer Slag Processing  
Limited Emissions**

**Company Name:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

The following calculations determine the limited emissions from the processing of slag in the aggregate drying/mixing

**Blast Furnace Slag:**

Slag Usage Limitation = 

73,900
--------

 ton/yr  
 SO2 Slag Limitation = 

0.540
-------

 lb/ton of slag processed 

1.10
------

 % sulfur

	Emission Factor or Limitation (lb/ton)*	Limited Potential to Emit (tons/yr)
Criteria Pollutant	Slag Processing	Slag Processing
SO2	0.540	19.95

**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 slag containing Limited Potential to Emit SO2 from Blast Furnace Slag (tons/yr) = (Blast Furnace Slag Usage Limitation (ton/yr)) \* [Limited Emission Factor (lb/ton)] \* [ton/2000 lbs]

**Steel Slag:**

Maximum Steel Slag Usage = 

738,932
---------

 ton/yr  
 Maximum SO2 Emissions from Slag = 

0.0014
--------

 lb/ton of slag processed 

0.66
------

 % sulfur

	Emission Factor (lb/ton)**	Potential to Emit (tons/yr)
Criteria Pollutant	Slag Processing	Slag Processing
SO2	0.0014	0.52

**Note:**

Maximum steel slag usage has been set equal to annual asphalt plant limitation as a worst case scenario.

**Methodology:**

\*\* Testing results for steel slag, obtained June 2009 from similar operations at an 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. Potential to Emit SO2 from Steel Slag (tons/yr) = Maximum Steel Slag Usage (ton/yr) \* [Emission Factor (lb/ton)] \* [ton/2000 lbs]

**Abbreviations**

SO2 = Sulfur Dioxide

**Appendix A.2: Limited Emissions Summary**

**Hot Oil Heater**

**Fuel Combustion with Maximum Capacity < 100 MMBtu/hr**

**Company Name:** E & B Paving, Inc.  
**Source Location:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

Maximum Hot Oil Heater Fuel Input Rate = 2.20 MMBtu/hr  
 Natural Gas Usage = 19 MMCF/yr  
 No. 2 Fuel Oil Usage = 137,657 gal/yr, and 0.50 % sulfur

**Unlimited/Uncontrolled Emissions**

Criteria Pollutant	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		Worse Case Fuel (tons/yr)
	Hot Oil Heater		Hot Oil Heater		
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	
PM	1.9	2.0	0.018	0.138	0.14
PM10/PM2.5	7.6	3.3	0.073	0.227	0.23
SO2	0.6	71.0	0.006	4.887	4.89
NOx	100	20.0	0.964	1.377	1.38
VOC	5.5	0.20	0.053	0.014	0.05
CO	84	5.0	0.809	0.344	0.81
<b>Hazardous Air Pollutant</b>					
Arsenic	2.0E-04	5.6E-04	1.9E-06	3.85E-05	3.9E-05
Beryllium	1.2E-05	4.2E-04	1.2E-07	2.89E-05	2.9E-05
Cadmium	1.1E-03	4.2E-04	1.1E-05	2.89E-05	2.9E-05
Chromium	1.4E-03	4.2E-04	1.3E-05	2.89E-05	2.9E-05
Cobalt	8.4E-05		8.1E-07		8.1E-07
Lead	5.0E-04	1.3E-03	4.8E-06	8.67E-05	8.7E-05
Manganese	3.8E-04	8.4E-04	3.7E-06	5.78E-05	5.8E-05
Mercury	2.6E-04	4.2E-04	2.5E-06	2.89E-05	2.9E-05
Nickel	2.1E-03	4.2E-04	2.0E-05	2.89E-05	2.9E-05
Selenium	2.4E-05	2.1E-03	2.3E-07	1.45E-04	1.4E-04
Benzene	2.1E-03		2.0E-05		2.0E-05
Dichlorobenzene	1.2E-03		1.2E-05		1.2E-05
Ethylbenzene					0
Formaldehyde	7.5E-02	6.10E-02	7.2E-04	4.20E-03	0.004
Hexane	1.8E+00		0.02		0.017
Phenol					0
Toluene	3.4E-03		3.3E-05		3.3E-05
Total PAH Haps	negl		negl		0
Polycyclic Organic Matter		3.30E-03		2.27E-04	2.3E-04
<b>Total HAPs =</b>			<b>1.8E-02</b>	<b>4.9E-03</b>	<b>0.022</b>

**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 9/98), 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  
Asphalt Load-Out, Silo Filling, and Yard Emissions**

**Company Name:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

The following calculations determine the limited fugitive emissions from hot asphalt mix load-out, silo filling, 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 =	738,932	tons/yr

Pollutant	Emission Factor (lb/ton asphalt)			Limited Potential to Emit (tons/yr)			
	Load-Out	Silo Filling	On-Site Yard	Load-Out	Silo Filling	On-Site Yard	Total
Total PM*	5.2E-04	5.9E-04	NA	0.19	0.22	NA	0.41
Organic PM	3.4E-04	2.5E-04	NA	0.13	0.094	NA	0.22
TOC	0.004	0.012	0.001	1.54	4.50	0.406	6.4
CO	0.001	0.001	3.5E-04	0.50	0.436	0.130	1.06

NA = Not Applicable (no AP-42 Emission Factor)

<b>PM/HAPs</b>	<b>0.009</b>	<b>0.011</b>	<b>0</b>	<b>0.020</b>
<b>VOC/HAPs</b>	<b>0.023</b>	<b>0.057</b>	<b>0.006</b>	<b>0.086</b>
<b>non-VOC/HAPs</b>	<b>1.2E-04</b>	<b>1.2E-05</b>	<b>3.1E-05</b>	<b>1.6E-04</b>
<b>non-VOC/non-HAPs</b>	<b>0.11</b>	<b>0.06</b>	<b>0.03</b>	<b>0.20</b>

<b>Total VOCs</b>	<b>1.44</b>	<b>4.50</b>	<b>0.4</b>	<b>6.3</b>
<b>Total HAPs</b>	<b>0.03</b>	<b>0.07</b>	<b>0.006</b>	<b>0.11</b>
<b>Worst Single HAP</b>				<b>0.033</b>
				<b>(formaldehyde)</b>

**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 =  $0.00558(-V)e^{((0.0251)(T+460)-20.43)}$

Silo Filling Emission Factor Equations (AP-42 Table 11.1-14):

PM/PM10 Ef =  $0.000332 + 0.00105(-V)e^{((0.0251)(T+460)-20.43)}$   
 Organic PM Ef =  $0.00105(-V)e^{((0.0251)(T+460)-20.43)}$   
 TOC Ef =  $0.0504(-V)e^{((0.0251)(T+460)-20.43)}$   
 CO Ef =  $0.00488(-V)e^{((0.0251)(T+460)-20.43)}$

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 Summary  
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)**

**Company Name:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

**Organic Particulate-Based Compounds (Table 11.1-15)**

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Limited Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of Total Organic PM)	Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)	Load-out	Silo Filling	Onsite Yard	Total
<b>PAH HAPs</b>										
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	0.47%	3.3E-04	4.4E-04	NA	7.7E-04
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	3.5E-05	1.3E-05	NA	4.8E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	8.8E-05	1.2E-04	NA	2.1E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	2.4E-05	5.3E-05	NA	7.6E-05
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	9.6E-06	0	NA	9.6E-06
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	2.8E-06	0	NA	2.8E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	2.4E-06	0	NA	2.4E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	2.9E-06	0	NA	2.9E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	9.8E-06	8.9E-06	NA	1.9E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	1.3E-04	2.0E-04	NA	3.3E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	4.7E-07	0	NA	4.7E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	6.3E-05	1.4E-04	NA	2.0E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	9.7E-04	9.5E-04	NA	1.9E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	5.9E-07	0	NA	5.9E-07
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	3.0E-03	4.9E-03	NA	0.008
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	1.6E-03	1.7E-03	NA	3.3E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	2.8E-05	2.8E-05	NA	5.6E-05
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	1.0E-03	1.7E-03	NA	2.7E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	1.9E-04	4.1E-04	NA	6.0E-04
<b>Total PAH HAPs</b>							<b>0.007</b>	<b>0.011</b>	<b>NA</b>	<b>0.018</b>
<b>Other semi-volatile HAPs</b>										
Phenol		PM/HAP	---	Organic PM	1.18%	0	1.5E-03	0	0	1.5E-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: Limited Emissions Summary**  
**Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)**  
**Limited Emissions**

**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)	Silo Filling and Asphalt Storage Tank (% by weight of TOC)	Load-out	Silo Filling	Onsite Yard	Total
<b>VOC</b>		VOC	---	TOC	94%	100%	<b>1.44</b>	<b>4.50</b>	<b>0.38</b>	<b>6.33</b>
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	1.0E-01	1.2E-02	2.6E-02	0.138
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	7.1E-04	2.5E-03	1.9E-04	0.003
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	1.1E-02	5.0E-02	2.9E-03	0.063
<b>Total non-VOC/non-HAPS</b>					<b>7.30%</b>	<b>1.40%</b>	<b>0.112</b>	<b>0.063</b>	<b>0.030</b>	<b>0.20</b>
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	8.0E-04	1.4E-03	2.1E-04	2.5E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	1.5E-04	2.2E-04	3.9E-05	4.1E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	7.5E-04	1.8E-03	2.0E-04	2.7E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	2.0E-04	7.2E-04	5.3E-05	9.7E-04
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	3.2E-06	1.8E-04	8.5E-07	1.8E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	2.3E-04	1.0E-03	6.1E-05	1.3E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	1.7E-03	0	4.5E-04	2.1E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	4.3E-03	1.7E-03	1.1E-03	0.007
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	1.4E-03	3.1E-02	3.6E-04	0.033
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	2.3E-03	4.5E-03	6.1E-04	0.007
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	2.8E-05	1.4E-05	7.3E-06	4.9E-05
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	1.2E-05	0	1.2E-05
MTBE	1634-04-4	VOC/HAP	---	TOC	0	0	0	0	0	0
Styrene	100-42-5	VOC/HAP	---	TOC	0.0073%	0.0054%	1.1E-04	2.4E-04	3.0E-05	3.8E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	1.2E-04	0	3.1E-05	1.5E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	3.2E-03	2.8E-03	8.5E-04	0.007
1,1,1-Trichloroethane	71-55-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichloroethene	79-01-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichlorofluoromethane	75-69-4	VOC/HAP	---	TOC	0.0013%	0	2.0E-05	0	5.3E-06	2.5E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	6.3E-03	9.0E-03	1.7E-03	0.017
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	1.2E-03	2.6E-03	3.3E-04	4.1E-03
<b>Total volatile organic HAPs</b>					<b>1.50%</b>	<b>1.30%</b>	<b>0.023</b>	<b>0.059</b>	<b>0.006</b>	<b>0.088</b>

**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 Summary  
Material Storage Piles**

**Company Name:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

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.

$$E_f = 1.7 \cdot (s/1.5)^3 \cdot (365-p) / 235 \cdot (f/15)$$

where  $E_f$  = 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	0.75	0.412	0.144
Limestone	1.6	1.85	0.75	0.253	0.089
RAP	0.5	0.58	0.75	0.079	0.028
Gravel	1.6	1.85	0.75	0.253	0.089
Slag	3.8	4.40	0.75	0.602	0.211
<b>Totals</b>				<b>1.60</b>	<b>0.56</b>

**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.

**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 Summary  
Material Processing, Handling, Crushing, Screening, and Conveying**

**Company Name:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

**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.

$$E_f = k \cdot (0.0032)^k \cdot (U/5)^{1.3} / (M/2)^{1.4}$$

where:  $E_f$  = 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)
$E_f$ (PM) =	2.27E-03	lb PM/ton of material handled
$E_f$ (PM10) =	1.07E-03	lb PM10/ton of material handled
$E_f$ (PM2.5) =	1.62E-04	lb PM2.5/ton of material handled

  

Annual Asphalt Production Limitation =	738,932	tons/yr
Percent Asphalt Cement/Binder (weight %) =	0.0%	
Maximum Material Handling Throughput =	738,932	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	0.84	0.40	0.06
Front-end loader dumping of materials into feeder bins	0.84	0.40	0.06
Conveyor dropping material into dryer/mixer or batch tower	0.84	0.40	0.06
<b>Total (tons/yr)</b>	<b>2.51</b>	<b>1.19</b>	<b>0.18</b>

**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 additives

\*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	2.00	0.89
Screening	0.025	0.0087	9.24	3.21
Conveying	0.003	0.0011	1.11	0.41
<b>Limited Potential to Emit (tons/yr) =</b>			<b>12.34</b>	<b>4.51</b>

**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 Summary  
Unpaved Roads**

**Company Name: E & B Paving, Inc.  
Source Address: 101 S 600 W, Kewanna, IN 46939  
Permit Number: 049-27797-03285  
Reviewer: Jason R. Krawczyk**

**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 =	738,932	tons/yr
Percent Asphalt Cement/Binder (weight %)	0.0%	
Maximum Material Handling Throughput =	738,932	tons/yr
Maximum Asphalt Cement/Binder Throughput =	0	tons/yr
No. 2 Fuel Oil Limitation =	705,920	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	3.3E+04	1.3E+06	330	0.063	2061.8
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	3.3E+04	5.6E+05	330	0.063	2061.8
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	0.0E+00	0.0E+00	330	0.063	0.0
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	0.0E+00	0.0E+00	330	0.063	0.0
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	7.5E+01	3.3E+03	330	0.063	4.7
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	7.5E+01	8.9E+02	330	0.063	4.7
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	1.8E+05	3.4E+06	330	0.063	10996.0
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	1.8E+05	2.6E+06	330	0.063	10996.0
<b>Total</b>						<b>4.2E+05</b>	<b>7.9E+06</b>		<b>2.6E+04</b>

Average Vehicle Weight Per Trip =	18.9	tons/trip
Average Miles Per Trip =	0.063	miles/trip

Unmitigated Emission Factor,  $E_f = k \cdot [(s/12)^a] \cdot [(W/3)^b]$  (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 =	18.9	18.9	18.9	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,  $E_{ext} = E \cdot [(365 - P)/365]$

Mitigated Emission Factor, $E_{ext} = E \cdot [(365 - P)/365]$		
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, $E_f =$	5.90	1.50	0.15	lb/mile
Mitigated Emission Factor, $E_{ext} =$	3.88	0.99	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)	6.08	1.55	0.16	4.00	1.02	0.10	2.00	0.51	0.05
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	6.08	1.55	0.16	4.00	1.02	0.10	2.00	0.51	0.05
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.000	0.000	0.00	0.000	0.000	0.0E+00	0.000	0.000	0.0E+00
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.000	0.000	0.00	0.000	0.000	0.0E+00	0.000	0.000	0.0E+00
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.014	0.004	3.5E-04	0.009	0.002	2.3E-04	0.005	0.001	1.2E-04
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.014	0.004	3.5E-04	0.009	0.002	2.3E-04	0.005	0.001	1.2E-04
Aggregate/RAP Loader Full	Front-end loader (3 CY)	32.44	8.27	0.83	21.33	5.44	0.54	10.67	2.72	0.27
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	32.44	8.27	0.83	21.33	5.44	0.54	10.67	2.72	0.27
<b>Totals</b>		<b>77.07</b>	<b>19.64</b>	<b>1.96</b>	<b>50.68</b>	<b>12.92</b>	<b>1.29</b>	<b>25.34</b>	<b>6.46</b>	<b>0.65</b>

**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 Summary**  
**Paved Roads**  
**Limited Emissions**

**Company Name:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

**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 =	738,932	tons/yr
Percent Asphalt Cement/Binder (weight %) =	0.0%	
Maximum Material Handling Throughput =	738,932	tons/yr
Maximum Asphalt Cement/Binder Throughput =	0	tons/yr
No. 2 Fuel Oil Limitation =	705,920	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)	0.0	0.0	0.00	0.0E+00	0.0E+00	330	0.063	0.0
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.0	0	0.00	0.0E+00	0.0E+00	330	0.063	0.0
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.0	0.0	0.00	0.0E+00	0.0E+00	330	0.063	0.0
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.0	0	0.00	0.0E+00	0.0E+00	330	0.063	0.0
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.0	0.0	0.00	0.0E+00	0.0E+00	330	0.063	0.0
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.0	0	0.00	0.0E+00	0.0E+00	330	0.063	0.0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0.0	0.0	0.00	0.0E+00	0.0E+00	330	0.063	0.0
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0.0	0	0.00	0.0E+00	0.0E+00	330	0.063	0.0
<b>Total</b>									<b>0.0E+00</b>

Average Vehicle Weight Per Trip = 0.0 tons/trip  
 Average Miles Per Trip = 0.000 miles/trip

Unmitigated Emission Factor, Ef = [k \* (sL/2)<sup>0.65</sup> \* (W/3)<sup>1.5</sup> - C] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.082	0.016	0.0024	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	0.0	0.0	0.0	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	0.00036	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)
sL =	0.6	0.6	0.6	g/m <sup>2</sup> = Ubiquitous 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 =	0.00	0.00	0.00	lb/mile
Mitigated Emission Factor, Eext =	0.00	0.00	0.00	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
<b>Totals</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**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 Summary  
Cold Mix Asphalt Production and Stockpiles**

**Company Name:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

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

Cold Mix Asphalt VOC Usage Limitation =  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%	0.0	0.0	N/A
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	0.0	0.0	N/A
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	0.0	0.0	N/A
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	0.0	0.0	N/A
Other asphalt with solvent binder	25.9%	2.5%	0.0	0.0	N/A
<b>Worst Case Limited PTE of VOC =</b>				<b>0.0</b>	

**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
<b>Limited PTE of Total HAPs (tons/yr) =</b>	<b>0.00</b>
<b>Limited PTE of Single HAP (tons/yr) =</b>	<b>0.00 Xylenes</b>

**Hazardous Air Pollutant (HAP) Content (% by weight) For Various Petroleum Solvents\***

Volatile Organic HAP	CAS#	Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents				
		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%	
<b>Total Organic HAPs</b>		<b>26.08%</b>	<b>0.33%</b>	<b>1.29%</b>	<b>0.68%</b>	<b>0.19%</b>
<b>Worst Single HAP</b>		<b>9.00%</b>	<b>0.31%</b>	<b>0.50%</b>	<b>0.23%</b>	<b>0.07%</b>
		<b>Xylenes</b>	<b>Naphthalene</b>	<b>Xylenes</b>	<b>Xylenes</b>	<b>Chrysene</b>

**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. Available on the Internet at: <http://www.aehs.com/publications/catalog/contents/tp.htm>

**Abbreviations**

VOC = Volatile Organic Compounds  
 PTE = Potential to Emit

**Appendix A.2: Limited Emissions Summary  
Gasoline Fuel Transfer and Dispensing Operation**

**Company Name:** E & B Paving, Inc.  
**Source Address:** 101 S 600 W, Kewanna, IN 46939  
**Permit Number:** 049-27797-03285  
**Reviewer:** Jason R. Krawczyk

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:

$$\begin{aligned} \text{Gasoline Throughput} &= \frac{1,300}{474.5} \text{ gallons/day} \\ &= \text{kgal/yr} \end{aligned}$$

**Volatile Organic Compounds**

Emission Source	Emission Factor (lb/kgal of throughput)	PTE of VOC (tons/yr)*
Filling storage tank (balanced submerged filling)	0.3	0.07
Tank breathing and emptying	1.0	0.24
Vehicle refueling (displaced losses - controlled)	1.1	0.26
Spillage	0.7	0.17
<b>Total</b>		<b>0.74</b>

**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
<b>Limited PTE of Total HAPs (tons/yr) =</b>	<b>0.19</b>
<b>Limited PTE of Single HAP (tons/yr) =</b>	<b>0.07 Xylenes</b>

**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. Available on the Internet at: <http://www.aehs.com/publications/catalog/contents/tph.htm>

**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  
[www.idem.IN.gov](http://www.idem.IN.gov)

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

TO: Steve Henderson  
Regulatory Affairs Dir.  
E & B Paving, Inc.  
286 W. 300 N.  
Anderson IN 46012

DATE: Dec. 2, 2009

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

SUBJECT: Final Decision  
FESOP  
049-27797-03285

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:  
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](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 11/30/07



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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[www.idem.IN.gov](http://www.idem.IN.gov)

Dec. 2, 2009

TO: Kewanna Union Twp Public Library

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

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

**Applicant Name: E & B Paving, Inc.**  
**Permit Number: 049-27797-03285**

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	BMILLER 12/2/2009 E & B Paving, Inc. 049-27797-03285 (final)		Type of Mail:  <b>CERTIFICATE OF MAILING ONLY</b>	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		

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2		Fulton County Commissioners 1093 E 600 N Rochester IN 46975 (Local Official)									
3		Mr. Charles L. Berger Berger & Berger, Attorneys at Law 313 Main Street Evansville IN 47700 (Affected Party)									
4		Karen Good Kewanna Town Council and Town Manager P.O. Box 5, 109 East Aurora Street Kewanna IN 46939 (Local Official)									
5		Fulton County Health Department 125 E 9th Street #125 Rochester IN 46975-7119 (Health Department)									
6		Kewanna Union Twp Public Library E Main St, P.O. Box 365 Kewanna IN 46939-0365 (Library)									
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