



# 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: April 29, 2008

RE: Dave O'Mara Contractor, Inc. / 055-25301-05227

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  
Renewal  
OFFICE OF AIR QUALITY**

**Dave O'Mara Contractor, Inc., Plant #7  
Lighthouse Junction Property, Southeast Corner of State Road 57 and  
State Road 54, Bloomfield, Indiana 47424**

(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.

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.: F055-25301-05227	
Issued by: Origin signed by	Issuance Date: April 29, 2008
Chrystal A. Wagner, Section Chief Permits Branch Office of Air Quality	Expiration Date: April 29, 2018

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**ATTACHMENT A - ASPHALT PLANT SITE FUGITIVE DUST CONTROL PLAN**

## 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)]

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The Permittee owns and operates a portable hot drum mix asphalt manufacturing facility.

Source Address:	Lighthouse Junction Property, Southeast Corner of State Road 57 and State Road 54, Bloomfield, Indiana 47424
Mailing Address:	1100 East O&M Avenue, North Vernon, Indiana 47265
General Source Phone Number:	812-346-4135
SIC Code:	2951
County Location:	Greene
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD 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) portable asphalt drum-mix plant, with a maximum capacity of 300 tons of asphalt per hour, equipped with one (1) No. 2 fuel oil fired aggregate dryer burner with a maximum rated capacity of 72 million British thermal units (MMBtu) per hour, using natural gas or No. 4 fuel oil as a back up fuel, and one (1) baghouse for particulate control, exhausting at one (1) stack, identified as #1. Under NSPS Subpart I, this asphalt plant is considered an affected facility;
- (b) five (5) compartment cold feed bins with feeders and collection conveyors;
- (c) one (1) 30" incline conveyor with a 4' X 10' scalping screen;
- (d) two (2) conveyors and one (1) screen to transfer aggregate from recycle bin to asphalt dryer;
- (e) one (1) conveyor and one (1) hot elevator to transfer product from asphalt dryer to storage silo;
- (f) cold-mix (stockpile mix) asphalt storage piles;
- (g) one (1) 20,000-gallon asphalt storage tank;
- (h) one (1) 15,000-gallon No. 2 fuel oil storage tank; and
- (i) one (1) 18,000-gallon No. 4 fuel oil storage tank.

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) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]
- (b) Other categories with emissions below insignificant thresholds:
  - (1) One (1) No. 2 fuel-oil fired hot oil heater with a rated capacity of 1.2 MMBtu/hr; and
  - (2) Aggregate storage piles with a total storage capacity of 12,500 tons. [326 IAC 6-5]

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

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

## SECTION B GENERAL CONDITIONS

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

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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, F055-25301-05227, 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]

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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)]

- (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)]

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

Indiana Department of Environmental Management  
Compliance 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)]

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)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) 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.
- (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, 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 Section), or  
Telephone Number: 317-233-0178 (ask for Compliance Section)  
Facsimile Number: 317-233-6865

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management  
Compliance 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 F055-25301-05227 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 Data Section, 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  
Permits Branch, 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  
Permits Branch, 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  
Permits Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

and

United States Environmental Protection Agency, Region V  
Air and Radiation Division, 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]**

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A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

**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]**

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

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

#### C.2 Overall Source Limit [326 IAC 2-8]

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

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), 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) The 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. This limitation shall make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) not applicable.

(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.3 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:

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

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A,

Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 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.5 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.6 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.7 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 plan submitted on February 25, 2003. The plan is included as Attachment A.

C.8 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 by using ambient air quality modeling pursuant to 326 IAC 1-7-4.

C.9 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  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-52 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 Accredited 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 Accredited 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.10 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 Data Section, 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.11 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.12 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. 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 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.13 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

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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.14 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.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]**

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- (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]**

- (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.

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

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. 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 Data Section, 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) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

### **Stratospheric Ozone Protection**

#### **C.20 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.

### **Portable Source Requirements**

#### **C.21 Relocation of Portable Sources [326 IAC 2-14-4]**

---

- (a) Pursuant to 2-14-4 (Relocation), a portable source, operation, process, or emissions unit that has been issued a valid operating permit under this article may be issued an approval letter for relocation that authorizes operation of the source, operation, process, or emissions unit as follows:
  - (1) The source submits a notification at least thirty (30) days prior to relocation.
  - (2) The commissioner shall approve or deny the relocation within thirty (30) days of receipt of the notification of the proposed relocation.
  - (3) The application submitted for a permit revision in accordance with 326 IAC 2-6.1-6, 326 IAC 2-7-12, or 326 IAC 2-8-11.1 shall satisfy the notification requirements of this section.

The commissioner shall not approve a relocation of a portable source, operation,

process, or emissions unit, if the following applies:

- (1) The relocation would allow a violation of the national ambient air quality standards (NAAQS).
  - (2) The relocation would allow a violation of a prevention of significant deterioration (PSD) maximum allowable increase.
  - (3) The source is not in compliance with all applicable air pollution control rules.
  - (4) The relocation would adversely affect the public health.
- (b) This permit is approved for operation in all areas of Indiana except in severe nonattainment areas for ozone (at the time of this permit's issuance these areas were Lake and Porter 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.
- (c) 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
- The notification by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) A "Relocation Site Approval" letter shall be obtained prior to relocating.
- (e) The Permittee shall also notify the applicable local air pollution control agency when relocating to, or from, one the following:
- (1) Madison County - (Anderson Office of Air Management)
  - (2) City of Evansville plus four (4) miles beyond the corporate limits but not outside Vanderburgh County - (Evansville EPA)
  - (3) City of Gary - (Gary Department of Environmental Affairs)
  - (4) City of Hammond - (Hammond Department of Environmental Management)
  - (5) Marion County - (Indianapolis Office of Environmental Services)
  - (6) St. Joseph County - (St. Joseph County Health Department)
  - (7) Vigo County - (Vigo County Air Pollution Control)
- (f) A valid operation permit consists of this document and any subsequent "Relocation Site Approval" letter specifying the current location of the portable plant.

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) One (1) portable asphalt drum-mix plant, with a maximum capacity of 300 tons of asphalt per hour, equipped with one (1) No. 2 fuel oil fired aggregate dryer burner with a maximum rated capacity of 72 million British thermal units (MMBtu) per hour, using natural gas or No. 4 fuel oil as a back up fuel, and one (1) baghouse for particulate control, exhausting at one (1) stack, identified as #1. Under NSPS Subpart I, this asphalt plant is considered an affected facility;
- (b) five (5) compartment cold feed bins with feeders and collection conveyors;
- (c) one (1) 30" incline conveyor with a 4' X 10' scalping screen;
- (d) two (2) conveyors and one (1) screen to transfer aggregate from recycle bin to asphalt dryer; and
- (e) one (1) conveyor and one (1) hot elevator to transfer product from asphalt dryer to storage silo.

(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 2-2]

- (a) The asphalt production shall be limited to 1,560,000 tons per twelve (12) consecutive month period and 0.225 pounds of PM per ton of asphalt produced. The PM emissions for the whole source are therefore limited to less than 250 tons per year, and 326 IAC 2-2 does not apply.

#### D.1.2 Particulate Matter Less than Ten Microns (PM<sub>10</sub>) [326 IAC 2-8-4]

- (a) The asphalt production shall be limited to 1,560,000 tons per twelve (12) consecutive month period and 0.098 pounds of PM<sub>10</sub> per ton of asphalt produced. The PM<sub>10</sub> emissions for the whole source are therefore limited to less than 100 tons per year, and 326 IAC 2-7 does not apply.

#### D.1.3 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 2-8-4] [326 IAC 7-1.1]

- (a) Pursuant to the requirements of 326 IAC 7-1.1, the sulfur content of the distillate oil (No. 2 and No. 4 fuel oil) used in the aggregate dryer burner shall not exceed 0.5 pounds per MMBtu.
- (b) The sulfur content of the No. 2 fuel oil shall not exceed 0.05% by weight.
- (c) The sulfur content of the No. 4 fuel oil shall not exceed 0.41% by weight. The use of No. 4 fuel oil shall be limited to less than 813,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (d) For the purposes of determining compliance, each 8,662 gallons of No.2 fuel oil shall be equivalent to 1,000 gallons of No.4 fuel oil.

Compliance with the above limits the SO<sub>2</sub> emissions for the whole source to less than 100 tons per year and makes 326 IAC 2-7 not applicable.

**D.1.4 Carbon Monoxide (CO) [326 IAC 2-8-4]**

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The asphalt production shall be limited to 1,560,000 tons per twelve (12) consecutive month period and the CO emissions shall be limited to less than 0.120 per ton of asphalt produced. The CO emissions for the whole source are therefore limited to less than 100 tons per year and 326 IAC 2-7 does not apply.

**D.1.5 Preventive Maintenance Plan [326 IAC 1-6-3]**

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

**Compliance Determination Requirements**

**D.1.6 Testing Requirements [326 IAC 2-1.1-11]**

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No later than 90 days after initial start up, in order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM and PM<sub>10</sub> testing utilizing methods per 40 CFR Part 60 Appendix A, Method 5 for PM and methods as approved by the Commissioner for PM<sub>10</sub>. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration.

**D.1.7 Particulate Matter (PM)**

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The baghouse shall be in operation at all times the aggregate dryer burner is in operation, in order to comply with Condition D.1.1.

**D.1.8 Sulfur Dioxide Emissions and Sulfur Content**

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Compliance shall be determined utilizing one of the following options:

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million Btu heat input and 0.05% sulfur content when burning No. 2 fuel oil by:
  - (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
  - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
    - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
    - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 72 MMBtu per hour burner for the aggregate dryer, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

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

- (c) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed 0.5 pounds per million Btu heat input and 0.41% sulfur content when burning No. 4 fuel oil by:

- (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
- (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
  - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
  - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (d) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 72 MMBtu per hour burner for the aggregate dryer, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

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

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

#### **D.1.9 Visible Emissions Notations**

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

#### **D.1.10 Baghouse Parametric Monitoring**

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- (a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the aggregate dryer burner, at least once per day when the aggregate dryer burner is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 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 and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.
- (b) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### D.1.11 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 aggregate dryer burner. 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 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.1.12 Record Keeping Requirements

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- (a) To document compliance with Condition D.1.3, the Permittee shall maintain records in accordance with (1) through (3) below. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

- (1) A certification, signed by the owner or operator, that the records of the fuel oil 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:

- (2) The name of the fuel supplier; and
    - (3) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

- (b) To document compliance with Conditions D.1.3(c), the Permittee shall keep records of the amount of No. 4 fuel oil used at the aggregate dryer burner. 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.1.1, D.1.2, and D.1.4, the Permittee shall keep records of the amount of asphalt processed through the aggregate dryer burner. Records necessary to demonstrate compliance shall be available within thirty (30) days of the end of each compliance period.
  - (d) The Permittee shall maintain records sufficient to verify compliance with the procedures specified in condition D.1.8. Records shall be maintained for a period of five (5) years and shall be made available upon request by IDEM.

- (e) To document compliance with Condition D.1.9, the Permittee shall maintain records of the daily visible emission notations of the drum mix dryer burner baghouse stack exhaust, conveyors, and transfer points. 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 (i.e., the process did not operate that day).
- (f) To document compliance with Condition D.1.10, the Permittee shall maintain daily records of the pressure drop during normal operation.

All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.1.13 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1, D.1.2 and D.1.3(c), and D.1.4 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).

#### **New Source Performance Standards (NSPS) Requirements [326 IAC 2-8-4(1)]**

#### D.1.14 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

The provisions of 40 CFR 60 Subpart A - General Provisions, which are incorporated as 326 IAC 12-1, apply to the asphalt plant described in this section except when otherwise specified in 40 CFR 60 Subpart I.

#### D.1.15 NSPS Subpart I Requirements [40 CFR Part 60, Subpart I] [326 IAC 12]

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.

##### **§ 60.91 Definitions**

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

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

##### **§ 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.

##### **§ 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.

## SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) Cold-mix (stockpile mix) asphalt storage piles

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

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

#### D.2.1 Volatile Organic Compounds (VOC) [326 IAC 2-2] [326 IAC 2-8-4]

The Permittee shall limit the emissions of VOC from cold mix asphalt production to not exceed sixty (60) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit combined with the potential emissions from all other emission units at this source shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable.

#### D.2.2 Volatile Organic Compounds (VOC)

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

- (1) Cut back asphalt rapid cure, containing a maximum of 25.3% of the liquid binder by weight of VOC solvent and 95% by weight of VOC solvent evaporating.
- (2) Cut back asphalt medium cure, containing a maximum of 28.6% of the liquid binder by weight of VOC solvent and 70% by weight of VOC solvent evaporating.
- (3) Cut back asphalt slow cure, containing a maximum of 20% of the liquid binder by weight of VOC solvent and 25% by weight of VOC solvent evaporating.
- (4) Emulsified asphalt with solvent, containing a maximum of 15% of liquid binder by weight of VOC solvent and 46.4% by weight of the VOC solvent in the liquid blend evaporating. The percent oil distillate in emulsified asphalt with solvent liquid, as determined by ASTM, must be 7% or less of the total emulsion by volume
- (5) Other asphalt with solvent binder, containing a maximum 25.9% of the liquid binder of VOC solvent and 2.5% by weight of the VOC solvent evaporating

- (b) The liquid binder used in cold mix asphalt production shall be limited as follows:

- (1) The amount of VOC solvent used in rapid cure cutback asphalt shall be limited to less than 63.2 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (2) The amount of VOC solvent used in medium cure cutback asphalt shall be limited to less than 85.7 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (3) The amount of VOC solvent used in slow cure cutback asphalt shall be limited to less than 240.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

- (4) The amount of VOC solvent used in emulsified asphalt shall be limited to less than 129.3 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (5) The amount of VOC solvent used in all other asphalt shall be limited to less than 2,400 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

When more than one type of binder is used per twelve (12) consecutive month period, the total usage of all binders shall be limited so that the total potential to emit VOC is less than 60 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

In order to determine the tons of VOC emitted per year for each type of binder, use the following formula and divide the tons of VOC solvent used per year for each type of binder by the corresponding adjustment ratio listed in the table that follows.

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

Type of binder	tons solvent	adjustment ratio	tons VOC emitted
cutback asphalt rapid cure		1.053	
cutback asphalt medium cure		1.429	
cutback asphalt slow cure		4.0	
emulsified asphalt		2.155	
other asphalt		40	

This will limit the potential to emit VOC from cutback and emulsified asphalt usage to less than 60 tons per year, and the total source potential to emit VOC to less than 100 tons per year, including the heater, the aggregate dryer burner, storage, silo filling, and load out. Thus, the requirements of 326 IAC 2-2, PSD, and 326 IAC 2-7, Part 70, do not apply with respect to VOC emissions.

#### D.2.3 Volatile Organic Compound Rules for Asphalt Pavers [326 IAC 8-5-2]

Pursuant to 326 IAC 8-5-2, Volatile Organic Compound Rules for Asphalt Pavers, the cutback asphalt or asphalt emulsions produced by the source shall not contain more than seven percent (7%) oil distillate by volume of emulsion as determined by ASTM D244-80a "Emulsific Asphalts" ASTM part 15, 1981 ASTM 1916 Race St., Philadelphia, PA 19103, Library of Congress Card Catalog #40-10712, for any paving application except as used for the following purposes:

- (a) penetrating prime coating;
- (b) stockpile storage;
- (c) application during the months of November, December, January, February, and March.

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

### **D.2.4 Record Keeping Requirements**

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- (a) To document compliance with Condition D.2.1 Volatile Organic Compounds, VOC records shall document VOC usage as follows:
- (1) Amount and type of liquid binder used in the production of cold mix asphalt each day.
  - (2) Type and VOC, solvent content by weight of the liquid binder used in the production of cold mix asphalt each day.
  - (3) Amount of VOC, solvent used in the production of cold mix asphalt each day.

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

### **D.2.5 Reporting Requirements**

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A quarterly summary of the information to document compliance with Condition D.2.1 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).

## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

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

Source Name: Dave O'Mara Contractor, Inc., Plant #7  
Source Address: Lighthouse Junction Property, Southeast Corner of State Road 57 and State  
Road 54, Bloomfield, Indiana 47424  
Mailing Address: 1100 East O&M Avenue, North Vernon, Indiana 47265  
FESOP Permit No.: F055-25301-05227

**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 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: Dave O'Mara Contractor, Inc., Plant #7  
Source Address: Lighthouse Junction Property, Southeast Corner of State Road 57 and State  
Road 54, Bloomfield, Indiana 47424  
Mailing Address: 1100 East O&M Avenue, North Vernon, Indiana 47265  
FESOP Permit No.: F055-25301-05227

**This form consists of 2 pages**

**Page 1 of 2**

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

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

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

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

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency?    Y    N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO <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 DATA SECTION**

**FESOP Quarterly Report - Hot Mix Asphalt Production**

Source Name: Dave O'Mara Contractor, Inc., Plant #7  
Source Address: Lighthouse Junction Property, Southeast Corner of State Road 57 and State Road 54, Bloomfield, Indiana 47424  
Mailing Address: 1100 East O&M Avenue, North Vernon, Indiana 47265  
FESOP Permit No.: F055-25301-05227  
Facility: One (1) portable asphalt drum-mix plant with one (1) baghouse exhausting at one (1) stack, identified as #1;  
Parameter: Hot mix asphalt production  
Limit: 1,560,000 tons per twelve (12) consecutive month period.

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

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

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**FESOP Quarterly Report - No. 4 Fuel Oil Usage**

Source Name: Dave O'Mara Contractor, Inc., Plant #7  
Source Address: Lighthouse Junction Property, Southeast Corner of State Road 57 and State Road 54, Bloomfield, Indiana 47424  
Mailing Address: 1100 East O&M Avenue, North Vernon, Indiana 47265  
FESOP Permit No.: F055-25301-05227  
Facility: One (1) portable asphalt drum-mix plant with one (1) baghouse exhausting at one (1) stack, identified as #1;  
Parameter: No. 4 fuel oil usage  
Limit: Less than 813,000 gallons per twelve (12) consecutive month period. For the purposes of determining compliance, each 8,662 gallons of No.2 fuel oil shall be equivalent to 1,000 gallons of No.4 fuel oil.

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

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

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

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

**FESOP Quarterly Report - No. 2/No.4 Fuel Oil Sulfur Content**

Source Name: Dave O'Mara Contractor, Inc., Plant #7  
 Source Address: Lighthouse Junction Property, Southeast Corner of State Road 57 and State Road 54, Bloomfield, Indiana 47424  
 Mailing Address: 1100 East O & M Avenue, North Vernon, Indiana 47265  
 FESOP Permit No.: F055-25301-05227  
 Facility: One (1) portable asphalt drum-mix plant with one (1) baghouse exhausting at one (1) stack, identified as #1;  
 Parameter: Fuel oil sulfur content  
 Limit: The maximum sulfur content of the No. 2 fuel oil shall be limited to 0.05% and the maximum sulfur content of the No. 4 fuel oil shall be limited to 0.41%.

Month: _____		Year: _____	
Date of Fuel Oil Delivery	Sulfur Content of No. 2/No.4 Fuel Oil	Date of Fuel Oil Delivery	Sulfur Content of No. 2/No.4 Fuel Oil
1		17	
2		18	
3		19	
4		20	
5		21	
6		22	
7		23	
8		24	
9		25	
10		26	
11		27	
12		28	
13		29	
14		30	
15		31	
16			

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

Submitted by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Title / Position:  
 Signature:  
 Phone:

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**FESOP Quarterly Report - Single Liquid Binder VOC Solvent**

Source Name: Dave O'Mara Contractor, Inc., Plant #7  
Source Address: Lighthouse Junction Property, Southeast Corner of State Road 57 and State Road 54, Bloomfield, Indiana 47424  
Mailing Address: 1100 East O & M Avenue, North Vernon, Indiana 47265  
FESOP Permit No.: F055-25301-05227  
Facility: Cold-mix (stockpile mix) asphalt manufacturing operations and storage piles  
Parameter: Cutback or emulsified asphalt VOC solvent usage  
Limit: Rapid cure liquid binder limited to 63.2 tons VOC solvent; medium cure liquid binder limited to 85.7 tons VOC solvent; slow cure liquid binder limited to 240.0 tons VOC solvent; emulsified asphalt limited to 129.3 tons VOC solvent; and/or other asphalt with solvent liquid binder limited to 2,400 tons VOC solvent per twelve (12) consecutive month period

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

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

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
Deviation has been reported on: \_\_\_\_\_

Submitted by: \_\_\_\_\_  
Title / Position: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 OFFICE OF AIR QUALITY  
 COMPLIANCE DATA SECTION**

**Multiple Liquid Binder Solvent Quarterly Report**

**Source Name:** Dave O'Mara Contractor, Inc., Plant #7  
**Source Address:** Lighthouse Junction Property, Southeast Corner of State Road 57 and State Road 54, Bloomfield, Indiana 47424  
**Mailing Address:** 1100 East O & M Avenue, North Vernon, Indiana 47265  
**FESOP Permit No.:** F055-25301-05227  
**Facility:** Cold-mix (stockpile mix) asphalt manufacturing operations and storage piles  
**Parameter:** VOC usage, rapid cure equivalent  
**Limit:** 63.2 tons per consecutive 12-month period  
**Current Year:** \_\_\_\_\_

Month	Type of Liquid binder	Solvent Usage This Month (tons)	Divisor	VOC emitted This Month (tons) for each solvent	VOC emitted This Month (tons)	VOC emitted Previous 11 Months (tons)	This month + Previous 11 months =VOC emitted 12 Month Total (tons)
Month 1	Cutback asphalt rapid cure		1.053				
	Cutback asphalt medium cure		1.429				
	Cutback asphalt slow cure		4.0				
	Emulsified asphalt		2.155				
	other asphalt		40				
Month 2	Cutback asphalt rapid cure		1.053				
	Cutback asphalt medium cure		1.429				
	Cutback asphalt slow cure		4.0				
	Emulsified asphalt		2.155				
	other asphalt		40				
Month 3	Cutback asphalt rapid cure		1.053				
	Cutback asphalt medium cure		1.429				
	Cutback asphalt slow cure		4.0				
	Emulsified asphalt		2.155				
	other asphalt		40				

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

**Submitted by:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Title / Position:** \_\_\_\_\_ **Phone:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

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

Source Name: Dave O'Mara Contractor, Inc., Plant #7  
Source Address: Lighthouse Junction Property, Southeast Corner of State Road 57 and State Road 54, Bloomfield, Indiana 47424  
Mailing Address: 1100 East O&M Avenue, North Vernon, Indiana 47265  
FESOP Permit No.: F055-25301-05227

**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

### ASPHALT PLANT SITE FUGITIVE DUST CONTROL PLAN

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

Paved roads and parking lots:

- (1) cleaning by vacuum sweeping on an as needed basis (monthly at a minimum)
- (2) power brooming while wet either from rain or application of water.

Unpaved roads and parking lots:

- (1) paving with asphalt;
- (2) treating with emulsified asphalt;
- (3) watering;
- (4) double chip and seal the road surface.

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

- (1) maintaining minimum size and number of stock piles of aggregate;
- (2) treating around the stockpile area with emulsified asphalt;
- (3) treating around the stockpile area with water;
- (4) treating the stockpiles with water.

Fugitive particulate matter emissions from outdoor conveying of aggregates shall be controlled by the following method on an as needed basis:

- (1) applying water at the feed and the intermediate points.

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

- (1) minimize the vehicular distance between transfer points;
- (2) enclose the transfer points;
- (3) apply water on transfer points on an as needed basis.

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

- (1) tarping the aggregate hauling vehicles;
- (2) maintain vehicle bodies in a condition to prevent leakage;
- (3) spray the aggregates with water;
- (4) maintain a 10 MPH speed limit in the yard.

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

- (1) reduce free fall distance to a minimum;
- (2) reduce the rate of discharge of the aggregate;
- (3) spray the aggregate with water on an as needed basis.

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

Technical Support Document (TSD) for a Federally Enforceable State Operating Permit  
Renewal

**Source Background and Description**

<b>Source Name:</b>	<b>Dave O'Mara Contractor, Inc., Plant #7</b>
<b>Source Location:</b>	<b>Lighthouse Junction Property, Southeast Corner of State Road 57 and State Road 54, Bloomfield, Indiana 47424</b>
<b>County:</b>	<b>Greene</b>
<b>SIC Code:</b>	<b>2951</b>
<b>Permit Renewal No.:</b>	<b>F055-25301-05227</b>
<b>Permit Reviewer:</b>	<b>Stephanie Wilkerson</b>

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Dave O'Mara Contractor, Inc. relating to the operation of a portable hot drum mix asphalt manufacturing facility.

**History**

On September 18, 2007, Dave O'Mara Contractor, Inc. submitted an application to the OAQ requesting to renew its operating permit for Plant #7. Dave O'Mara Contractor, Inc., Plant #7 was issued FESOP F031-16844-05227 on June 19, 2003.

**Permitted Emission Units and Pollution Control Equipment**

- (a) One (1) portable asphalt drum-mix plant, with a maximum capacity of 300 tons of asphalt per hour, equipped with one (1) No. 2 fuel oil fired aggregate dryer burner with a maximum rated capacity of 72 million British thermal units (MMBtu) per hour, using natural gas or No. 4 fuel oil as a back up fuel, and one (1) baghouse for particulate control, exhausting at one (1) stack, identified as #1. Under NSPS Subpart I, this asphalt plant is considered an affected facility;
- (b) five (5) compartment cold feed bins with feeders and collection conveyors;
- (c) one (1) 30" incline conveyor with a 4' X 10' scalping screen;
- (d) two (2) conveyors and one (1) screen to transfer aggregate from recycle bin to asphalt dryer;
- (e) one (1) conveyor and one (1) hot elevator to transfer product from asphalt dryer to storage silo;
- (f) cold-mix (stockpile mix) asphalt storage piles;
- (g) one (1) 20,000-gallon asphalt storage tank;
- (h) one (1) 15,000-gallon No. 2 fuel oil storage tank; and
- (i) one (1) 18,000-gallon No. 4 fuel oil storage tank.

**Insignificant Activities**

- (a) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]
- (b) Other categories with emissions below insignificant thresholds:
  - (1) one (1) No. 2 fuel-fired hot oil heater with a rated capacity of 1.2 MMBtu/hr; and

- (2) aggregate storage piles with total storage capacity of 12,500 tons. [326 IAC 6-5]

### Existing Approvals

Since the issuance of the FESOP 031-25301-05227 on June 19, 2003, the source has constructed or has been operating under the following approvals as well:

- (a) Minor Permit Revision No. 031-18153-05227 issued on November 20, 2003; and
- (b) Minor Permit Revision No. 031-18671-05227 issued on May 27, 2004.

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

The following terms and conditions from previous approvals have been revised in this FESOP Renewal:

- (a) Production Limitation

Based on revised calculations for the source, a production limit of 178 tons of asphalt produced per hour (equivalent to 1,560,000 tons of asphalt produced per year), shall be applied in order to avoid the requirements of 326 IAC 2-7 (Part 70 Permit Program) and 326 IAC 8-1-6 (BACT).

- (b) Particulate Matter Less than Ten (10) Microns (PM<sub>10</sub>) Dryer Burner Limitation

Based on revised calculations for the source, a limit of 0.098 pounds of PM<sub>10</sub> per ton of asphalt produced shall be applied in order to avoid the requirements of 326 IAC 2-7 (Part 70 Permit Program).

- (b) Carbon Monoxide Dryer Burner Limitation

Based on revised calculations for the source, a limit of 0.120 pounds of carbon monoxide per ton of asphalt produced shall be applied in order to avoid the requirements of 326 IAC 2-7 (Part 70 Permit Program).

- (c) Particulate Matter Dryer Burner Limitation

Based on revised calculations for the source, a limit of 0.225 pounds of PM per ton of asphalt produced shall be applied in order to avoid the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration).

- (d) Cold Mix Asphalt VOC Usage Limitation

Based on revised calculations for the source, the VOC usage limit for cold mix asphalt production has been decreased to 60 tons per year in order to avoid the requirements of 326 IAC 2-7 (Part 70 Permit Program).

- (e) Permit Term

On December 16, 2007, rule revisions to 326 IAC 2-1.1-9 and 326 IAC 2-8-4 were finalized allowing for ten (10) year permit terms on FESOP renewals. Condition B.2 of the permit has been revised to reflect the ten (10) year permit term.

The following terms and conditions from previous approvals have been determined no longer applicable; therefore, were not incorporated into this FESOP Renewal:

- (a) New Source Performance Standards for Volatile Organic Liquid Storage Vessels (40 CFR 60.110b, Subpart Kb)

Reason not incorporated: Since the issuance of the previous permit, the applicability requirements of the NSPS, Subpart Kb, have changed and no longer includes the three (3) storage tanks at this source.

### Enforcement Issue

There are no enforcement actions pending.

### Emission Calculations

See Appendix A of this document for detailed emission calculations.

### County Attainment Status

The source is located in Greene County.

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Attainment effective December 29, 2005, 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) Greene County has been classified as unclassifiable or attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as a surrogate for PM2.5 emissions. See the State Rule Applicability – Entire Source section.
- (b) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NOx emissions are considered when evaluating the rule applicability relating to ozone. Greene County has been designated as attainment for ozone. Therefore, VOC emissions and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.
- (c) Greene County has been classified as unclassifiable or attainment in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.
- (d) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (e) Fugitive Emissions  
This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 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 applicability.

### Portable Source

- (a) Initial Location  
This is a portable source and its initial location is Hanson Aggregates, Fifth Street, North Vernon, Indiana 47265.
- (b) PSD Requirements  
The emissions from this portable source were reviewed under the requirements of the Prevention of Significant Deterioration (PSD) 326 IAC 2-2.

### Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Pollutant	tons/year
PM	36,912.36
PM-10	8,579.37
SO <sub>2</sub>	138.53
VOC	109.24
CO	177.31
NO <sub>x</sub>	105.87

HAPs	tons/year
Formaldehyde*	4.413
Hexane*	1.804
Xylenes*	4.84
Total HAPs	24.97

\*HAPs listed specifically are worst-case; total is ALL HAPs. Please see Appendix A for details.

- (a) The potentials to emit (as defined in 326 IAC 2-7-1(29)) of PM<sub>10</sub>, SO<sub>2</sub>, VOC, CO, and NO<sub>x</sub> are each greater than 100 tons per year. The source is subject to the provisions of 326 IAC 2-7. However, the source has agreed to limit its PM<sub>10</sub>, SO<sub>2</sub>, VOC, CO, and NO<sub>x</sub> emissions to less than Title V levels, therefore the source will be issued a FESOP.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants are less than 100 tons per year.
- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year.

### Fugitive Emissions

This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 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 applicability.

### Actual Emissions

No previous emission data has been received from the source.

### Potential to Emit After Issuance

The source has opted to remain a FESOP source. The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered 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/emission unit	Potential To Emit (tons/year)						
	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Aggregate dryer burner	175.50	76.44	45.24	24.96	93.60	88.34	8.15
Load-out, silo filling, on-site yard	0.86	0.86	-	13.36	2.25	-	0.22
Material processing & handling	5.04	2.38	-	-	-	-	-
Material crushing, screening & conveying	24.75	9.04	-	-	-	-	-
Storage tanks	-	-	-	neg.*	-	-	neg.*
Cold mix asphalt production	-	-	-	60	-	-	15.65
Insignificant activities	41.45	10.72	neg.*	0.06	2.70	neg.*	0.06
<b>Total Emissions</b>	<b>247.60</b>	<b>99.44</b>	<b>45.24</b>	<b>98.38</b>	<b>98.55</b>	<b>88.34</b>	<b>24.08</b>

\*neg. = negligible amount of emissions

- (a) This existing stationary source is not major for PSD because the emissions of each criteria pollutant are less than two hundred fifty (<250) tons per year, and it is not one of the twenty-eight (28) listed source categories.

### Federal Rule Applicability

- (a) This source is subject to the New Source Performance Standard for Hot Mix Asphalt Facilities (40 CFR 60, Subpart I), which is incorporated by reference as 326 IAC 12. This source meets the definition of a hot mix asphalt facility pursuant to the rule and it was constructed after June 11, 1973.

Nonapplicable portions of the NSPS will not be included in the permit. This source is subject to the following portions of Subpart I:

- (1) 40 CFR 60.90
  - (2) 40 CFR 60.91
  - (3) 40 CFR 60.92
  - (4) 40 CFR 60.93
- (b) The one (1) 20,000-gallon liquid asphalt storage tank, the one (1) 11,000-gallon No. 2 fuel oil storage tank, and the one (1) 18,000-gallon No. 4 fuel oil storage tank are not subject to the New Source Performance Standard for Volatile Organic Liquid Storage Vessels (40 CFR 60.110b, Subpart Kb), which is incorporated by reference as 326 IAC 12. These three (3) storage vessels were each installed after the applicability date of July 23, 1984, but either have storage capacities less than seventy-five cubic meters (75 m<sup>3</sup>) or a true vapor pressure less than fifteen kiloPascals (15 kPa). Therefore, these requirements are not included in this permit.
  - (c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in this permit renewal. This source is not major for HAPs, and therefore is not subject to these requirements.

- (d) Pursuant to 40 CFR 64.2, the source is not subject to the requirements of Compliance Assurance Monitoring, 40 CFR 64, because the source has been limited below major source limits and is not required to obtain a Part 70 permit.

### State Rule Applicability - Entire Source

#### 326 IAC 2-2 (Prevention of Significant Deterioration)

The Permittee has agreed to limit the emissions of PM, PM<sub>10</sub>, VOC, CO, and SO<sub>2</sub> to less than 250 tons per year, and will not be located in Lake, Porter, LaPorte, Clark, and Floyd Counties. Therefore, this source is not subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration).

- (a) The potential to emit PM from the aggregate dryer burner shall be limited to less than 0.225 pounds per ton of asphalt produced. This, in combination with the asphalt production limit pursuant to 326 IAC 2-8 (FESOP), will limit the potential to emit PM to less than 250 tons per year. Therefore, 326 IAC 2-2 does not apply.
- (b) The source has accepted emission limitations of less than 100 tons per year for PM<sub>10</sub>, VOC, CO, and SO<sub>2</sub> pursuant to 326 IAC 2-8 (FESOP), thus rendering the requirements of 326 IAC 2-2 not applicable for those pollutants.

#### 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)

The operation of this source will emit less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

#### 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 will not be located in Lake, Porter, or LaPorte Counties, 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.

#### 326 IAC 2-8 (FESOP)

Pursuant to this rule, the amount of PM<sub>10</sub>, SO<sub>2</sub>, VOC, NO<sub>x</sub>, and CO shall be limited to less than one hundred (100) tons per year. Therefore, the requirements of 326 IAC 2-7, do not apply.

- (a) The amount of asphalt processed shall not exceed 1,560,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. In addition, the PM<sub>10</sub>, SO<sub>2</sub>, and CO emissions shall be limited as follows:
- (1) The potential to emit PM<sub>10</sub> from the aggregate dryer burner shall be less than 0.098 pounds per ton of asphalt processed. This shall limit the potential to emit PM<sub>10</sub> to 76.44 tons per year from the aggregate dryer burner and less than 100 tons per year from the entire source, including PM<sub>10</sub> emissions from the insignificant heater, screening and conveying, storage, silo filling, and load out. Thus, the requirements of 326 IAC 2-7, Part 70, do not apply with respect to PM<sub>10</sub> emissions.
- (2) The potential to emit CO from the aggregate dryer burner shall be less than 0.120 pounds per ton of asphalt processed. This shall limit CO emissions to less than 93.6 tons per year from the aggregate dryer burner and less than 100 tons per year from the entire source. Thus, the requirements of 326 IAC 2-7, Part 70, do not apply with respect to CO emissions.
- (b) The use of No. 4 fuel oil shall be limited to less than 813,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. A fuel usage limit for No. 2 fuel oil is not necessary for the source to comply with the requirements of 326 IAC 2-8. The sulfur content of the No. 2 fuel oil shall not exceed 0.05% and the sulfur content of the No. 4 fuel oil shall not exceed 0.41%, each percentage by weight. This will limit the potential to emit SO<sub>2</sub> from the entire source to

less than 100 tons per year, including SO<sub>2</sub> emissions from the aggregate dryer burner and heater. Thus, the requirements of 326 IAC 2-7, Part 70, do not apply with respect to SO<sub>2</sub> emissions.

- (c) This source may use cutback or emulsified asphalt. The VOC emissions from the use of liquid binders in cold mix, including emulsified, asphalt production shall be limited to less than 60.0 tons of VOC is emitted per twelve (12) consecutive month period, with compliance determined at the end of each month. In order to comply with this limit, the amount of VOC solvent used is limited as follows:
- (1) The amount of VOC solvent used in rapid cure cutback asphalt shall be limited to less than 63.2 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (2) The amount of VOC solvent used in medium cure cutback asphalt shall be limited to less than 85.7 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (3) The amount of VOC solvent used in slow cure cutback asphalt shall be limited to less than 240.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (4) The amount of VOC solvent used in emulsified asphalt shall be limited to less than 129.3 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (5) The amount of VOC solvent used in all other asphalt shall be limited to less than 2,400 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

When more than one type of binder is used per twelve (12) consecutive month period, the total usage of all binders shall be limited so that the total potential to emit VOC is less than 60 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

In order to determine the tons of VOC emitted per year for each type of binder, use the following formula and divide the tons of VOC solvent used per year for each type of binder by the corresponding adjustment ratio listed in the table that follows.

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

Type of binder	tons solvent	adjustment ratio	tons VOC emitted
cutback asphalt rapid cure		1.053	
cutback asphalt medium cure		1.429	
cutback asphalt slow cure		4.0	
emulsified asphalt		2.155	
other asphalt		40	

This will limit the potential to emit VOC from cutback and emulsified asphalt usage to less than 60.0 tons per year, and the total source potential to emit VOC to less than 100 tons per year, including the heater, the aggregate dryer burner, storage, silo filling, and load

out. Thus, the requirements of 326 IAC 2-2, PSD, and 326 IAC 2-7, Part 70, do not apply with respect to VOC emissions.

326 IAC 2-14 (Portable Sources)

- (a) Pursuant to 2-14-4 (Relocation), a portable source, operation, process, or emissions unit that has been issued a valid operating permit under this article may be issued an approval letter for relocation that authorizes operation of the source, operation, process, or emissions unit as follows:
- (1) The source submits a notification at least thirty (30) days prior to relocation.
  - (2) The commissioner shall approve or deny the relocation within thirty (30) days of receipt of the notification of the proposed relocation.
  - (3) The application submitted for a permit revision in accordance with 326 IAC 2-6.1-6, 326 IAC 2-7-12, or 326 IAC 2-8-11.1 shall satisfy the notification requirements of this section.

The commissioner shall not approve a relocation of a portable source, operation, process, or emissions unit, if the following applies:

- (1) The relocation would allow a violation of the national ambient air quality standards (NAAQS).
  - (2) The relocation would allow a violation of a prevention of significant deterioration (PSD) maximum allowable increase.
  - (3) The source is not in compliance with all applicable air pollution control rules.
  - (4) The relocation would adversely affect the public health.
- (b) This permit is approved for operation in all areas of Indiana except in severe nonattainment areas for ozone. This determination is based on the requirements of Prevention of Significant Deterioration in 326 IAC 2-2, and Emission Offset requirements in 326 IAC 2-3. Prior to locating in any severe nonattainment area, the Permittee must submit a request and obtain a permit modification.
- (c) 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

The notification by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (d) A "Relocation Site Approval" letter shall be obtained prior to relocating.
- (e) The Permittee shall also notify the applicable local air pollution control agency when relocating to, or from, one the following:
- (1) Madison County - (Anderson Office of Air Management)
  - (2) City of Evansville plus four (4) miles beyond the corporate limits but not outside Vanderburgh County - (Evansville EPA)
  - (3) City of Gary - (Gary Department of Environmental Affairs)

- (4) City of Hammond - (Hammond Department of Environmental Management)
  - (5) Marion County - (Indianapolis Office of Environmental Services)
  - (6) St. Joseph County - (St. Joseph County Health Department)
  - (7) Vigo County - (Vigo County Air Pollution Control)
- (f) A valid operation permit consists of this document and any subsequent "Relocation Site Approval" letter specifying the current location of the portable plant.

**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 the permit:

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

**326 IAC 6-4 (Fugitive Dust Emissions)**

This source is subject to 326 IAC 6-4 for fugitive dust emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), fugitive dust shall not be visible crossing the boundary or property line of a source. Observances of visible emissions crossing property lines may be refuted by factual data expressed in 326 IAC 6-4-2(1), (2) or (3).

**326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)**

This source is subject to 326 IAC 6-5 for fugitive particulate matter emissions. Pursuant to 326 IAC 6-5, for any new source which has not received all the necessary preconstruction approvals before December 13, 1985, a fugitive dust control plan must be submitted, reviewed, and approved. The fugitive dust control plan for this source is included as Attachment A to this permit.

**State Rule Applicability – Individual Facilities**

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

Pursuant to the applicability determination in 326 IAC 6-3-1(c), the requirements of 326 IAC 6-3 do not apply to the hot-mix asphalt operations at this source because the particulate matter emission limit required in 326 IAC 12 (as the incorporation of the New Source Performance Standard for Hot Mix Asphalt Facilities, 40 CFR 60, Subpart I) is more stringent than the particulate limitation required by 326 IAC 6-3, as follows:

- (a) *Particulate limit from 326 IAC 6-3-2:*  
Particulate from the aggregate dryer burner shall be limited to 63.0 pounds per hour when operating at a process weight rate of 300 tons per hour. Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

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

- (b) *Particulate limit from 326 IAC 12 (40 CFR 60, Subpart I):*  
Particulate from the hot-mix asphalt facility shall not exceed 0.04 gr/dscf (8.23 pounds per hour).

Therefore, 326 IAC 6-3-2 does not apply.

326 IAC 6.5-1 (Particulate Matter Limitations except Lake County)

Pursuant to 326 IAC 6.5-1 (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the aggregate dryer burner shall be limited to 0.03 gr/dscf, equivalent to 5.12 pounds of PM per hour, when located in the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

The aggregate dryer burner is subject to the requirements of 326 IAC 7-1.1 (Sulfur Dioxide Emissions) because the uncontrolled potential to emit of SO<sub>2</sub> is greater than 25 tons per year.

- (a) Pursuant to 326 IAC 7-1.1-2, the sulfur content of No. 2 fuel oil used in the aggregate dryer burner shall not exceed 0.5 pounds per MMBtu. This equates to a fuel oil sulfur content limit of 0.5%.
- (b) Pursuant to 326 IAC 7-1.1-2, the sulfur content of No. 4 fuel oil used in the aggregate dryer burner shall not exceed 1.6 pounds per MMBtu. This equates to a fuel oil sulfur content limit of 1.6%.
- (c) Compliance with the fuel oil sulfur content limits for 326 IAC 2-8 (FESOP) will satisfy this requirement.
- (d) The 1.2 MMBtu/hr hot oil heater is not subject to the requirements of this rule because potential SO<sub>2</sub> emissions from this unit are less than 25 tons per year.

326 IAC 7-2 (Sulfur Dioxide Emission Compliance)

- (a) The aggregate dryer burner is subject to the requirements of 326 IAC 7-1.1. As such, and pursuant to 326 IAC 7-1.1-1, the source shall comply with the compliance determination requirements in 326 IAC 7-2:
  - (1) The Permittee shall submit to the commissioner the following reports based on fuel sampling and analysis data obtained in accordance with procedures specified under 326 IAC 3-7:
    - (A) Reports of calendar month average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate in pounds per MMBtu upon request.
  - (2) Compliance or noncompliance with the emission limitations contained in 326 IAC 7-1.1, 326 IAC 7-4, or 326 IAC 7-4.1 may be determined by a stack test conducted in accordance with 326 IAC 3-6 utilizing procedures outlined in 40 CFR 60, Appendix A, Method 6, 6A, 6C, or 8.
  - (3) Fuel sampling and analysis data shall be collected pursuant to the procedures specified in 326 IAC 3-7-2 or 326 IAC 3-7-3 for coal combustion or 326 IAC 3-7-4 for oil combustion, and these data may be used to determine compliance or noncompliance with the emission limitations contained in 326 IAC 7-1.1, 326 IAC 7-4, or 326 IAC 7-4.1. Computation of calculated sulfur dioxide emission rates from fuel sampling and analysis data shall be based on the emission factors contained in U.S. EPA publication AP-42 unless other emission factors based on site-specific sulfur dioxide measurements are approved by the commissioner and the U.S. EPA. Fuel sampling and analysis data shall be collected as follows:
    - (A) Compliance or noncompliance shall be determined using a calendar month average sulfur dioxide emission rate in pounds per MMBtu.
- (b) The 1.2 MMBtu/hr hot oil heater is not subject to the requirements of this rule because it is not subject to 326 IAC 7-1.1.

#### 326 IAC 8-1-6 (BACT)

- (a) The aggregate dryer burner is subject to the provisions of 326 IAC 8-1-6 because the potential VOC emissions from this facility are greater than twenty-five (25) tons per year. Compliance with the production limit of 1,560,000 tons of asphalt per year shall limit VOC emissions to less than twenty-five (25) tons per twelve (12) consecutive month period for this facility and will render the requirements of 326 IAC 8-1-6 not applicable.
- (b) The use of cutback asphalt to manufacture stockpile mix, which is a source of potential VOC emissions greater than twenty-five (25) tons per year, is regulated by the provisions of 326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving), therefore, it is not subject to the requirements of this rule.

#### 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)

The three (3) storage vessels at this source are not subject to the requirements of 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities) because each tank's capacity is less than 39,000 gallons. Therefore, these requirements are not included in this permit.

#### 326 IAC 8-5-2 (Miscellaneous Operations - Asphalt Paving Rules)

Pursuant to 326 IAC 8-5-2, Volatile Organic Compound Rules for Asphalt Pavers, the cutback asphalt or asphalt emulsions produced by the source shall not contain more than seven percent (7%) oil distillate by volume of emulsion as determined by ASTM D244-80a "Emulsific Asphalts" ASTM part 15, 1981 ASTM 1916 Race St., Philadelphia, PA 19103, Library of Congress Card Catalog #40-10712, for any paving application except as used for the following purposes:

- (a) penetrating prime coating;
- (b) stockpile storage;
- (c) application during the months of November, December, January, February, and March.

#### 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)

The requirements of 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels) do not apply to this source because this source is located in Greene County and this rule applies to sources located in Clark, Floyd, Lake, or Porter County.

### Testing Requirements

The Permittee shall perform PM and PM<sub>10</sub> testing in order to demonstrate compliance with 326 IAC 2-8-4. This testing shall be repeated at least once every five years from the date of the last valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>.

### Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-6. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will

arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

#### Visible Emissions Notations

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

#### Daily Monitoring of Baghouse Operational Parameters

- (a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the aggregate dryer burner, at least once per day when the aggregate dryer burner is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 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 and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.
- (b) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### Broken or Failed Bag Detection

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

These monitoring conditions are necessary because the baghouse for the aggregate dryer burner must operate properly to ensure compliance with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).

The compliance determination requirements applicable to this source are as follows:

#### Sulfur Dioxide Emissions Limitations

- (a) 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 Btu heat input and 0.05% and 0.41% sulfur content when burning No. 2 and No. 4 fuel oil, respectively, by:
  - (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
  - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
    - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
    - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 72 MMBtu per hour burner for the aggregate dryer, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

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

#### Recommendation

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

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on September 18, 2007.

#### Conclusion

The operation of this portable hot drum mix asphalt manufacturing facility shall be subject to the conditions of the attached FESOP Renewal No. 055-25301-05227.

**Appendix A: Asphalt FESOP Emissions Calculations  
Unlimited/Uncontrolled Emission Summary**

**Source:** Dave O'Mara Contractor, Inc., Plant #7  
**Source Location:** Lighthouse Junction Property, Southeast Corner of State Road 57 and State Road 54, Bloomfield, Indiana 47424  
**County:** Greene  
**Permit:** F055-25301-05227  
**Permit Reviewer:** Stephanie Wilkerson  
**Date:** January 4, 2008

**Maximum Capacity**

Maximum Hourly Asphalt Production =	300	ton/hr
Maximum Annual Asphalt Production =	2,628,000	ton/yr
Maximum Fuel Input Rate =	72	MMBtu/hr
Equivalent Natural Gas Usage =	631	MMCF/yr
Equivalent No. 2 Fuel Oil Usage =	4,505,143	gal/yr, and 0.05 % sulfur
Equivalent No. 4 Fuel Oil Usage =	4,505,143	gal/yr, and 0.41 % sulfur

**Unlimited/Uncontrolled Emissions**

Process Description	Unlimited/Uncontrolled Potential to Emit (tons/year)								
	Criteria Pollutants					Hazardous Air Pollutants			
	PM	PM10	SO2	NOx	VOC	CO	Total HAPs	Worst Case HAP	
<b>Ducted Emissions</b>									
Fuel Combustion (worst case)	15.77	18.70	138.53	105.87	1.73	26.49	0.97	0.57	(hexane)
Dryer Burner	36792.00	8541.00	14.45	72.27	42.05	170.82	11.58	4.07	(formaldehyde)
<b>Worst Case Emissions</b>	<b>36792.00</b>	<b>8541.00</b>	<b>138.53</b>	<b>105.87</b>	<b>42.05</b>	<b>170.82</b>	<b>11.58</b>	<b>4.07</b>	(formaldehyde)
<b>Fugitive Emissions</b>									
Asphalt Load-Out, Silo Filling, On-Site Yard	1.46	1.46	0	0	13.36	3.79	0.22	0.07	
Hot Oil Heater	0	0	0	0	0.06	2.70	0.06	0.04	
Material Storage Piles	1.60	0.56	0	0	0	0	0	0	
Material Processing and Handling	8.49	4.02	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	41.69	15.23	0	0	0	0	0	0	
Paved and Unpaved Roads (worst case)	67.12	17.11	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	31581.99	0	8237.75	2842.38	(xylenes)
Volatile Organic Liquid Storage Vessels									
<b>Total Fugitive Emissions</b>	<b>120.36</b>	<b>38.37</b>	<b>0</b>	<b>0</b>	<b>31595.41</b>	<b>6.49</b>	<b>8238.03</b>	<b>2842.38</b>	(xylenes)
<b>Totals Unlimited/Uncontrolled PTE</b>	<b>36912.36</b>	<b>8579.37</b>	<b>138.53</b>	<b>105.87</b>	<b>31637.46</b>	<b>177.31</b>	<b>8249.62</b>	<b>2846.45</b>	(xylenes)

negl = negligible

**Appendix A: Asphalt FESOP Emissions Calculations  
Limited/Controlled Emission Summary**

**Source:** Dave O'Mara Contractor, Inc., Plant #7  
Lighthouse Junction Property, Southeast Corner of State  
**Source Location:** Road 57 and State Road 54, Bloomfield, Indiana 47424  
**County:** Greene  
**Permit:** F055-25301-05227  
**Permit Reviewer:** Stephanie Wilkerson  
**Date:** January 4, 2008

**Production and Fuel Limitations**

Annual Asphalt Production Limitation =	1,560,000	ton/yr
Natural Gas (Unlimited) =	631	MMCF/yr
Equivalent No. 2 Fuel Oil =	4,505,143	gal/yr, and
No. 4 Fuel Oil Limitation =	813,000	gal/yr, and
		0.05 % sulfur
		0.41 % sulfur
PM Dryer/Mixer Limitation =	0.225	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation =	0.098	lb/ton of asphalt production
CO Dryer/Mixer Limitation =	0.120	lb/ton of asphalt production
Cold Mix Asphalt VOC Usage Limitation =	60	tons/yr

**Limited/Controlled Emissions**

Process Description	Limited/Controlled Potential Emissions (tons/year)							
	Criteria Pollutants						Hazardous Air Pollutants	
	PM	PM10	SO2	NOx	VOC	CO	Total HAPs	Worst Case HAP
<b>Ducted Emissions</b>								
Fuel Combustion (worst case)	4.51	7.43	25.00	88.34	1.74	26.50	0.77	0.57 (hydrogen chloride)
Dryer Burner	175.50	76.44	45.24	42.90	24.96	93.60	8.15	2.42 (formaldehyde)
<b>Worst Case Emissions</b>	<b>175.50</b>	<b>76.44</b>	<b>45.24</b>	<b>88.34</b>	<b>24.96</b>	<b>93.60</b>	<b>8.15</b>	<b>2.42</b>
<b>Fugitive Emissions</b>								
Asphalt Load-Out, Silo Filling, On-Site Yard	0.86	0.86	0	0	13.36	2.25	0.22	0.07 (formaldehyde)
Hot Oil Heater	0	0	0	0	0.06	2.70	0.06	0.04 (naphthalene)
Material Storage Piles	1.60	0.56	0	0	0	0	0	0
Material Processing and Handling	5.04	2.38	0	0	0	0	0	0
Material Crushing, Screening, and Conveying	24.75	9.04	0	0	0	0	0	0
Paved and Unpaved Roads (worst case)	39.84	10.15	0	0	0	0	0	0
Cold Mix Asphalt Production	0	0	0	0	60.00	0	15.65	5.40 (xylenes)
Volatile Organic Liquid Storage Vessels					negl.			negl.
<b>Total Fugitive Emissions</b>	<b>72.10</b>	<b>23.00</b>	<b>0</b>	<b>0</b>	<b>73.42</b>	<b>4.95</b>	<b>15.93</b>	<b>5.40</b>
<b>Totals Limited/Controlled Emissions</b>	<b>247.60</b>	<b>99.44</b>	<b>45.24</b>	<b>88.34</b>	<b>98.38</b>	<b>98.55</b>	<b>24.08</b>	<b>7.82</b>

negl = negligible

**Appendix A: Asphalt FESOP Emissions Calculations  
Unlimited Fuel Combustion**

**Source:** Dave O'Mara Contractor, Inc., Plant #7  
**Source Location:** Lighthouse Junction Property, Southeast Corner of State Road 57 and State Road 54, Bloomfield, Indiana 47424  
**County:** Greene  
**Permit:** F055-25301-05227  
**Permit Reviewer:** Stephanie Wilkerson  
**Date:** January 4, 2008

The following calculations determine the unlimited emissions created from the combustion of natural gas and fuel oils in the dryer/mixer and all other fuel combustion sources at the source.

**Production and Fuel Usage**

Maximum Annual Asphalt Production =	2,628,000	ton/yr
Maximum Fuel Input Rate =	72	MMBtu/hr
Equivalent Natural Gas Usage =	631	MMCF/yr
Equivalent No. 2 Fuel Oil Usage =	4,505,143	gal/yr, and
Equivalent No. 4 Fuel Oil Usage =	4,505,143	gal/yr, and
		0.05 % sulfur
		0.41 % sulfur

**Unlimited Emissions**

Criteria Pollutant	Emission Factor (units)			Limited 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)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	
PM	1.9	2	7	0.60	4.51	15.77	15.768
PM10	7.6	3.3	8.3	2.40	7.43	18.70	18.70
SO2	0.6	7.9	61.5	0.19	17.68	138.53	138.53
NOx	280	24.0	47.0	88.30	54.06	105.87	105.87
VOC	5.5	0.20	0.20	1.73	0.45	0.45	1.73
CO	84	5.0	5.0	26.49024	11.26	11.26	26.49
<b>Hazardous Air Pollutant</b>							
HCl							0.00
Antimony			5.25E-03			1.18E-02	1.2E-02
Arsenic	2.0E-04	5.6E-04	1.32E-03	6.3E-05	1.26E-03	2.97E-03	3.0E-03
Beryllium	1.2E-05	4.2E-04	2.78E-05	3.8E-06	9.46E-04	6.26E-05	9.5E-04
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.5E-04	9.46E-04	8.97E-04	9.5E-04
Chromium	1.4E-03	4.2E-04	8.45E-04	4.4E-04	9.46E-04	1.90E-03	1.9E-03
Cobalt	8.4E-05		6.02E-03	2.6E-05		1.36E-02	1.4E-02
Lead	5.0E-04	1.3E-03	1.51E-03	1.6E-04	2.84E-03	3.40E-03	0.00
Manganese	3.8E-04	8.4E-04	3.00E-03	1.2E-04	1.89E-03	6.76E-03	0.01
Mercury	2.6E-04	4.2E-04	1.13E-04	8.2E-05	9.46E-04	2.55E-04	9.5E-04
Nickel	2.1E-03	4.2E-04	8.45E-02	6.6E-04	9.46E-04	1.90E-01	0.190
Selenium	2.4E-05	2.1E-03	6.83E-04	7.6E-06	4.73E-03	1.54E-03	4.7E-03
1,1,1-Trichloroethane			2.36E-04			5.32E-04	5.3E-04
1,3-Butadiene							0.0E+00
Acetaldehyde							0.0E+00
Acrolein							0.0E+00
Benzene	2.1E-03		2.14E-04	6.6E-04		4.82E-04	6.6E-04
Bis(2-ethylhexyl)phthalate							
Dichlorobenzene	1.2E-03			3.8E-04			3.8E-04
Ethylbenzene			6.36E-05			1.43E-04	1.4E-04
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	2.4E-02	1.37E-01	7.43E-02	0.137
Hexane	1.8E+00			0.57			0.568
Phenol							negl
Toluene	3.4E-03		6.20E-03	1.1E-03		1.40E-02	1.4E-02
Total PAH Haps	negl		1.13E-03	negl		2.55E-03	2.5E-03
Polycyclic Organic Matter		3.30E-03			7.43E-03		7.4E-03
Xylene			1.09E-04			2.46E-04	2.5E-04
			<b>Total HAPs</b>	<b>0.60</b>	<b>0.16</b>	<b>0.33</b>	<b>0.97</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, 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 10/96), 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  
 Diesel Engine Oil: AP-42 Chapter 3.3 (dated 10/96), Tables 3.3-1 and 3.3-2

**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: Asphalt FESOP Emissions Calculations  
Limited Fuel Combustion**

Source: Dave O'Mara Contractor, Inc., Plant #7  
 Source Location: Lighthouse Junction Property, Southeast Corner of State Road 57 and State Road 54, Bloomfield, Indiana 47424  
 County: Greene  
 Permit: F055-25301-05227  
 Permit Reviewer: Stephanie Wilkerson  
 Date: January 4, 2008

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	Maximum Fuel Input Rate =	72	MMBtu/hr
Annual Asphalt Production (Unlimited) =	1,560,000	ton/yr	Equivalent Hours of Operation =	5,200	hours/year
Natural Gas (Unlimited) =	631	MMCF/yr	Equivalent Hours of Operation =	8,764	hours/year
Equivalent No. 2 Fuel Oil =	4,505,143	gal/yr, and	Equivalent Hours of Operation =	8,760	hours/year
No. 4 Fuel Oil Limitation =	813,000	gal/yr, and	Equivalent Hours of Operation =	1,581	hours/year
				0.05	% sulfur
				0.41	% sulfur

**Limited Emissions**

Criteria Pollutant	Emission Factor (units)			Limited 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)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	
PM	1.9	2	7	0.60	4.51	2.85	4.505143
PM10	7.6	3.3	8.3	2.40	7.43	3.37	7.43
SO2	0.6	7.9	61.5	0.19	17.68	25.00	25.00
NOx	280	24.0	47.0	88.34	54.06	19.11	88.34
VOC	5.5	0.20	0.20	1.74	0.45	0.08	1.74
CO	84	5.0	5.0	26.502	11.26	2.03	26.50
<b>Hazardous Air Pollutant</b>							
HCl							0.00
Antimony			5.25E-03			2.13E-03	2.1E-03
Arsenic	2.0E-04	5.6E-04	1.32E-03	6.3E-05	1.26E-03	5.37E-04	1.3E-03
Beryllium	1.2E-05	4.2E-04	2.78E-05	3.8E-06	9.46E-04	1.13E-05	9.5E-04
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.5E-04	9.46E-04	1.62E-04	9.5E-04
Chromium	1.4E-03	4.2E-04	8.45E-04	4.4E-04	9.46E-04	3.43E-04	9.5E-04
Cobalt	8.4E-05		6.02E-03	2.7E-05		2.45E-03	2.4E-03
Lead	5.0E-04	1.3E-03	1.51E-03	1.6E-04	2.84E-03	6.14E-04	0.00
Manganese	3.8E-04	8.4E-04	3.00E-03	1.2E-04	1.89E-03	1.22E-03	0.00
Mercury	2.6E-04	4.2E-04	1.13E-04	8.2E-05	9.46E-04	4.59E-05	9.5E-04
Nickel	2.1E-03	4.2E-04	8.45E-02	6.6E-04	9.46E-04	3.43E-02	0.034
Selenium	2.4E-05	2.1E-03	6.83E-04	7.6E-06	4.73E-03	2.78E-04	4.7E-03
1,1,1-Trichloroethane			2.36E-04			9.59E-05	9.6E-05
1,3-Butadiene							0.0E+00
Acetaldehyde							0.0E+00
Acrolein							0.0E+00
Benzene	2.1E-03		2.14E-04	6.6E-04		8.70E-05	6.6E-04
Bis(2-ethylhexyl)phthalate							
Dichlorobenzene	1.2E-03			3.8E-04			3.8E-04
Ethylbenzene			6.36E-05			2.59E-05	2.6E-05
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	2.4E-02	1.37E-01	1.34E-02	0.137
Hexane	1.8E+00			0.57			0.568
Phenol							negl
Toluene	3.4E-03		6.20E-03	1.1E-03		2.52E-03	2.5E-03
Total PAH Haps	negl		1.13E-03	negl		4.59E-04	4.6E-04
Polycyclic Organic Matter		3.30E-03	1.09E-04		7.43E-03		7.4E-03
Xylene			1.09E-04			4.43E-05	4.4E-05
			<b>Total HAPs</b>	<b>0.60</b>	<b>0.16</b>	<b>0.06</b>	<b>0.77</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, 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 10/96), 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  
 Diesel Engine Oil: AP-42 Chapter 3.3 (dated 10/96), Tables 3.3-1 and 3.3-2

**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: Asphalt FESOP Emissions Calculations  
Dryer Burner**

**Unlimited/Uncontrolled Volatile Organic Compounds and Hazardous Air Pollutants**

**Source:** Dave O'Mara Contractor, Inc., Plant #7  
Lighthouse Junction Property, Southeast Corner of State Road 57  
**Source Location:** and State Road 54, Bloomfield, Indiana 47424  
**County:** Greene  
**Permit:** F055-25301-05227  
**Permit Reviewer:** Stephanie Wilkerson  
**Date:** January 4, 2008

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

Maximum Annual Asphalt Production = **2,628,000** ton/yr

Criteria Pollutant*	Uncontrolled Emission Factors			Uncontrolled Potential to Emit			Worse Case PTE
	Drum-Mix Plant (dryer/mixer)			Drum-Mix Plant (dryer/mixer)			
	Natural Gas	No. 2 Fuel Oil	No. 4 Fuel Oil	Natural Gas	No. 2 Fuel Oil	No. 4 Fuel Oil	
PM	28	28	28	36792	36792	36792	<b>36792</b>
PM10	6.5	6.5	6.5	8541	8541	8541	<b>8541</b>
SO2	0.0034	0.011	0.011	4.4676	14.454	14.454	<b>14.454</b>
NOx	0.026	0.055	0.055	34.164	72.27	72.27	<b>72.27</b>
VOC	0.032	0.032	0.032	42.048	42.048	42.048	<b>42.048</b>
CO	0.13	0.13	0.13	170.82	170.82	170.82	<b>170.82</b>
<b>Hazardous Air Pollutant</b>							
Antimony	1.80E-07	1.80E-07	1.80E-07	2.37E-04	2.37E-04	2.37E-04	<b>2.37E-04</b>
Arsenic	5.60E-07	5.60E-07	5.60E-07	7.36E-04	7.36E-04	7.36E-04	<b>7.36E-04</b>
Beryllium	negl	negl	negl	negl	negl	negl	<b>0.00E+00</b>
Cadmium	4.10E-07	4.10E-07	4.10E-07	5.39E-04	5.39E-04	5.39E-04	<b>5.39E-04</b>
Chromium	5.50E-06	5.50E-06	5.50E-06	7.23E-03	7.23E-03	7.23E-03	<b>7.23E-03</b>
Cobalt	2.60E-08	2.60E-08	2.60E-08	3.42E-05	3.42E-05	3.42E-05	<b>3.42E-05</b>
Lead	6.20E-07	1.50E-05	1.50E-05	8.15E-04	1.97E-02	1.97E-02	<b>1.97E-02</b>
Manganese	7.70E-06	7.70E-06	7.70E-06	1.01E-02	1.01E-02	1.01E-02	<b>1.01E-02</b>
Mercury	2.40E-07	2.60E-06	2.60E-06	3.15E-04	3.42E-03	3.42E-03	<b>3.42E-03</b>
Nickel	6.30E-05	6.30E-05	6.30E-05	8.28E-02	8.28E-02	8.28E-02	<b>8.28E-02</b>
Selenium	3.50E-07	3.50E-07	3.50E-07	4.60E-04	4.60E-04	4.60E-04	<b>4.60E-04</b>
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	5.26E-02	5.26E-02	5.26E-02	<b>5.26E-02</b>
Acetaldehyde						0.00E+00	<b>0.00</b>
Acrolein						0.00E+00	<b>0.00E+00</b>
Benzene	3.90E-04	3.90E-04	3.90E-04	5.12E-01	5.12E-01	5.12E-01	<b>0.51</b>
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	3.15E-01	3.15E-01	3.15E-01	<b>0.32</b>
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	4.07E+00	4.07E+00	4.07E+00	<b>4.07</b>
Hexane	9.20E-04	9.20E-04	9.20E-04	1.21E+00	1.21E+00	1.21E+00	<b>1.21</b>
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	6.31E-02	6.31E-02	6.31E-02	<b>6.31E-02</b>
MEK						0.00E+00	<b>0.00E+00</b>
Propionaldehyde						0.00E+00	<b>0.00E+00</b>
Quinone						0.00E+00	<b>0.00E+00</b>
Toluene	1.50E-04	2.90E-03	2.90E-03	1.97E-01	3.81E+00	3.81E+00	<b>3.81</b>
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	2.50E-01	1.16E+00	1.16E+00	<b>1.16</b>
Xylene	2.00E-04	2.00E-04	2.00E-04	2.63E-01	2.63E-01	2.63E-01	<b>0.2628</b>

**Total HAPs 11.58**  
**Worst Single HAP 4.0734**  
**(formaldehyde)**

**Methodology**

Limited/Controlled Potential to Emit (tons/yr) = (Annual Asphalt Production Limitation (tons/yr)) \* (Emission Factor (lb/ton)) \* (ton/2000 lbs)

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-1, 11.1-3, 11.1-5, 11.1-6, 11.1-7, 11.1-8, 11.1-9, 11.1-10, 11.1-11, and 11.1-12

\*Emission of PM, PM10, SO2, NOx, and, CO from Batch-Mix Plants and Drum-Mix Plants are included with the emission calculations for fuel combustion

**Abbreviations**

VOC - Volatile Organic Compounds

HCl = Hydrogen Chloride

SO2 = Sulfur Dioxide

HAP = Hazardous Air Pollutant

PAH = Polyaromatic Hydrocarbon

**Appendix A: Asphalt FESOP Emissions Calculations  
Dryer Burner**

**Limited Volatile Organic Compounds and Hazardous Air Pollutants**

**Source:** Dave O'Mara Contractor, Inc., Plant #7  
Lighthouse Junction Property, Southeast Corner of State Road 57  
**Source Location:** and State Road 54, Bloomfield, Indiana 47424  
**County:** Greene  
**Permit:** F055-25301-05227  
**Permit Reviewer:** Stephanie Wilkerson  
**Date:** January 4, 2008

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

Annual Asphalt Production Limitation = 1,560,000 ton/yr  
PM Dryer/Mixer Limitation = 0.225 lb/ton of asphlt production  
PM10 Dryer/Mixer Limitation = 0.098 lb/ton of asphlt production  
CO Dryer/Mixer Limitation = 0.120 lb/ton of asphlt production

Criteria Pollutant*	Emission Factor or Limitation			Limited/Controlled Potential to Emit			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	No. 4 Fuel Oil	Natural Gas	No. 2 Fuel Oil	No. 4 Fuel Oil	
PM	0.225	0.225	0.225	175.5	175.5	175.5	175.5
PM10	0.098	0.098	0.098	76.44	76.44	76.44	76.44
SO2	0.0034	0.011	0.058	2.652	8.58	45.24	45.24
NOx	0.026	0.055	0.055	20.28	42.9	42.9	42.9
VOC	0.032	0.032	0.032	24.96	24.96	24.96	24.96
CO	0.12	0.12	0.12	93.6	93.6	93.6	93.6
<b>Hazardous Air Pollutant</b>							
Antimony	1.80E-07	1.80E-07	1.80E-07	1.40E-04	1.40E-04	1.40E-04	1.40E-04
Arsenic	5.60E-07	5.60E-07	5.60E-07	4.37E-04	4.37E-04	4.37E-04	4.37E-04
Beryllium	negl	negl	negl	negl	negl	negl	0.00E+00
Cadmium	4.10E-07	4.10E-07	4.10E-07	3.20E-04	3.20E-04	3.20E-04	3.20E-04
Chromium	5.50E-06	5.50E-06	5.50E-06	4.29E-03	4.29E-03	4.29E-03	4.29E-03
Cobalt	2.60E-08	2.60E-08	2.60E-08	2.03E-05	2.03E-05	2.03E-05	2.03E-05
Lead	6.20E-07	1.50E-05	1.50E-05	4.84E-04	1.17E-02	1.17E-02	1.17E-02
Manganese	7.70E-06	7.70E-06	7.70E-06	6.01E-03	6.01E-03	6.01E-03	6.01E-03
Mercury	2.40E-07	2.60E-06	2.60E-06	1.87E-04	2.03E-03	2.03E-03	2.03E-03
Nickel	6.30E-05	6.30E-05	6.30E-05	4.91E-02	4.91E-02	4.91E-02	4.91E-02
Selenium	3.50E-07	3.50E-07	3.50E-07	2.73E-04	2.73E-04	2.73E-04	2.73E-04
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	3.12E-02	3.12E-02	3.12E-02	3.12E-02
Acetaldehyde			1.30E-03			1.01E+00	1.01
Acrolein			2.60E-05			2.03E-02	2.03E-02
Benzene	3.90E-04	3.90E-04	3.90E-04	3.04E-01	3.04E-01	3.04E-01	0.30
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	1.87E-01	1.87E-01	1.87E-01	0.19
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	2.42E+00	2.42E+00	2.42E+00	2.42
Hexane	9.20E-04	9.20E-04	9.20E-04	7.18E-01	7.18E-01	7.18E-01	0.72
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	3.74E-02	3.74E-02	3.74E-02	3.74E-02
MEK			2.00E-05			1.56E-02	1.56E-02
Propionaldehyde			1.30E-04			1.01E-01	1.01E-01
Quinone			1.60E-04			1.25E-01	1.25E-01
Toluene	1.50E-04	2.90E-03	2.90E-03	1.17E-01	2.26E+00	2.26E+00	2.26
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	1.48E-01	6.86E-01	6.86E-01	0.69
Xylene	2.00E-04	2.00E-04	2.00E-04	1.56E-01	1.56E-01	1.56E-01	0.156

**Total HAPs 8.15**  
**Worst Single HAP 2.418**  
**(formaldehyde)**

**Methodology**

Limited/Controlled Potential to Emit (tons/yr) = (Annual Asphalt Production Limitation (tons/yr)) \* (Emission Factor (lb/ton)) \* (ton/2000 lbs)  
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-1, 11.1-3, 11.1-5, 11.1-6, 11.1-7, 11.1-8, 11.1-9, 11.1-10, 11.1-11, and 11.1-12  
\*Emission of PM, PM10, SO2, NOx, and, CO from Batch-Mix Plants and Drum-Mix Plants are included with the emission calculations for fuel combustion

**Abbreviations**

VOC - Volatile Organic Compounds      HAP = Hazardous Air Pollutant  
HCl = Hydrogen Chloride                      PAH = Polyaromatic Hydrocarbon  
SO2 = Sulfur Dioxide

**Appendix A: Asphalt FESOP Emissions Calculations  
Unlimited Load-Out, Silo Filling, and Yard Emissions**

**Source:** Dave O'Mara Contractor, Inc., Plant #7  
Lighthouse Junction Property, Southeast Corner of State Road  
**Source Location:** 57 and State Road 54, Bloomfield, Indiana 47424  
**County:** Greene  
**Permit:** F055-25301-05227  
**Permit Reviewer:** Stephanie Wilkerson  
**Date:** January 4, 2008

The following calculations determine the unlimited 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)			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	0.69	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>0.019</b>	<b>0.023</b>	<b>0</b>	<b>0.042</b>
<b>VOC/HAPs</b>	<b>0.048</b>	<b>0.121</b>	<b>0.013</b>	<b>0.181</b>
<b>non-VOC/HAPs</b>	<b>2.5E-04</b>	<b>2.6E-05</b>	<b>6.6E-05</b>	<b>3.4E-04</b>
<b>non-VOC/non-HAPs</b>	<b>0.24</b>	<b>0.13</b>	<b>0.06</b>	<b>0.43</b>
<b>Total VOCs</b>	<b>3.05</b>	<b>9.51</b>	<b>0.8</b>	<b>13.4</b>
<b>Total HAPs</b>	<b>0.07</b>	<b>0.14</b>	<b>0.013</b>	<b>0.22</b>
<b>Worst Single HAP</b>				<b>0.069</b>
				<b>(formaldehyde)</b>

**Methodology**

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)::

$$\text{Total PM/PM10 Ef} = 0.000181 + 0.00141(-V)e^{((0.0251)(T+460)-20.43)}$$

$$\text{Organic PM Ef} = 0.00141(-V)e^{((0.0251)(T+460)-20.43)}$$

$$\text{TOC Ef} = 0.0172(-V)e^{((0.0251)(T+460)-20.43)}$$

$$\text{CO Ef} = 0.00558(-V)e^{((0.0251)(T+460)-20.43)}$$

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

$$\text{PM/PM10 Ef} = 0.000332 + 0.00105(-V)e^{((0.0251)(T+460)-20.43)}$$

$$\text{Organic PM Ef} = 0.00105(-V)e^{((0.0251)(T+460)-20.43)}$$

$$\text{TOC Ef} = 0.0504(-V)e^{((0.0251)(T+460)-20.43)}$$

$$\text{CO Ef} = 0.00488(-V)e^{((0.0251)(T+460)-20.43)}$$

On Site Yard CO emissions estimated by multiplying the TOC emissions by 0.32

**Abbreviations**

TOC = Total Organic Compounds

CO = Carbon Monoxide

PM = Particulate Matter

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

**Appendix A: Asphalt FESOP Emissions Calculations  
Limited Load-Out, Silo Filling, and Yard Emissions**

**Source:** Dave O'Mara Contractor, Inc., Plant #7  
Lighthouse Junction Property, Southeast Corner of State Road  
**Source Location:** 57 and State Road 54, Bloomfield, Indiana 47424  
**County:** Greene  
**Permit:** F055-25301-05227  
**Permit Reviewer:** Stephanie Wilkerson  
**Date:** January 4, 2008

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

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.5	
Annual Asphalt Production Limitation =	1,560,000	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	0.41	0.46	NA	0.86
Organic PM	3.4E-04	2.5E-04	NA	0.27	0.198	NA	0.46
TOC	0.004	0.012	0.001	3.24	9.51	0.858	13.6
CO	0.001	0.001	3.5E-04	1.05	0.920	0.275	2.25

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

<b>PM/HAPs</b>	<b>0.019</b>	<b>0.023</b>	<b>0</b>	<b>0.042</b>
<b>VOC/HAPs</b>	<b>0.048</b>	<b>0.121</b>	<b>0.013</b>	<b>0.181</b>
<b>non-VOC/HAPs</b>	<b>2.5E-04</b>	<b>2.6E-05</b>	<b>6.6E-05</b>	<b>3.4E-04</b>
<b>non-VOC/non-HAPs</b>	<b>0.24</b>	<b>0.13</b>	<b>0.06</b>	<b>0.43</b>

  

<b>Total VOCs</b>	<b>3.05</b>	<b>9.51</b>	<b>0.8</b>	<b>13.4</b>
<b>Total HAPs</b>	<b>0.07</b>	<b>0.14</b>	<b>0.013</b>	<b>0.22</b>
<b>Worst Single HAP</b>				<b>0.069</b>
				<b>(formaldehyde)</b>

**Methodology**

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

**Abbreviations**

TOC = Total Organic Compounds

CO = Carbon Monoxide

PM = Particulate Matter

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

**Appendix A: Asphalt FESOP Emissions Calculations:  
Unlimited Load-Out, Silo Filling, and Yard Emissions (continued)**

**Source:** Dave O'Mara Contractor, Inc., Plant #7  
Lighthouse Junction Property, Southeast Corner of State Road 57 and State Road 54,  
**Source Location:** Bloomfield, Indiana 47424  
**County:** Greene  
**Permit:** F055-25301-05227  
**Permit Reviewer:** Stephanie Wilkerson  
**Date:** January 4, 2008

**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%	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	5.0E-04	NA	7.2E-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>0.065</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**

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: Asphalt FESOP Emissions Calculations:  
Unlimited Load-Out, Silo Filling, and Yard Emissions (continued)**

**Source:** Dave O'Mara Contractor, Inc., Plant #7  
Lighthouse Junction Property, Southeast Corner of State Road 57 and State Road 54,  
**Source Location:** Bloomfield, Indiana 47424  
**County:** Greene  
**Permit:** F055-25301-05227  
**Permit Reviewer:** Stephanie Wilkerson  
**Date:** January 4, 2008

**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>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**

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: Asphalt FESOP Emissions Calculations  
Limited Load-Out, Silo Filling, and Yard Emissions (continued)**

**Source:** Dave O'Mara Contractor, Inc., Plant #7  
Lighthouse Junction Property, Southeast Corner of State Road 57 and State Road 54,  
Bloomfield, Indiana 47424  
**Source Location:** Bloomfield, Indiana 47424  
**County:** Greene  
**Permit:** F055-25301-05227  
**Permit Reviewer:** Stephanie Wilkerson  
**Date:** January 4, 2008

**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%	6.9E-04	9.3E-04	NA	1.6E-03
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	7.4E-05	2.8E-05	NA	1.0E-04
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	1.9E-04	2.6E-04	NA	4.4E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	5.1E-05	1.1E-04	NA	1.6E-04
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	2.0E-05	0	NA	2.0E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	5.9E-06	0	NA	5.9E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	5.1E-06	0	NA	5.1E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	6.1E-06	0	NA	6.1E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	2.1E-05	1.9E-05	NA	4.0E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	2.7E-04	4.2E-04	NA	6.9E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	9.8E-07	0	NA	9.8E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	1.3E-04	3.0E-04	NA	4.3E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	2.0E-03	2.0E-03	NA	4.0E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	1.2E-06	0	NA	1.2E-06
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	6.3E-03	1.0E-02	NA	0.017
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	3.3E-03	3.6E-03	NA	6.9E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	5.9E-05	5.9E-05	NA	1.2E-04
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	2.2E-03	3.6E-03	NA	5.7E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	4.0E-04	8.7E-04	NA	1.3E-03
<b>Total PAH HAPs</b>							<b>0.016</b>	<b>0.023</b>	<b>NA</b>	<b>0.038</b>
<b>Other semi-volatile HAPs</b>										
Phenol		PM/HAP	---	Organic PM	1.18%	0	3.1E-03	0	0	3.1E-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: Asphalt FESOP Emissions Calculations  
Limited Load-Out, Silo Filling, and Yard Emissions (continued)**

**Source:** Dave O'Mara Contractor, Inc., Plant #7  
Lighthouse Junction Property, Southeast Corner of State Road 57 and State Road 54,  
Bloomfield, Indiana 47424  
**Source Location:** Bloomfield, Indiana 47424  
**County:** Greene  
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**Permit Reviewer:** Stephanie Wilkerson  
**Date:** January 4, 2008

**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>3.05</b>	<b>9.51</b>	<b>0.81</b>	<b>13.36</b>
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	2.1E-01	2.5E-02	5.6E-02	0.291
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	1.5E-03	5.2E-03	3.9E-04	0.007
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	2.3E-02	1.0E-01	6.1E-03	0.134
<b>Total non-VOC/non-HAPS</b>					<b>7.30%</b>	<b>1.40%</b>	<b>0.237</b>	<b>0.133</b>	<b>0.063</b>	<b>0.43</b>
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	1.7E-03	3.0E-03	4.5E-04	5.2E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	3.1E-04	4.7E-04	8.2E-05	8.6E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	1.6E-03	3.7E-03	4.2E-04	5.7E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	4.2E-04	1.5E-03	1.1E-04	2.1E-03
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	6.8E-06	3.8E-04	1.8E-06	3.9E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	4.9E-04	2.2E-03	1.3E-04	2.8E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	3.6E-03	0	9.4E-04	4.5E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	9.1E-03	3.6E-03	2.4E-03	0.015
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	2.9E-03	6.6E-02	7.6E-04	0.069
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	4.9E-03	9.5E-03	1.3E-03	0.016
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	5.8E-05	2.9E-05	1.5E-05	1.0E-04
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	2.6E-05	0	2.6E-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%	2.4E-04	5.1E-04	6.3E-05	8.1E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	2.5E-04	0	6.6E-05	3.2E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	6.8E-03	5.9E-03	1.8E-03	0.015
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	4.2E-05	0	1.1E-05	5.3E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	1.3E-02	1.9E-02	3.5E-03	0.036
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	2.6E-03	5.4E-03	6.9E-04	8.7E-03
<b>Total volatile organic HAPs</b>					<b>1.50%</b>	<b>1.30%</b>	<b>0.049</b>	<b>0.124</b>	<b>0.013</b>	<b>0.185</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: Asphalt FESOP Emissions Calculations  
Hot Oil and Asphalt Heaters**

**Source:** Dave O'Mara Contractor, Inc., Plant #7  
Lighthouse Junction Property, Southeast Corner of State Road 57 and  
State Road 54, Bloomfield, Indiana 47424  
**Source Location:** State Road 54, Bloomfield, Indiana 47424  
**County:** Greene  
**Permit:** F055-25301-05227  
**Permit Reviewer:** Stephanie Wilkerson  
**Date:** January 4, 2008

The following calculations determine the unlimited emissions from the hot oil heater.

Maximum No. 2 Fuel Oil Usage = 4,505,143 gal/yr

Criteria Pollutant	Emission Factors (lb/ton)	Potential to Emit (tons/yr)	Worse Case PTE	
	No. 2 Fuel Oil (lb/gal)	No. 2 Fuel Oil		
VOC	2.65E-05	0.060	0.060	
CO	0.0012	2.7030857	2.703085714	
Hazardous Air Pollutant				
Formaldehyde:	3.50E-06	7.88E-03	7.88E-03	
Acenaphthene	5.30E-07	1.19E-03	1.19E-03	
Acenaphthylene	2.00E-07	4.51E-04	4.51E-04	
Anthracene	1.80E-07	4.05E-04	4.05E-04	
Benzo(b)fluoranthene	1.00E-07	2.25E-04	2.25E-04	
Fluoranthene	4.40E-08	9.91E-05	9.91E-05	
Fluorene	3.20E-08	7.21E-05	7.21E-05	
Naphthalene	1.70E-05	3.83E-02	3.83E-02	
Phenanthrene	4.90E-06	1.10E-02	1.10E-02	
Pyrene	3.20E-08	7.21E-05	7.21E-05	

**Total HAPs 5.97E-02**  
**Worst Single HAP 3.83E-02 (Naphthalene)**

**Methodology**

No. 2 Fuel Oil: Potential to Emit (tons/yr) = (No. 2 Fuel Oil Usage (gals/yr))\*(Emission Factor (lb/gal))\*(ton/2000 lbs)  
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Table 11.1-13

**Abbreviations**

CO = Carbon Monoxide  
VOC = Volatile Organic Compound

**Appendix A: Asphalt FESOP Emissions Calculations  
Material Storage Piles**

**Source:** Dave O'Mara Contractor, Inc., Plant #7  
 Lighthouse Junction Property, Southeast Corner of State Road 57 and  
**Source Location:** State Road 54, Bloomfield, Indiana 47424  
**County:** Greene  
**Permit:** F055-25301-05227  
**Permit Reviewer:** Stephanie Wilkerson  
**Date:** January 4, 2008

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.

$$E_f = 1.7 * (s/1.5) * (365-p) / 235 * (f/15)$$
 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)**	Limited PTE of PM (tons/yr)	Limited PTE of PM10 (tons/yr)
Limestone	1.6	1.85	0.75	0.253	0.089
Sand	2.6	3.01	0.75	0.412	0.144
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**

Limited PTE of PM (tons/yr) = (Emission Factor (lb/acre/day)) \* (Maximum Pile Size (acres)) \* (ton/2000 lbs) \* (8760 hours/yr)

Limited PTE of PM10 (tons/yr) = (Potential PM Emissions (tons/yr)) \* 35%

\*Silt content values obtained from AP-42 Table 13.2.4-1 (dated 1/95)

\*\*Maximum pile size (acres) anticipated for a source limited to an annual asphalt production of 600,000 tons/yr

**Abbreviations**

PM = Particulate Matter  
 PM10 = Particulate Matter (<10 um)  
 PTE = Potential to Emit

**Appendix A: Asphalt FESOP Emissions Calculations  
Material Processing and Handling  
Fugitive Dust**

**Source:** Dave O'Mara Contractor, Inc., Plant #7  
Lighthouse Junction Property, Southeast Corner of State Road 57 and State Road 54,  
**Source Location:** Bloomfield, Indiana 47424  
**County:** Greene  
**Permit:** F055-25301-05227  
**Permit Reviewer:** Stephanie Wilkerson  
**Date:** January 4, 2008

To estimate potential fugitive dust emissions from processing and handling of raw materials, AP-42 emission factors for Aggregate Handling, Section 13.2.4 (fifth edition, 1/95) are utilized.

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

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)  
 $U$  = 10.2 = worst case annual mean wind speed (Source: NOAA, 2005\*)  
 $M$  = 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

Maximum Annual Asphalt Production = 2,628,000 tons/yr  
 Percent Asphalt Cement/Binder (weight %) = 5.0%  
 Maximum Material Handling Throughput = 2,496,600 tons/yr

Type of Activity	Limited PTE of PM (tons/yr)	Limited PTE of PM10 (tons/yr)
Truck unloading of materials into storage piles	2.83	1.34
Front-end loader dumping of materials into feeder bins	2.83	1.34
Conveyor dropping material into dryer/mixer or batch tower	2.83	1.34
<b>Total (tons/yr)</b>	<b>8.49</b>	<b>4.02</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 limestone, sand, recycled asphalt pavement (RAP), gravel, slag, and other additives

\*Worst case annual mean wind speed (South Bend, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2005

**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)*	Limited PTE of PM (tons/yr)	Limited PTE of PM10 (tons/yr)
Crushing	0.0054	0.0024	6.74	3.00
Screening	0.025	0.0087	31.21	10.86
Conveying	0.003	0.0011	3.74	1.37
<b>Limited Potential to Emit (tons/yr) =</b>			<b>41.69</b>	<b>15.23</b>

**Appendix A: Asphalt FESOP Emissions Calculations  
Material Processing and Handling  
Fugitive Dust**

**Source:** Dave O'Mara Contractor, Inc., Plant #7  
Lighthouse Junction Property, Southeast Corner of State Road 57 and State Road 54,  
**Source Location:** Bloomfield, Indiana 47424  
**County:** Greene  
**Permit:** F055-25301-05227  
**Permit Reviewer:** Stephanie Wilkerson  
**Date:** January 4, 2008

To estimate potential fugitive dust emissions from processing and handling of raw materials, AP-42 emission factors for Aggregate Handling, Section 13.2.4 (fifth edition, 1/95) are utilized.

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

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)  
 $U$  = 10.2 = worst case annual mean wind speed (Source: NOAA, 2005\*)  
 $M$  = 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

Annual Asphalt Production Limitation = 1,560,000 tons/yr  
 Percent Asphalt Cement/Binder (weight %) = 5.0%  
 Maximum Material Handling Throughput = 1,482,000 tons/yr

Type of Activity	Limited PTE of PM (tons/yr)	Limited PTE of PM10 (tons/yr)
Truck unloading of materials into storage piles	1.68	0.79
Front-end loader dumping of materials into feeder bins	1.68	0.79
Conveyor dropping material into dryer/mixer or batch tower	1.68	0.79
<b>Total (tons/yr)</b>	<b>5.04</b>	<b>2.38</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 limestone, sand, recycled asphalt pavement (RAP), gravel, slag, and other additives

\*Worst case annual mean wind speed (South Bend, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2005

**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 (tons/yr)
Crushing	0.0054	0.0024	4.00	1.78
Screening	0.025	0.0087	18.53	6.45
Conveying	0.003	0.0011	2.22	0.82
<b>Limited Potential to Emit (tons/yr) =</b>			<b>24.75</b>	<b>9.04</b>

**Appendix A: Asphalt FESOP Emissions Calculations  
Unlimited Fugitive Dust Emissions - Unpaved Roads**

**Source:** Dave O'Mara Contractor, Inc., Plant #7  
 Lighthouse Junction Property, Southeast Corner of State Road 57 and State  
**Source Location:** Road 54, Bloomfield, Indiana 47424  
**County:** Greene  
**Permit:** F055-25301-05227  
**Permit Reviewer:** Stephanie Wilkerson  
**Date:** January 4, 2008

**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 %) = 5.0%  
 Maximum Material Handling Throughput = 2,496,600 tons/yr  
 Maximum Asphalt Cement/Binder Throughput = 131,400 tons/yr  
 Maximum No. 2 Fuel Oil Usage = 4,505,143 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)	23.0	22.4	45.4	1.1E+05	5.1E+06	330	0.063	6966.0
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	23.0	0	23.0	1.1E+05	2.6E+06	330	0.063	6966.0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	5.9E+05	1.1E+07	165	0.031	18575.9
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	5.9E+05	8.9E+06	165	0.031	18575.9
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	23.0	24.0	47.0	1.1E+05	5.1E+06	330	0.063	6843.8
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	23.0	0	23.0	1.1E+05	2.5E+06	330	0.063	6843.8
<b>Total</b>						<b>1.6E+06</b>	<b>3.6E+07</b>		<b>6.5E+04</b>

Average Vehicle Weight Per Trip = 21.8 tons/trip  
 Average Miles Per Trip = 0.040 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	
where k =	4.9	1.5	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	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	= constant (AP-42 Table 13.2.2-2)
W =	21.8	21.8	tons = average vehicle weight (provided by source)
b =	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	
Unmitigated Emission Factor, $E_f$ =	6.30	1.61	lb/mile
Mitigated Emission Factor, $E_{ext}$ =	4.15	1.06	lb/mile
Dust Control Efficiency =	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)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	21.96	5.60	14.44	3.68	7.22	1.84
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	21.96	5.60	14.44	3.68	7.22	1.84
Aggregate/RAP Loader Full	Front-end loader (3 CY)	58.55	14.92	38.50	9.81	19.25	4.91
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	58.55	14.92	38.50	9.81	19.25	4.91
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	21.57	5.50	14.18	3.61	7.09	1.81
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	21.57	5.50	14.18	3.61	7.09	1.81
<b>Totals</b>		<b>204.16</b>	<b>52.03</b>	<b>134.24</b>	<b>34.21</b>	<b>67.12</b>	<b>17.11</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)  
 PTE = Potential to Emit

**Appendix A: Asphalt FESOP Emissions Calculations  
Limited Fugitive Dust Emissions - Unpaved Roads**

**Source:** Dave O'Mara Contractor, Inc., Plant #7  
Lighthouse Junction Property, Southeast Corner of State Road 57 and State  
**Source Location:** Road 54, Bloomfield, Indiana 47424  
**County:** Greene  
**Permit:** F055-25301-05227  
**Permit Reviewer:** Stephanie Wilkerson  
**Date:** January 4, 2008

**Unpaved Roads at Industrial Site**

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (12/2003).

Annual Asphalt Production Limitation = 1,560,000 tons/yr  
Percent Asphalt Cement/Binder (weight %) = 5.0%  
Maximum Material Handling Throughput = 1,482,000 tons/yr  
Maximum Asphalt Cement/Binder Throughput = 78,000 tons/yr  
No. 2 Fuel Oil Limitation = 4,505,143 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)	23.0	22.4	45.4	6.6E+04	3.0E+06	330	0.063	4135.0
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	23.0	0	23.0	6.6E+04	1.5E+06	330	0.063	4135.0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	3.5E+05	6.8E+06	165	0.031	11026.8
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	3.5E+05	5.3E+06	165	0.031	11026.8
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	23.0	24.0	47.0	6.5E+04	3.1E+06	330	0.063	4062.5
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	23.0	0	23.0	6.5E+04	1.5E+06	330	0.063	4062.5
<b>Total</b>						<b>9.7E+05</b>	<b>2.1E+07</b>		<b>3.8E+04</b>

Average Vehicle Weight Per Trip = 21.8 tons/trip  
Average Miles Per Trip = 0.040 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	
where k =	4.9	1.5	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	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	= constant (AP-42 Table 13.2.2-2)
W =	21.8	21.8	tons = average vehicle weight (provided by source)
b =	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	
Unmitigated Emission Factor, $E_f$ =	6.30	1.61	lb/mile
Mitigated Emission Factor, $E_{ext}$ =	4.15	1.06	lb/mile
Dust Control Efficiency =	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)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	13.03	3.32	8.57	2.18	4.28	1.09
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	13.03	3.32	8.57	2.18	4.28	1.09
Aggregate/RAP Loader Full	Front-end loader (3 CY)	34.76	8.86	22.85	5.82	11.43	2.91
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	34.76	8.86	22.85	5.82	11.43	2.91
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	12.80	3.26	8.42	2.15	4.21	1.07
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	12.80	3.26	8.42	2.15	4.21	1.07
<b>Totals</b>		<b>121.19</b>	<b>30.89</b>	<b>79.69</b>	<b>20.31</b>	<b>39.84</b>	<b>10.15</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)  
PTE = Potential to Emit

**Appendix A: Asphalt FESOP Emissions Calculations  
Unlimited Fugitive Dust Emissions - Paved Roads**

Source: Dave O'Mara Contractor, Inc., Plant #7

Lighthouse Junction Property, Southeast Corner of State Road 57 and State Road 54, Bloomfield, Indiana 47424

County: Greene

Permit: F055-25301-05227

Permit Reviewer: Stephanie Wilkerson

Date: January 4, 2008

**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 %) =	5.0%	
Maximum Material Handling Throughput =	2,496,600	tons/yr
Maximum Asphalt Cement/Binder Throughput =	131,400	tons/yr
Maximum No. 2 Fuel Oil Usage =	4,505,143	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)	23.0	22.4	45.40	1.1E+05	5.1E+06	330	0.063	6966.0
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	23.0	0	23.00	1.1E+05	2.6E+06	330	0.063	6966.0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.20	5.9E+05	1.1E+07	165	0.031	18575.9
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	5.9E+05	8.9E+06	165	0.031	18575.9
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	23.0	24.0	47.00	1.1E+05	5.1E+06	330	0.063	6843.8
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	23.0	0	23.00	1.1E+05	2.5E+06	330	0.063	6843.8
<b>Total</b>					<b>1.6E+06</b>	<b>3.6E+07</b>			<b>6.5E+04</b>

Average Vehicle Weight Per Trip =	21.8	tons/trip
Average Miles Per Trip =	0.040	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)

where k =	PM	PM10	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	21.8	21.8	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)
sL =	0.6	0.6	g/m <sup>2</sup> = Ubiquitous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer r

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor,  $E_{ext} = E * [1 - (p/4N)]$

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

Unmitigated Emission Factor, $E_f =$	PM	PM10	lb/mile
Mitigated Emission Factor, $E_{ext} =$	0.74	0.14	lb/mile
Dust Control Efficiency =	0.67	0.13	lb/mile
	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)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	2.56	0.50	2.34	0.46	1.17	0.23
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	2.56	0.50	2.34	0.46	1.17	0.23
Aggregate/RAP Loader Full	Front-end loader (3 CY)	6.84	1.33	6.25	1.22	3.13	0.61
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	6.84	1.33	6.25	1.22	3.13	0.61
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	2.52	0.49	2.30	0.45	1.15	0.22
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	2.52	0.49	2.30	0.45	1.15	0.22
<b>Totals</b>		<b>23.84</b>	<b>4.64</b>	<b>21.80</b>	<b>4.24</b>	<b>10.90</b>	<b>2.12</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)  
 PTE = Potential to Emit

**Appendix A: Asphalt FESOP Emissions Calculations  
Limited Fugitive Dust Emissions - Paved Roads**

Source: Dave O'Mara Contractor, Inc., Plant #7

Source Location: Lighthouse Junction Property, Southeast Corner of State Road 57 and State Road 54, Bloomfield, Indiana 47424

County: Greene

Permit: F055-25301-05227

Permit Reviewer: Stephanie Wilkerson

Date: January 4, 2008

**Paved Roads at Industrial Site**

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (12/2003).

Annual Asphalt Production Limitation =	1,560,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	1,482,000	tons/yr
Maximum Asphalt Cement/Binder Throughput =	78,000	tons/yr
No. 2 Fuel Oil Limitation =	4,505,143	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)	23.0	22.4	45.40	6.6E+04	3.0E+06	330	0.063	4135.0
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	23.0	0	23.00	6.6E+04	1.5E+06	330	0.063	4135.0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.20	3.5E+05	6.8E+06	165	0.031	11026.8
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	3.5E+05	5.3E+06	165	0.031	11026.8
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	23.0	24.0	47.00	6.5E+04	3.1E+06	330	0.063	4062.5
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	23.0	0	23.00	6.5E+04	1.5E+06	330	0.063	4062.5
<b>Total</b>					<b>9.7E+05</b>	<b>2.1E+07</b>			<b>3.8E+04</b>

Average Vehicle Weight Per Trip =	21.8	tons/trip
Average Miles Per Trip =	0.040	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	
where k =	0.082	0.016	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	21.8	21.8	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)
sL =	0.6	0.6	g/m <sup>2</sup> = Ubiquitous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer m

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor,  $E_{ext} = E * [1 - (p/4N)]$

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	
Unmitigated Emission Factor, $E_f =$	0.74	0.14	lb/mile
Mitigated Emission Factor, $E_{ext} =$	0.67	0.13	lb/mile
Dust Control Efficiency =	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)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	1.52	0.30	1.39	0.27	0.70	0.14
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	1.52	0.30	1.39	0.27	0.70	0.14
Aggregate/RAP Loader Full	Front-end loader (3 CY)	4.06	0.79	3.71	0.72	1.86	0.36
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	4.06	0.79	3.71	0.72	1.86	0.36
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	1.50	0.29	1.37	0.27	0.68	0.13
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	1.50	0.29	1.37	0.27	0.68	0.13
<b>Totals</b>		<b>14.15</b>	<b>2.75</b>	<b>12.94</b>	<b>2.52</b>	<b>6.47</b>	<b>1.26</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)  
 PTE = Potential to Emit

**Appendix A: Emissions Calculations**  
**Unlimited Cold Mix Asphalt Production and Stockpiles**

**Source:** Dave O'Mara Contractor, Inc., Plant #7  
 Lighthouse Junction Property, Southeast Corner of State Road 57 and  
**Source Location:** State Road 54, Bloomfield, Indiana 47424  
**County:** Greene  
**Permit:** F055-25301-05227  
**Permit Reviewer:** Stephanie Wilkerson  
**Date:** January 4, 2008

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 %) =	5.0%	
Maximum Asphalt Cement/Binder Throughput =	131,400	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%	33244.2	31582.0
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	37580.4	26306.3
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	26280.0	6570.0
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	19710.0	9145.4
Other asphalt with solvent binder	25.9%	2.5%	34032.6	850.8
<b>Worst Case PTE of VOC =</b>				<b>31582.0</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>8237.75</b>
<b>PTE of Single HAP (tons/yr) =</b>	<b>2842.38 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:

**Abbreviations**

VOC = Volatile Organic Compounds  
 PTE = Potential to Emit

**Appendix A: Asphalt FESOP Emissions Calculations  
Limited Cold Mix Asphalt Production and Stockpiles**

**Source:** Dave O'Mara Contractor, Inc., Plant #7  
Lighthouse Junction Property, Southeast Corner of State Road 57 and State  
**Source Location:** Road 54, Bloomfield, Indiana 47424  
**County:** Greene  
**Permit:** F055-25301-05227  
**Permit Reviewer:** Stephanie Wilkerson  
**Date:** January 4, 2008

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 = 60 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)
Cut back asphalt rapid cure (assuming gasoline or naphtha solvent)	25.3%	95.0%	63.2	60.0
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	85.7	60.0
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	240.0	60.0
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	129.3	60.0
Other asphalt with solvent binder	25.9%	2.5%	2400.0	60.0
<b>Worst Case Limited PTE of VOC =</b>				<b>60.0</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>15.65</b>	
<b>Limited PTE of Single HAP (tons/yr) =</b>	<b>5.40</b>	<b>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. 4 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%	1.80E-4%
Acenaphthylene	208-96-8		4.50E-5%		6.00E-5%	6.00E-5%
Anthracene	120-12-7		1.20E-6%	5.80E-5%	2.80E-5%	2.80E-5%
Benzene	71-43-2	1.90%		2.90E-4%		
Benzo(a)anthracene	56-55-3			9.60E-7%	4.50E-7%	4.50E-7%
Benzo(a)pyrene	50-32-8			2.20E-6%	2.10E-7%	2.10E-7%
Benzo(g,h,i)perylene	191-24-2			1.20E-7%	5.70E-8%	5.70E-8%
Biphenyl	92-52-4			6.30E-4%	7.20E-5%	7.20E-5%
Chrysene	218-01-9			4.50E-7%	1.40E-6%	1.40E-6%
Ethylbenzene	100-41-4	1.70%		0.07%	3.40E-4%	3.40E-4%
Fluoranthene	206-44-0		7.10E-6%	5.90E-5%	1.40E-5%	1.40E-5%
Fluorene	86-73-7		4.20E-5%	8.60E-4%	1.90E-4%	1.90E-4%
Indeno(1,2,3-cd)pyrene	193-39-5			1.60E-7%		
Methyl-tert-butylether	1634-04-4	0.33%				
Naphthalene	91-20-3	0.25%	0.31%	0.26%	0.22%	0.22%
n-Hexane	110-54-3	2.40%				
Phenanthrene	85-01-8		8.60E-6%	8.80E-4%	7.90E-4%	7.90E-4%
Pyrene	129-00-0		2.40E-6%	4.60E-5%	2.90E-5%	2.90E-5%
Toluene	108-88-3	8.10%		0.18%	6.20E-4%	6.20E-4%
Total Xylenes	1330-20-7	9.00%		0.50%	0.23%	0.23%
<b>Total Organic HAPs</b>		<b>26.08%</b>	<b>0.33%</b>	<b>1.29%</b>	<b>0.68%</b>	<b>0.68%</b>
<b>Worst Single HAP</b>		<b>9.00%</b>	<b>0.31%</b>	<b>0.50%</b>	<b>0.23%</b>	<b>0.23%</b>
		<b>Xylenes</b>	<b>Naphthalene</b>	<b>Xylenes</b>	<b>Xylenes</b>	<b>Xylenes</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/tph.htm>

**Abbreviations**

VOC = Volatile Organic Compounds

PTE = Potential to Emit