



# 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: October 2, 2008

RE: MAC Construction / 025-26394-05315

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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**New Source Construction and Federally Enforceable  
State Operating Permit  
OFFICE OF AIR QUALITY  
AND ANY APPLICABLE LOCAL AGENCY (AS  
DESCRIBED IN SECTION B - LOCAL AIR POLLUTION  
CONTROL AGENCIES)**

**MAC Construction & Excavating, Inc.  
Portable Source**

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

**The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. 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.: F025-26394-05315	
Issued by/Original Signed By:	Issuance Date: October 2, 2008
Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Expiration Date: October 2, 1013

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## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and any applicable Local Air Pollution Control Agency (LAPCA) (as described in Condition B.6 of this permit). 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 drum mix hot asphalt plant.

Source Address:	Portable
Initial Source Address:	7172 South Tower Road, Leavenworth, Indiana 47137
Mailing Address:	1903 Unruh Court, P.O. Box 6787, New Albany, Indiana 47151
General Source Phone Number:	(812) 941-7895
SIC Code:	2951
County Location:	Crawford
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

- (a) One (1) drum mix asphalt plant, approved for construction in 2008, and consisting of the following emission units:
  - (1) One (1) drum dryer/mixer, identified as ES1, with a maximum rated throughput capacity of 400 tons per hour, equipped with one (1) 100 million British thermal units per hour (MMBtu/hr) No. 4 fuel oil-fired burner, using Baghouse CD-1 as control, and exhausting to stack EP-1.

Under NSPS Subpart I, this is considered an affected hot mix asphalt facility.
- (b) One (1) liquid asphalt storage tank, identified as Tank 1, approved for construction in 2008, with a maximum capacity of 35,000 gallons.
- (c) One (1) No. 4 fuel oil storage tank, identified as Tank 2, approved for construction in 2008, with maximum capacity of 20,000 gallons.
- (d) One (1) No. 2 fuel oil storage tank, identified as Tank 3, approved for construction in 2008, with a maximum capacity of 650 gallons.
- (e) One (1) No. 2 fuel oil-fired Power Flume Hot Oil Heater, identified as ES2, approved for construction in 2008, with a maximum capacity of 3.08 MMBtu, and exhausting to stack EP-2.

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

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

- (a) One (1) aggregate cold feed system consisting of:
  - (1) five (5) aggregate feed bins;
  - (2) five (5) feeder conveyors;
  - (3) one (1) gathering conveyor;
  - (4) one (1) cold aggregate screen system; and
  - (5) one (1) cold aggregate scale conveyor.
- (b) One (1) Reclaimed Asphalt Pavement (RAP) feed system consisting of:
  - (1) two (2) RAP feed bins and two (2) feeder conveyors;
  - (2) one (1) lump breaker system with one (1) collector conveyor; and
  - (3) one (1) RAP scale conveyor.
- (c) One (1) hot mix drag slat conveyor with a maximum capacity to transfer 400 tons per hour of hot mix asphalt.
- (d) One (1) hot mix storage system consisting of one (1) hot mix surge bin, with a maximum storage capacity of 100 tons.
- (e) Aggregate and RAP storage piles.
- (f) VOC and HAP storage containers storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (g) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- (h) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.
- (i) Unpaved roads and parking lots with public access.

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

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

## **SECTION B GENERAL CONDITIONS**

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

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

### **B.2 Revocation of Permits [326 IAC 2-1.1-9(5)]**

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Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

### **B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4][326 IAC 2-8]**

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This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 and [326 IAC 2-8] when prior to the start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM and any applicable LAPCA (as described in Condition B.6 of this permit) if constructed as proposed.
- (b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.
- (c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) or any applicable LAPCA (as described in Condition B.6 of this permit) to this permit.

### **B.4 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, F025-26394-05315, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, and any applicable Local Air Pollution Control Agency (as described in Condition B.6 of this permit), 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.5 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.6 Local Air Pollution Control Agencies**

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- (a) If the portable asphalt plant seeks to move to an area under the jurisdiction of any applicable Local Air Pollution Control Agency (LAPCA), the LAPCA may enact additional

air pollution control requirements. The Permittee shall notify the applicable LAPCA when relocating to or from a LAPCA (See Condition C.20 for portable source relocation requirements).

- (b) The Local Air Pollution Control Agencies are:

**Anderson**

Jurisdiction: Madison County

City of Anderson, Air Management Division  
P.O. Box 2100  
120 East 8th Street, Anderson, IN 46018  
(765) 648-6158 (765) 648-5916 (FAX)

**Evansville**

Jurisdiction: City of Evansville plus four (4) miles beyond the corporate limits but not outside Vanderburgh County

City of Evansville EPA  
C.K. Newsome Community Center  
100 East Walnut Street, Suite 100  
Evansville, IN 47713  
(812) 435-6145 (812) 435-6155 (FAX)

**Indianapolis**

Jurisdiction: Marion County

Office of Environmental Services  
Administration Building  
2700 South Belmont Avenue  
Indianapolis, IN 46221  
(317) 327-2237 (317) 274-2274 (FAX)

**Vigo County**

Jurisdiction: Vigo County

Vigo County Air Pollution Control  
103 South Third Street  
Terre Haute, IN 47807  
(812) 462-3433 (812) 462-3447(FAX)

**B.7 Enforceability [326 IAC 2-8-6]**

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- (a) 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 and any applicable LAPCA (as described in Condition B.6 of this permit), the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.
- (b) Unless otherwise stated, all terms and conditions in this permit that are local requirements, including any provisions designed to limit the source's potential to emit, are enforceable by the applicable LAPCA (as described in Condition B.6 of this permit).

**B.8 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.9 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.10 Duty to Provide Information [326 IAC 2-8-4(5)(E)]**

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- (a) The Permittee shall furnish to IDEM, OAQ, and any applicable LAPCA (as described in Condition B.6 of this permit), within a reasonable time, any information that IDEM, OAQ and any applicable LAPCA (as described in Condition B.6 of this permit) 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 and any applicable LAPCA (as described in Condition B.6 of this permit) 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.11 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.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]**

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

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

and any applicable LAPCA (as described in Condition B.6 of this permit)

- (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, and any applicable LAPCA (as described in Condition B.6 of this permit), 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 and any applicable LAPCA (as described in Condition B.6 of this permit) 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.13 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ and any applicable LAPCA (as described in Condition B.6 of this permit) 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.14 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 prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

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

and any applicable LAPCA (as described in Condition B.6 of this permit)

The PMP extension notification does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ and any applicable LAPCA (as described in Condition B.6 of this permit) upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ and any applicable LAPCA (as described in Condition B.6 of this permit). IDEM, OAQ and any applicable LAPCA (as described in Condition B.6 of this permit) 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.15 Emergency Provisions [326 IAC 2-8-12]**

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- (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, any applicable LAPCA (as described in Condition B.6 of this permit), and Southwest Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or

Telephone Number: 317-233-0178 (ask for Compliance Section)

Facsimile Number: 317-233-6865

and any applicable LAPCA (as described in Condition B.6 of this permit)

Southwest Regional Office phone: (812) 380-2305; fax: (812) 380-2304.

- (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

and any applicable LAPCA (as described in Condition B.6 of this permit)

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 and any applicable LAPCA (as described in Condition B.6 of this permit) 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 and any applicable LAPCA (as described in Condition B.6 of this permit) 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.16 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to F025-26394-05315 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.17 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.18 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

- (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

and any applicable LAPCA (as described in Condition B.6 of this permit)

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

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit.

[326 IAC 2-8-4(5)(C)] The notification by the Permittee does require 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 and any applicable LAPCA (as described in Condition B.6 of this permit) 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 and any applicable LAPCA (as described in Condition B.6 of this permit) 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 and any applicable LAPCA (as described in Condition B.6 of this permit) at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ and any applicable LAPCA (as described in Condition B.6 of this permit) may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

**B.20 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 any applicable LAPCA (as described in Condition B.6 of this permit) 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

and any applicable LAPCA (as described in Condition B.6 of this permit)

- (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 and any applicable LAPCA (as described in Condition B.6 of this permit) 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 and any applicable LAPCA (as described in Condition B.6 of this permit) 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 and any applicable LAPCA (as described in Condition B.6 of this permit) any additional information identified as being needed to process the application.

B.21 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

and any applicable LAPCA (as described in Condition B.6 of this permit)

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

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) 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

and any applicable LAPCA (as described in Condition B.6 of this permit)

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.23 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.24 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, and any applicable LAPCA (as described in Condition B.6 of this permit) 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.25 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  
  
and any applicable LAPCA (as described in Condition B.6 of this permit)  
  
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.26 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 and any applicable LAPCA (as described in Condition B.6 of this permit) 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 and any applicable LAPCA (as described in Condition B.6 of this permit) 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.27 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]

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

- (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of

fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

- (b) Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following when operating in areas listed in 326 IAC 5-1-1(c), unless otherwise stated in this permit:
- (1) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
  - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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

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

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator 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]

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]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the plan submitted on July 22, 2008. The plan is included as Attachment A.

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

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

- (B) Removal or demolition contractor; or
- (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-52 IGCN 1003  
Indianapolis, Indiana 46204-2251

and any applicable LAPCA (as described in Condition B.6 of this permit)

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**  
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

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

#### **C.9 Performance Testing [326 IAC 3-6]**

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- (a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. 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

and any applicable LAPCA (as described in Condition B.6 of this permit)

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

#### **Compliance Requirements [326 IAC 2-1.1-11]**

##### **C.10 Compliance Requirements [326 IAC 2-1.1-11]**

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The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

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

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

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Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. 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

and any applicable LAPCA (as described in Condition B.6 of this permit)

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

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

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

**C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

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

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- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

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

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

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

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) These ERPs shall be submitted for approval to:  
  
Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
  
within 180 days from the date on which this source commences operation.  
  
The ERP does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

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

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

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

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
  - (1) initial inspection and evaluation;
  - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
  - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
  - (1) monitoring results;
  - (2) review of operation and maintenance procedures and records; and/or
  - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
  - (1) monitoring data;
  - (2) monitor performance data, if applicable; and
  - (3) corrective actions taken.

C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ and any applicable LAPCA (as described in Condition B.6 of this permit), within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

#### **C.18 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]**

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- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or any applicable LAPCA (as described in Condition B.6 of this permit) makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or any applicable LAPCA (as described in Condition B.6 of this permit) 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]**

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- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

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

and any applicable LAPCA (as described in Condition B.6 of this permit)

- (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 and any applicable LAPCA (as described in Condition B.6 of this permit) on or before the date it is due.

- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

### Portable Source Requirement

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

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- (a) This permit is approved for operation in all areas of Indiana, except in Lake and Porter Counties and in areas designated as extreme, severe, or serious nonattainment areas for any National Ambient Air Quality Standard. 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 Lake or Porter Counties or any extreme, severe, or serious nonattainment area, the Permittee must submit a request and obtain a permit modification.
- (b) A request to relocate shall be submitted to IDEM, OAQ at least thirty (30) days prior to the intended date of relocation. This submittal shall include the following:
  - (1) A list of governmental officials entitled to receive notice of application to relocate. IC 13-15-3-1
  - (2) A list of adjacent landowners that the Permittee will send written notice to not more than ten (10) days after submission of the request to relocate. IC 13-15-8The notification by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) A "Relocation Site Approval" letter shall be obtained prior to relocating.
- (d) The Permittee shall also notify the applicable local air pollution control agency when relocating to, or from, one the following (see Condition B.4 for Local Air Pollution Control Agency contact information):
  - (1) Madison County - (City of Anderson, Air Management Division)
  - (2) City of Evansville plus four (4) miles beyond the corporate limits but not outside Vanderburgh County - (Evansville EPA)
  - (3) Marion County - (Indianapolis Office of Environmental Services)
  - (4) Vigo County - (Vigo County Air Pollution Control)
- (e) A valid operation permit consists of this document and any subsequent "Relocation Site Approval" letter specifying the current location of the portable plant.

## **Stratospheric Ozone Protection**

### **C.21 Compliance with 40 CFR 82 and 326 IAC 22-1**

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

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) One (1) drum mix asphalt plant, approved for construction in 2008, and consisting of the following emission units:
- (1) One (1) drum dryer/mixer, identified as ES1, with a maximum rated throughput capacity of 400 tons per hour, equipped with one (1) 100 million British thermal units per hour (MMBtu/hr) No. 4 fuel oil-fired burner, using Baghouse CD-1 as control, and exhausting to stack EP-1.

Under NSPS Subpart I, this is considered an affected hot mix asphalt facility.

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

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

#### D.1.1 Particulate Matter (PM) [326 IAC 6.5-1-2]

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

#### D.1.2 Particulate Matter (PM) and PM<sub>2.5</sub> [326 IAC 2-2] [326 IAC 2-1.1-5]

- (a) When located in a PM attainment County and in order to render 326 IAC 2-2 not applicable, the Permittee shall comply with the following:
- (1) The asphalt production rate shall not exceed 450,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (2) PM emissions from the dryer/mixer shall not exceed 0.891 pounds of PM per ton of asphalt produced.

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

- (b) When located in a PM<sub>2.5</sub> attainment County and in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the source shall comply with the following:
- (1) The asphalt production rate shall not exceed 450,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (2) PM<sub>2.5</sub> emissions from the dryer/mixer shall not exceed 1.07 pounds of PM<sub>2.5</sub> per ton of asphalt produced.

Compliance with these limits, combined with the potential to emit PM<sub>2.5</sub> from all other emission units at this source, shall limit the source-wide total potential to emit of PM<sub>2.5</sub> to less than 250 tons per 12 consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

- (c) When located in a PM2.5 nonattainment County and in order to render the requirements of 326 IAC 2-1.1-5 (Nonattainment New Source Review) not applicable, the source shall comply with the following:
- (1) The asphalt production rate shall not exceed 450,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
  - (2) PM2.5 emissions from the dryer/mixer shall not exceed 0.403 pounds of PM2.5 per ton of asphalt produced.
  - (3) The source shall not relocate from a County that has been classified attainment for PM2.5 to a County that has been classified nonattainment for PM2.5, if the asphalt production rate while located in a PM2.5 attainment classified County has exceeded 178,598 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits, combined with the potential to emit PM2.5 from all other emission units at this source, shall limit the source-wide total potential to emit of PM2.5 to less than 100 tons per 12 consecutive month period and shall render 326 IAC 2-1.1-5 (Nonattainment New Source Review) not applicable.

D.1.3 FESOP Limits [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-3] [326 IAC 2-1.1-5]

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

- (a) The asphalt production rate shall not exceed 450,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) PM<sub>10</sub> emissions from the dryer/mixer shall not exceed 0.367 pounds of PM<sub>10</sub> per ton of asphalt produced.
- (c) CO emissions from the dryer/mixer shall not exceed 0.130 pounds of CO per ton of asphalt produced.

Compliance with these limits, combined with the potential to emit PM<sub>10</sub> and CO from all other emission units at this source, shall limit the source-wide total potential to emit of PM<sub>10</sub> and CO, to less than 100 tons per 12 consecutive month period, each, and render 326 IAC 2-7 (Part 70 Permit Program), 326 IAC 2-2 (PSD), and 326 IAC 2-3 (Emission Offset) not applicable.

D.1.4 Fuel Usage Limitations [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-3]

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

- (a) The total usage of No. 4 fuel oil shall not exceed 2,350,933 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The sulfur content of the No. 4 fuel oil shall not exceed 0.5 percent by weight.
- (c) The SO<sub>2</sub> emissions from the dryer/mixer burner shall not exceed 75.0 pounds per 1,000 gallons of No. 4 fuel oil.

Compliance with these limits, combined with the potential to emit SO<sub>2</sub> and NO<sub>x</sub> from all other emission units at this source, shall limit the source-wide total potential to emit of SO<sub>2</sub> and NO<sub>x</sub>, to less than 100 tons per 12 consecutive month period, each, and render 326 IAC 2-7 (Part 70 Permit Program), 326 IAC 2-2 (PSD), and 326 IAC 2-3 (Emission Offset) not applicable.

**D.1.5 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1-1] [326 IAC 7-1.1-2]**

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- (a) Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), sulfur dioxide emissions from the dryer/mixer burner shall not exceed five-tenths (0.5) pounds per MMBtu heat input when using distillate oil (including No. 4 fuel oil).
- (b) Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

**D.1.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]**

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

- (a) The asphalt production rate shall not exceed 450,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) VOC emissions from the dryer/mixer shall not exceed 0.032 pounds of VOC per ton of asphalt produced.

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

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

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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 any control devices.

**Compliance Determination Requirements**

**D.1.8 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]**

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In order to demonstrate compliance with Conditions D.1.2(a)(2), D.1.2(b)(2), D.1.2(c)(2), and D.1.3(b), the Permittee shall perform PM, PM 2.5, and PM10 testing for dryer/mixer (Baghouse CD-1) within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008. This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM10 and PM2.5 includes filterable and condensable PM10 and PM2.5.

**D.1.9 Particulate Control**

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- (a) In order to comply with conditions D.1.1, D.1.2, and D.1.3, the baghouse for particulate control shall be in operation and control emissions from the dryer/mixer at all times when the dryer/mixer is in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

#### D.1.10 Sulfur Dioxide (SO<sub>2</sub>) Emissions and Sulfur Content

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Compliance with the sulfur dioxide emissions and sulfur content limitations in Conditions D.1.4(b), and D.1.5 shall be determined utilizing one of the following options:

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate compliance with sulfur dioxide emissions and sulfur content limitations by:
  - (1) Providing vendor analysis of heat content and sulfur content 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 dryer/mixer, 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.1.11 Visible Emissions Notations

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

##### D.1.12 Parametric Monitoring

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The Permittee shall record the pressure drop across the baghouse used in conjunction with the dryer/mixer, at least once per day when the dryer/mixer is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A

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

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

#### D.1.13 Broken or Failed Bag Detection

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In the event that bag failure has been observed:

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

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

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

#### D.1.14 Record Keeping Requirements

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- (a) To document compliance with Conditions D.1.2 and D.1.3 and D.1.6 the Permittee shall keep records of the amount of asphalt processed through the dryer/mixer. Records necessary to demonstrate compliance shall be available within thirty (30) days of the end of each compliance period.
- (b) To document compliance with Conditions D.1.4 and D.1.5, the Permittee shall maintain records in accordance with (1) through (7) below.
  - (1) Calendar dates covered in the compliance determination period;
  - (2) Actual fuel usage, sulfur content, heat content, and equivalent sulfur dioxide emission rates for each fuel used at the source per month;
  - (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

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

- (5) Fuel supplier certifications;
- (6) The name of the fuel supplier; and
- (7) A statement from the fuel supplier that certifies the sulfur content of the No. 4 fuel oil.

The Permittee shall maintain records of all recording/monitoring data and support information in accordance with Section C - General Record Keeping Requirements, of this permit. 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.

- (c) To document compliance with Condition D.1.11, the Permittee shall maintain records of visible emission notations of the dryer/mixer baghouse stack once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (d) To document compliance with Condition D.1.12, the Permittee shall maintain records once per day of the pressure drop during normal operation. The Permittee shall include in its daily record when the pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.1.15 Reporting Requirements

- (a) A quarterly summary of the information to document compliance with Conditions D.1.2(a)(1), D.1.2(b)(1), D.1.2(c)(1), D.1.3(a), D.1.4(b), and D.1.5(a) shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

## SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (b) One (1) liquid asphalt storage tank, identified as Tank 1, approved for construction in 2008, with a maximum capacity of 35,000 gallons.
- (c) One (1) No. 4 fuel oil storage tank, identified as Tank 2, approved for construction in 2008, with maximum capacity of 20,000 gallons.
- (d) One (1) No. 2 fuel oil storage tank, identified as Tank 3, approved for construction in 2008, with a maximum capacity of 650 gallons.

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

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

#### D.2.1 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]

Pursuant to 326 IAC 8-9-6 (Volatile Organic Liquid Storage Vessels), the Permittee shall record and submit to IDEM, OAQ a report containing the following information for Tank 1, Tank 2, and Tank 3 when the source is located in Clark or Floyd Counties:

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

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

**SECTION E.1 40 CFR 60, Subpart I — Standards of Performance for Hot Mix Asphalt Facilities**

**Emissions Unit Description:**

- (a) One (1) drum mix asphalt plant, approved for construction in 2008, and consisting of the following emission units:
- (1) One (1) drum dryer/mixer, identified as ES1, with a maximum rated throughput capacity of 400 tons per hour, equipped with one (1) 100 million British thermal units per hour (MMBtu/hr) No. 4 fuel oil-fired burner, using Baghouse CD-1 as control, and exhausting to stack EP-1.

Under NSPS Subpart I, this is considered an affected hot mix asphalt facility.

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

**E.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]**

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- (a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 12-1, except as otherwise specified in 40 CFR 60, Subpart I.
- (b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

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

and any applicable LAPCA (as described in Condition B.6 of this permit)

**E.2 New Source Performance Standards (NSPS) for (Hot Mix Asphalt Facilities) [40 CFR Part 60, Subpart I] [326 IAC 12]**

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

- (a) 40 CFR 60.90  
(b) 40 CFR 60.91  
(c) 40 CFR 60.92  
(d) 40 CFR 60.93

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

**and any applicable Local Air Pollution Control Agency  
(as described in Condition B.6 of this permit)**

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

Source Name: MAC Construction & Excavating, Inc.  
Initial Source Address: 7172 South Tower Road, Leavenworth, Indiana 47137  
Mailing Address: 1903 Unruh Court, P.O. Box 6787, New Albany, Indiana 47151  
FESOP Permit No.: F025-26394-05315

**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**

**and any applicable Local Air Pollution Control Agency  
(as described in Condition B.6 of this permit)**

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

Source Name: MAC Construction & Excavating, Inc.  
Initial Source Address: 7172 South Tower Road, Leavenworth, Indiana 47137  
Mailing Address: 1903 Unruh Court, P.O. Box 6787, New Albany, Indiana 47151  
FESOP Permit No.: F025-26394-05315

**This form consists of 2 pages**

**Page 1 of 2**

- |  |
|--|
| <p><input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <ul style="list-style-type: none"><li>• 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</li><li>• 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</li></ul> |
|--|

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**

**and any applicable Local Air Pollution Control Agency  
(as described in Condition B.4 of this permit)**

**FESOP Quarterly Report**

Source Name: MAC Construction & Excavating, Inc.  
Initial Source Address: 7172 South Tower Road, Leavenworth, Indiana 47137  
Mailing Address: 1903 Unruh Court, P.O. Box 6787, New Albany, Indiana 47151  
FESOP Permit No.: F025-26394-05315  
Facility: One (1) drum dryer/mixer  
Parameter: Hot mix asphalt production  
Limit: The asphalt production rate shall not exceed 450,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

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

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

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

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

Attach a signed certification to complete this report.

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

**and any applicable Local Air Pollution Control Agency  
(as described in Condition B.4 of this permit)**

### FESOP Quarterly Report

Source Name: MAC Construction & Excavating, Inc.  
Initial Source Address: 7172 South Tower Road, Leavenworth, Indiana 47137  
Mailing Address: 1903 Unruh Court, P.O. Box 6787, New Albany, Indiana 47151  
FESOP Permit No.: F025-26394-05315  
Facility: 100 MMBtu/hr aggregate dryer/mixer burner  
Parameter: No. 4 Fuel Oil Usage  
Limit: The total usage of No. 4 fuel oil shall not exceed 2,350,933 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

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

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

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

Attach a signed certification to complete this report.

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

**and any applicable Local Air Pollution Control Agency  
(as described in Condition B.4 of this permit)**

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

Source Name: MAC Construction & Excavating, Inc.  
Initial Source Address: 7172 South Tower Road, Leavenworth, Indiana 47137  
Mailing Address: 1903 Unruh Court, P.O. Box 6787, New Albany, Indiana 47151  
FESOP Permit No.: F025-26394-05315

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>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
<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>	
<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.

Mail to: Permit Administration & Development Section  
Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

MAC Construction & Excavating, Inc.  
7172 South Tower Road  
Leavenworth, Indiana 47137

and  
any applicable Local Agency  
(as described in Section B -  
Local Air Pollution Control Agencies)

Affidavit of Construction

I, \_\_\_\_\_, being duly sworn upon my oath, depose and say:  
(Name of the Authorized Representative)

1. I live in \_\_\_\_\_ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of \_\_\_\_\_ for \_\_\_\_\_.  
(Title) (Company Name)
3. By virtue of my position with \_\_\_\_\_, I have personal  
(Company Name)  
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of \_\_\_\_\_.  
(Company Name)
4. I hereby certify that MAC Construction & Excavating, Inc. 7172 South Tower Road, Leavenworth, Indiana 47137, completed construction of the portable drum mix hot asphalt plant on \_\_\_\_\_ in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on April 8, 2008 and as permitted pursuant to New Source Construction Permit and Federally Enforceable State Operating Permit No. F025-26394-05315, Plant ID No. 025-05315 issued on \_\_\_\_\_.
5. **Permittee, please cross out the following statement if it does not apply:** Additional (operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the construction permit.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature \_\_\_\_\_

Date \_\_\_\_\_

STATE OF INDIANA)  
)SS

COUNTY OF \_\_\_\_\_ )

Subscribed and sworn to me, a notary public in and for \_\_\_\_\_ County and State of Indiana  
on this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_. My Commission expires: \_\_\_\_\_.

Signature \_\_\_\_\_

Name \_\_\_\_\_ (typed or printed)

## **Attachment A**

### **MAC Construction & Excavating, Inc.**

#### **ASPHALT PLANT SITE FUGITIVE DUST CONTROL PLAN**

- Fugitive particulate matter emissions from unpaved roads and parking lots will be controlled by treating with water on an as needed basis.
- Fugitive particulate matter emissions from aggregate stockpiles will be controlled by maintaining minimum size and number of stock piles of aggregate and treating around the stockpile area with water on an as needed basis.
- Fugitive particulate matter emissions from outdoor conveying of aggregates will be controlled by applying water at the feed and the intermediate points as needed.
- Fugitive particulate matter emissions from the transfer of aggregates shall be controlled by minimizing the vehicular distance between transfer points and applying water on transfer points on an as needed basis.
- Fugitive particulate matter emissions from transportation of aggregate by truck, front end loader, etc. will be controlled by maintaining a 10 MPH speed limit in the yard.
- Fugitive particulate matter emissions from the loading and unloading of aggregate will be controlled by reducing the free fall distance to a minimum and spraying the aggregate with water on an as needed basis.

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

**Attachment B**

**Title 40: Protection of Environment**

**Subpart I—Standards of Performance for Hot Mix Asphalt Facilities**

**§ 60.90 Applicability and designation of affected facility.**

- (a) The affected facility to which the provisions of this subpart apply is each hot mix asphalt facility. For the purpose of this subpart, a hot mix asphalt facility is comprised only of any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler, systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems.
- (b) Any facility under paragraph (a) of this section that commences construction or modification after June 11, 1973, is subject to the requirements of this subpart.

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

**§ 60.91 Definitions.**

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

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

[51 FR 12325, Apr. 10, 1986]

**§ 60.92 Standard for particulate matter.**

- (a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall discharge or cause the discharge into the atmosphere from any affected facility any gases which:
  - (1) Contain particulate matter in excess of 90 mg/dscm (0.04 gr/dscf).
  - (2) Exhibit 20 percent opacity, or greater.

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

**§ 60.93 Test methods and procedures.**

- (a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).
- (b) The owner or operator shall determine compliance with the particulate matter standards in §60.92 as follows:
  - (1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf).

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

[54 FR 6667, Feb. 14, 1989]

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

Addendum to the Technical Support Document (ATSD) for a  
New Source Construction and Federally Enforceable State Operating  
Permit (FESOP)

**Source Background and Description**

<b>Source Name:</b>	<b>MAC Construction &amp; Excavating, Inc.</b>
<b>Source Location:</b>	<b>Portable</b>
<b>Initial Location:</b>	<b>7172 South Tower Road, Leavenworth, IN 47137</b>
<b>County:</b>	<b>Crawford</b>
<b>SIC Code:</b>	<b>2951</b>
<b>Operation Permit No.:</b>	<b>F 025-26394-05315</b>
<b>Permit Reviewer:</b>	<b>Brian Williams</b>

On August 27, 2008, the Office of Air Quality (OAQ) had a notice published in The Clarion News, Corydon, Indiana, stating that MAC Construction & Excavating, Inc. had applied for a New Source Construction and FESOP to construct and operate a new portable drum hot mix asphalt plant. The notice also stated that the OAQ proposed to issue a New Source Construction and FESOP for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

**Comments and Responses**

No comments were received during the public notice period.

**Additional Changes**

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

- (a) Since this source is portable, the Cover Page and the Affidavit of Construction form have been revised to include references to any applicable local agencies.
- (b) Section A has been revised to include the following language, "and any applicable Local Air Pollution Control Agency (LAPCA) (as described in Condition B.6 of this permit)."
- (c) In addition, Conditions B.3(a), B.19(d), C.8(d), C.9(a) and (c), C.11, C.17(a), and C.19(b) and (c) have been revised to include the following language, "and any applicable LAPCA (as described in Condition B.6 of this permit)."
- (d) Finally, Conditions B.3(c) and C.18(a) have been revised to include the following language, "or any applicable LAPCA (as described in Condition B.6 of this permit)."

Cover Page:

New Source Construction and Federally Enforceable State Operating Permit  
OFFICE OF AIR QUALITY  
**AND ANY APPLICABLE LOCAL AGENCY (AS  
DESCRIBED IN SECTION B - LOCAL AIR POLLUTION CONTROL AGENCIES)**

...  
SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) **and any applicable Local Air Pollution Control Agency (LAPCA) (as described in Condition B.6 of this permit)**. 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.

...  
B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4][326 IAC 2-8]

---

This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 and [326 IAC 2-8] when prior to the start of operation, the following requirements are met:

(a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM **and any applicable LAPCA (as described in Condition B.6 of this permit)** if constructed as proposed.

...  
(c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) **or any applicable LAPCA (as described in Condition B.6 of this permit)** to this permit.

...  
B.19 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]

---

...  
(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 and any applicable LAPCA (as described in Condition B.6 of this permit) at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ **and any applicable LAPCA (as described in Condition B.6 of this permit)** may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

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

---

...  
(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

**and any applicable LAPCA (as described in Condition B.6 of this permit)**

...  
C.9 Performance Testing [326 IAC 3-6]

---

(a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. 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

**and any applicable LAPCA (as described in Condition B.6 of this permit)**

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

---

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

**and any applicable LAPCA (as described in Condition B.6 of this permit)**

...  
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, **and any applicable LAPCA (as described in Condition B.6 of this permit)**, 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.

...  
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 **or any applicable LAPCA (as described in Condition B.6 of this permit)** makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner **or any applicable LAPCA (as described in Condition B.6 of this permit)** within a reasonable time.

...

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

---

...

- (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

**and any applicable LAPCA (as described in Condition B.6 of this permit)**

- (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 **and any applicable LAPCA (as described in Condition B.6 of this permit)** on or before the date it is due.

...

Affidavit of Construction

Mail to: Permit Administration & Development Section  
Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251

**and**

**any applicable local agency  
(as described in Section B -  
Local Air Pollution Control Agencies)**

...

<b>IDEM Contact</b>
---------------------

- (a) Questions regarding this proposed New Source Construction and FESOP can be directed to Brian Williams at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) (234-5375) or toll free at 1-800-451-6027 extension (4-5375).
- (b) A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.idem.in.gov](http://www.idem.in.gov)

## Indiana Department of Environmental Management Office of Air Quality

### Technical Support Document (TSD) for a New Source Construction and Federally Enforceable State Operating Permit (FESOP)

#### Source Description and Location

<b>Source Name:</b>	<b>MAC Construction &amp; Excavating, Inc.</b>
<b>Source Location:</b>	<b>Portable</b>
<b>Initial Location:</b>	<b>7172 South Tower Road, Leavenworth, IN 47137</b>
<b>County:</b>	<b>Crawford</b>
<b>SIC Code:</b>	<b>2951</b>
<b>Operation Permit No.:</b>	<b>F 025-26394-05315</b>
<b>Permit Reviewer:</b>	<b>Brian Williams</b>

On April 8, 2008, the Office of Air Quality (OAQ) has received an application from MAC Construction & Excavating, Inc. related to the construction and operation of a new portable drum hot mix asphalt plant.

#### Source Definition

This source is located completely within the confines of another permitted source, Mulzer Crushed Stone, Tower Quarry, SSOA 025-23217-00014.

In order to consider both plants as one single source, all three of the following criteria must be met:

- (1) The plants must have common ownership/control;
- (2) The plants must have the same SIC code; and
- (3) The plants must be located on contiguous or adjacent properties.

These plants are located on adjacent properties, but do not have the same SIC codes and are not under common control, therefore they will be considered separate sources, as defined by 326 IAC 2-7-1(22).

#### Existing Approvals

There have been no previous approvals issued to this source.

#### County Attainment Status

The source is located in Crawford County.

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. <sup>1</sup>
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Not designated.
<sup>1</sup> Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM <sub>2.5</sub> .	

- (a) **Ozone Standards**  
Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Crawford County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM2.5**  
Crawford County has been classified as attainment for PM2.5. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, and the effective date of these rules was July 15<sup>th</sup>, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM2.5 emissions until 326 IAC 2-2 is revised.
- (c) **Other Criteria Pollutants**  
Crawford County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

#### **Fugitive Emissions**

This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, however, there is an applicable New Source Performance Standard that was in effect on August 7, 1980, therefore fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

#### **Background and Description of New Source Construction**

The Office of Air Quality (OAQ) has reviewed an application, submitted by MAC Construction & Excavation, Inc. on April 8, 2008, relating to the construction of a new portable drum hot mix asphalt plant.

The following is a list of the new emission unit(s) and pollution control device(s):

- (a) One (1) drum mix asphalt plant, approved for construction in 2008, and consisting of the following emission units:
  - (1) One (1) drum dryer/mixer, identified as ES1, with a maximum rated throughput capacity of 400 tons per hour, equipped with one (1) 100 million British thermal units per hour (MMBtu/hr) No. 4 fuel oil-fired burner, using Baghouse CD-1 as control, and exhausting to stack EP-1.  
  
Under NSPS Subpart I, this is considered an affected hot mix asphalt facility.
- (b) One (1) liquid asphalt storage tank, identified as Tank 1, approved for construction in 2008, with a maximum capacity of 35,000 gallons.
- (c) One (1) No. 4 fuel oil storage tank, identified as Tank 2, approved for construction in 2008, with maximum capacity of 20,000 gallons.
- (d) One (1) No. 2 fuel oil storage tank, identified as Tank 3, approved for construction in 2008, with a maximum capacity of 650 gallons.

- (e) One (1) No. 2 fuel oil-fired Power Flume Hot Oil Heater, identified as ES2, approved for construction in 2008, with a maximum capacity of 3.08 MMBtu, and exhausting to stack EP-2.
- (f) Insignificant activities consisting of the following:
  - (1) One (1) aggregate cold feed system consisting of:
    - (A) five (5) aggregate feed bins;
    - (B) five (5) feeder conveyors;
    - (C) one (1) gathering conveyor;
    - (D) one (1) cold aggregate screen system; and
    - (E) one (1) cold aggregate scale conveyor.
  - (2) One (1) Reclaimed Asphalt Pavement (RAP) feed system consisting of:
    - (A) two (2) RAP feed bins and two (2) feeder conveyors;
    - (B) one (1) lump breaker system with one (1) collector conveyor; and
    - (C) one (1) RAP scale conveyor.
  - (3) One (1) hot mix drag slat conveyor with a maximum capacity to transfer 400 tons per hour of hot mix asphalt.
  - (4) One (1) hot mix storage system consisting of one (1) hot mix surge bin, with a maximum storage capacity of 100 tons.
  - (5) Aggregate and RAP storage piles.
  - (6) VOC and HAP storage containers storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
  - (7) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
  - (8) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.
  - (9) Unpaved roads and parking lots with public access.

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

<b>Emission Calculations</b>
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See Appendix A of this TSD for detailed emission calculations.

Fugitive emissions from the one (1) 35,000 gallon Liquid Asphalt storage tank, the one (1) 20,000 gallon No. 4 Fuel Oil storage tank, and the one (1) 650 gallon No. 2 Fuel Oil storage tank were calculated using the EPA Tanks 4.0.9d program and were determined to be negligible.

**Permit Level Determination – FESOP**

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

Pollutant	Potential To Emit (tons/year)
PM	49,260.84
PM10 <sup>(1)</sup>	11,449.92
PM2.5	2,654.90
SO <sub>2</sub>	241.8
NO <sub>x</sub>	148.97
VOC	86.11
CO	233.41

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

HAPs	Potential To Emit (tons/year)
Formaldehyde <sup>(1)</sup>	5.59
<b>TOTAL HAPs<sup>(2)</sup></b>	<b>18.82</b>

(1) Single worst case HAP

(2) See Appendix A of TSD for more details regarding the potential to emit HAPs.

(a) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of PM10, SO<sub>2</sub>, NO<sub>x</sub>, and CO is greater than one hundred (100) tons per year, each. The PTE of all other regulated criteria pollutants are less than one hundred (100) tons per year. The source would have been subject to the provisions of 326 IAC 2-7. However, the source will be issued a New Source Construction Permit (326 IAC 2-5.1-3) and a Federally Enforceable State Operating Permit (FESOP) (326 IAC 2-8), because the source will limit emissions to less than the Title V major source threshold levels.

(b) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

(c) Portable Source

(1) Initial Location

This is a portable source and its initial location is 7172 South Tower Road, Leavenworth, IN 47137.

(2) PSD and Emission Offset Requirements

This portable source is allowed to operate in all areas of Indiana except Lake County, Porter County, and in areas that are designated as extreme, severe, or serious non-attainment for any National Ambient Air Quality Standard. This determination is based on the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration), 326 IAC 2-3 (Emission Offset), 326 IAC 2-6 (Emission Reporting), 326 IAC 5-1 (Opacity Limitations), and 326 IAC 6.8-11 (Lake County: Particulate Matter Contingency Measures).

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

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

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of FESOP (tons/year)								
	PM	PM10	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Total HAPs	Worst Single HAP
Dryer/Mixer	200.5	82.51	$\frac{90.65^2}{240.65^3}$	88.16	54.8	7.2	29.25	2.40	0.7 formaldehyde
Fuel Oil Heater	0.19	0.32	0.32	6.84	1.93	0.03	0.48	0.01	negl.
Asphalt Load-Out, Silo Filling, On-Site Yard	0.25	0.25	0.25	0	0	3.85	0.65	0.06	0.02 formaldehyde
Hot Oil System	0	0	0	0	0	0.003	0.12	0.003	negl.
Material Storage Piles	0.62	0.22	0.22	0	0	0	0	0	0
Material Processing and Handling	0.81	0.38	0.06	0	0	0	0	0	0
Material Crushing, Screening, and Conveying	7.14	2.61	2.61	0	0	0	0	0	0
Unpaved Roads	35.44	9.03	0.9	0	0	0	0	0	0
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl.	0	negl.	negl.
<b>Total PTE of Entire Source</b>	244.96	95.32	$\frac{95.00^2}{245.00^3}$	95.00	57.17	11.09	30.5	2.47	0.72
Title V Major Source Thresholds	NA	100	-	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250 <sup>3</sup>	250	250	250	250	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	100	100 <sup>2</sup>	100	100	100 <sup>1</sup>	100	NA	NA

negl. = negligible

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

<sup>1</sup> Threshold is for basic nonattainment. This source is not allowed to relocate in any areas designated as extreme, severe, or serious non-attainment for any National Ambient Air Quality Standard.

<sup>2</sup>When located in Counties that have been classified nonattainment for PM2.5, the source is limited to less than 100 tons of PM2.5 per twelve (12) consecutive month period.

<sup>3</sup>When located in Counties that have been classified attainment for PM2.5., the source is limited to less than 250 tons of PM2.5 per twelve (12) consecutive month period.

(a) FESOP Status

This new source is not a Title V major stationary source, because the potential to emit criteria pollutants from the entire source will be limited to less than the Title V major source threshold levels. In addition, this new source is not a major source of HAPs, as defined in 40 CFR 63.41, because the potential to emit HAPs is less than ten (10) tons per year for a single HAP and twenty-five (25) tons per year of total HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act and is subject to the provisions of 326 IAC 2-8 (FESOP).

In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the source shall comply with the following:

- (1) Pursuant to 326 IAC 2-8-4, the NO<sub>x</sub> and SO<sub>2</sub> emissions from the dryer/mixer burner shall be limited as follows:
  - (A) The total usage of No. 4 fuel oil shall not exceed 2,350,933 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (B) The sulfur content of the No. 4 fuel oil shall not exceed 0.5 percent by weight.
  - (C) The SO<sub>2</sub> emissions from the dryer/mixer burner shall not exceed 75.0 pounds per 1,000 gallons of No. 4 fuel oil.

Compliance with these limits, combined with the potential to emit NO<sub>x</sub> and SO<sub>2</sub> from all other units at this source, shall limit the source-wide total potential to emit of NO<sub>x</sub> and SO<sub>2</sub> to less than 100 tons per twelve (12) consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permit Program), 326 IAC 2-2 (PSD), and 326 IAC 2-3 (Emission Offset) not applicable.

- (3) Pursuant to 326 IAC 2-8-4, the emissions of PM<sub>10</sub> and CO from the dryer/mixer shall be limited as follows:
  - (A) The asphalt production rate shall not exceed 450,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
  - (B) PM<sub>10</sub> emissions from the dryer/mixer shall not exceed 0.367 pounds of PM<sub>10</sub> per ton of asphalt produced.
  - (C) CO emissions from the dryer/mixer shall not exceed 0.130 pounds of CO per ton of asphalt produced.

Compliance with these limits, combined with the potential to emit PM<sub>10</sub> and CO from all other emission units at this source, shall limit the source-wide total potential to emit of PM<sub>10</sub> and CO, to less than 100 tons per 12 consecutive month period, each, and render 326 IAC 2-7 (Part 70 Permit Program), 326 IAC 2-2 (PSD), and 326 IAC 2-3 (Emission Offset) not applicable.

(b) PSD Minor Source

This new source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit PM is limited to less than 250 tons per year and the potential to emit all other attainment regulated pollutants are less than 250 tons per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

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

- (1) The asphalt production rate shall not exceed 450,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (2) PM emissions from the dryer/mixer shall not exceed 0.891 pounds of PM per ton of asphalt produced.

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

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the source shall comply with the following when located in Counties that have been classified attainment for PM2.5:

- (1) The asphalt production rate shall not exceed 450,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (2) PM2.5 emissions from the dryer/mixer shall not exceed 1.07 pounds of PM2.5 per ton of asphalt produced.

Compliance with these limits, combined with the potential to emit PM2.5 from all other emission units at this source, shall limit the source-wide total potential to emit of PM2.5 to less than 250 tons per 12 consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

(c) Emission Offset Minor Source

This new source is not a major stationary source, under Emission Offset (326 IAC 2-3), because the potential to emit all nonattainment regulated pollutants are less than 100 tons per year. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

This new source is not a major stationary source, under 326 IAC 2-1.1-5 (Nonattainment New Source Review), because the potential to emit particulate matter with a diameter less than ten 2.5 micrometers (PM2.5), is limited less than 100 tons per year. Therefore, pursuant to 326 IAC 2-1.1-5, the Nonattainment New Source Review requirements do not apply.

In order to render the requirements of 326 IAC 2-1.1-5 (Nonattainment New Source Review) not applicable, the source shall comply with the following when located in Counties that have been classified nonattainment for PM2.5:

- (1) The asphalt production rate shall not exceed 450,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (2) PM2.5 emissions from the dryer/mixer shall not exceed 0.403 pounds of PM2.5 per ton of asphalt produced.
- (3) The source shall not relocate from a County that has been classified attainment for PM2.5 to a County that has been classified nonattainment for PM2.5, if the asphalt production rate while located in a PM2.5 attainment classified County has exceeded 178,598 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance with these limits, combined with the potential to emit PM2.5 from all other emission

units at this source, shall limit the source-wide total potential to emit of PM<sub>2.5</sub> to less than 100 tons per 12 consecutive month period and shall render 326 IAC 2-1.1-5 (Nonattainment New Source Review) not applicable.

### Federal Rule Applicability Determination

#### New Source Performance Standards (NSPS)

- (a) This source is subject to the New Source Performance Standards for Hot Mix Asphalt Facilities, 40 CFR 60, Subpart I, because it is a hot mix asphalt plant that commenced construction after June 11, 1973.

The units subject to this rule include the following:

- (1) Dryers
- (2) Systems for screening, handling, storing, and weighing hot aggregate
- (3) Systems for loading, transferring, and storing mineral filler
- (4) Systems for mixing hot mix asphalt
- (5) The loading, transfer, and storage systems associated with emission control systems

Applicable portions of the NSPS are the following:

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

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the source except as otherwise specified in 40 CFR 60, Subpart I.

- (b) The requirements of the New Source Performance Standard for Asphalt Processing and Asphalt Roofing Manufacture, 40 CFR 60, Subpart UU (326 IAC 12), are not included in the permit, since pursuant to 40 CFR 60.471, the hot mix asphalt plant is not an asphalt processing plant because it does not blow asphalt or an asphalt roofing plant because it does not produce asphalt roofing products.
- (c) The requirements of the New Source Performance Standard for Nonmetallic Mineral Processing Plants (40 CFR 60, Subpart OOO) (326 IAC 12), are not included in the permit, because this source is subject to the requirements of 40 CFR 60, Subpart I.
- (d) The requirements of the New Source Performance Standard (NSPS) for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (40 CFR Part 60, Subpart Kb) (326 IAC 12) are not included in the permit for the liquid asphalt storage tank, No. 4 fuel oil storage tank, and No. 2 fuel oil storage tank. The construction of the storage tanks will commence after July 23, 1984 and the liquid asphalt storage tank and No. 4 fuel oil storage tank each have a capacity greater than 75 cubic meters (19,813 gallons) and less than 151 cubic meters (39,890 gallons). However, these tanks will not store liquids with a maximum true vapor pressure greater than 15.0 kPa. In addition, the No. 2 fuel oil storage tank is exempt from the requirements of this rule because it has a maximum capacity less than 75 cubic meters (19,813 gallons).
- (e) There are no other New Source Performance Standards (NSPS)(40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (f) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63, Subpart LLLLLL (326 IAC 20-(number)), are not included in the permit, since the hot mix asphalt plant is not a major source of HAPs, is not located at and is not part of a major source of HAP emissions, and does not engage in the preparation of asphalt flux or asphalt roofing materials.
- (g) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

- (h) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

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

- (a) 326 IAC 2-8-4 (FESOP)  
FESOP applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))  
PSD applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.
- (c) 326 IAC 2-3 (Emission Offset) and (for PM2.5 nonattainment counties) 326 IAC 2-1.1-5 (Nonattainment New Source Review)  
Emission Offset and Nonattainment New Source Review applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.
- (d) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))  
This source is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the new units is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.
- (e) 326 IAC 2-6 (Emission Reporting)  
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (f) 326 IAC 5-1 (Opacity Limitations)  
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
  - (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4, when the source is located in any County except Lake or the areas specified in (2)(a) through (g).
  - (2) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute

averaging period as determined in 326 IAC 5-1-4, when the source is located in the following areas listed in 326 IAC 5-1-1(c):

- (a) Clark County (Jefferson Township - Cities of Jeffersonville, Clarksville, Oak Park);
  - (b) Dearborn County (Lawrenceburg Township - Cities of Lawrenceburg and Greendale);
  - (c) Dubois County (Bainbridge Township - the City of Jasper);
  - (d) Marion County (except the area of Washington Township east of Fall Creek and the area of Franklin Township south of Thompson Road and east of Five Points Road);
  - (e) St. Joseph County (the area north of Kern Road and east of Pine Road);
  - (f) Vanderburgh County (the area included in the City of Evansville and Pigeon Township); and
  - (g) Vigo County (Indiana State University campus, 0.5km radius around UTM Easting 464,519.00, Northing 4,369,208.00, Zone 16.
- (3) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period, when the source is located in any County.
- (g) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)  
The source is subject to the requirements of 326 IAC 6-4, because the Asphalt Load-Out and On-Site Yard, Material Storage Piles, Material Processing and Handling, Material Crushing, Screening, and Conveying, and Unpaved Roads each have the potential to emit fugitive particulate emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
- (h) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)  
The source is subject to the requirements of 326 IAC 6-4, because the Asphalt Load-Out and On-Site Yard, Material Storage Piles, Material Processing and Handling, Material Crushing, Screening, and Conveying, and Unpaved Roads have combined potential fugitive particulate emissions greater than 25 tons per year. Pursuant to 326 IAC 6-5, fugitive particulate matter emissions shall be controlled according to the Fugitive Dust Control Plan, submitted on January 24, 2008, which is included as Attachment A to the permit.

#### Asphalt Plant

- (a) 326 IAC 6-2 (Emission Limitations for Sources of Indirect Heating)  
The dryer/mixer is not subject to the requirements of 326 IAC 6-2 because it is not a source of indirect heating.
- (b) 326 IAC 6.5-1-2(a) (Nonattainment Area PM Limitations)  
This new portable asphalt plant has the potential to emit PM before controls greater than 100 tons per year and may be relocated to Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties. Pursuant to 6.5-1-2(a), PM emissions from the dryer/mixer shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)) when the source is located in

Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.

In order to comply with the requirements of 326 IAC 6.5-1-2, particulate from the dryer/mixer shall be controlled by the baghouse at all times that the dryer/mixer is in operation.

- (c) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)  
Particulate emissions from this asphalt plant are subject to a more stringent particulate requirement in 40 CFR 60, Subpart I, and the particulate emissions are limited by 326 IAC 6.5 when operating in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties. Therefore, the asphalt plant is exempt from the requirements of 326 IAC 6-3 when operating in any county.
- (d) 326 IAC 7-1.1-2 (Sulfur Dioxide (SO<sub>2</sub>) Emission Limitations)  
Pursuant to 326 IAC 7-1.1-1, the dryer/mixer is subject to the requirements of 326 IAC 7-1.1-2, because it has potential sulfur dioxide emissions greater than twenty-five (25) tons per year. Pursuant to 7-1.1-2, sulfur dioxide emissions from the dryer/mixer shall not exceed five-tenths (0.5) pound per MMBtu for distillate oil combustion.
- (e) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)  
The unlimited VOC potential emissions from the dryer/mixer are greater than twenty-five (25) tons per year. However, the source shall limit the VOC potential emissions from the dryer/mixer to less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 do not apply.

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

- (1) The asphalt production rate shall not exceed 450,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (2) VOC emissions from the dryer/mixer shall not exceed 0.032 pounds of VOC per ton of asphalt produced.

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

- (f) 326 IAC 8-5-2 (Asphalt Paving Rules)  
This source does not have the capacity to produce cutback or emulsified asphalt. Therefore, the requirements of 326 IAC 8-5-2 are not included in the permit for this source.
- (g) 326 IAC 10-1 (Nitrogen Oxides Control in Clark and Floyd Counties)  
This new portable asphalt plant may relocate to Clark or Floyd Counties. However, potential to emit NOx from this source is less than 100 tons per year. Therefore, the dryer/mixer is not subject to the requirements of 326 IAC 10-1.
- (h) 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Categories)  
The asphalt plant is not subject to the requirements of 326 IAC 10-3 because it does not consist of a portland cement kiln, one of the types of boilers listed in 326 IAC 10-3-1(a)(2), or a blast furnace gas fired boiler with a heat input greater than two hundred fifty million (250,000,000) British thermal units per hour.
- (i) 326 IAC 10-4 (Nitrogen Oxides Budget Trading Program)  
The asphalt plant is not subject to the requirements of 326 IAC 10-4 because it does not consist of electricity generating units or large affected units as defined in 326 IAC 10-4-2.
- (j) 326 IAC 10-5 (Nitrogen Oxide Reduction Program for Internal Combustion Engines (ICE))

The asphalt plant is not subject to the requirements of 326 IAC 10-5 because it does not consist of a large NOx SIP Call engine.

- (k) 326 IAC 12 (New Source Performance Standards)  
See Federal Rule Applicability Section of this TSD.
- (l) 326 IAC 20 (Hazardous Air Pollutants)  
See Federal Rule Applicability Section of this TSD.

Storage Tanks

- (a) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)  
Each new storage tank is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions from each new storage tank is less than twenty-five (25) tons per year.
- (b) 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)  
The storage tanks are not subject to the requirements of 326 IAC 8-4-3 because they are not petroleum liquid storage vessels with capacities greater than thirty-nine thousand (39,000) gallons.
- (c) 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)  
This portable source can relocate to Clark or Floyd Counties and has storage tanks with a capacity of less than thirty-nine thousand (39,000) gallons each. Pursuant to 326 IAC 8-9-1(b), the storage tanks are subject to reporting and recordkeeping provisions of section 6(a) and 6(b) of this rule and are exempt from all other provisions of this rule when the source is located in Clark or Floyd Counties.

Pursuant to 326 IAC 8-9-6(b), the Permittee shall maintain a record and submit to IDEM, OAQ a report containing the following information for the fuel storage tanks when the source is located in Clark or Floyd Counties.

- (1) the tank identification number;
- (2) the tank dimensions; and
- (3) the tank capacity.

Pursuant to 326 IAC 8-9-6(a), these records shall be maintained for the life of the tank.

**Compliance Determination, Monitoring and Testing Requirements**

- (a) The compliance determination and monitoring requirements applicable to this source are as follows:

<b>Emission Unit/Control</b>	<b>Operating Parameters</b>	<b>Frequency</b>
Dryer/Mixer Baghouse CD-1	Visible Emissions Notations	Once per day
Dryer/Mixer Baghouse CD-1	Pressure Drop	Once per day

- (b) The testing requirements applicable to this source are as follows:

<b>Testing Requirements</b>				
<b>Emission Unit</b>	<b>Control Device</b>	<b>Pollutant</b>	<b>Timeframe for Testing</b>	<b>Frequency of Testing</b>
Dryer/Mixer	Baghouse CD-1	PM, PM2.5, and PM10	See below for additional information	Once every five (5) years

The Permittee shall perform PM, PM 2.5, and PM10 testing for dryer/mixer (Baghouse CD-1) within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008. This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM10 and PM2.5 includes filterable and condensable PM10 and PM2.5.

#### **Conclusion and Recommendation**

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on April 8, 2008.

The construction and operation of this source shall be subject to the conditions of the attached proposed New Source Construction and FESOP No. 025-26394-05315. The staff recommends to the Commissioner that this New Source Construction and FESOP be approved.

#### **IDEM Contact**

- (a) Questions regarding this proposed permit can be directed to Brian Williams at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) (234-5375) or toll free at 1-800-451-6027 extension (4-5375).
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.idem.in.gov](http://www.idem.in.gov)

**Appendix A: Emissions Calculations**  
Emission Summary

Company Name: **MAC Construction & Excavating, Inc.**  
Source Address: **7172 South Tower Road, Leavenworth, Indiana 47137**  
Permit Number: **025-26394-05315**  
Reviewer: **Brian Williams**

**Asphalt Plant Maximum Capacity**

Maximum Hourly Asphalt Production =	400	ton/hr
Maximum Annual Asphalt Production =	3,504,000	ton/yr
Maximum Fuel Input Rate =	100.00	MMBtu/hr (Dryer burner)
Maximum Fuel Input Rate =	3.08	MMBtu/hr (Heater)
Equivalent No. 2 Fuel Oil Usage =	192,720	gal/yr, and 0.50 % sulfur (Heater)
Equivalent No. 4 Fuel Oil Usage =	6,257,143	gal/yr, and 0.50 % sulfur (Dryer burner)

**Unlimited/Uncontrolled Emissions**

Process Description	Unlimited/Uncontrolled Potential to Emit (tons/year)									
	Criteria Pollutants							Hazardous Air Pollutants		
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Case HAP	
<b>Ducted Emissions</b>										
Fuel Combustion (worst case)	21.90	25.97	25.97	234.64	147.04	0.63	15.64	0.45	0.26 (hydrogen chloride)	
Dryer/Mixer	49056.00	11388.00	2628.00	19.27	96.36	56.06	227.76	18.31	5.43 (formaldehyde)	
Fuel Oil Heater	0.19	0.32	0.32	6.84	1.93	0.03	0.48	0.01	5.88E-03 (formaldehyde)	
<b>Worst Case Emissions</b>	<b>49056.19</b>	<b>11388.32</b>	<b>2628.32</b>	<b>241.48</b>	<b>148.97</b>	<b>56.10</b>	<b>228.24</b>	<b>18.31</b>	<b>5.44 (formaldehyde)</b>	
<b>Fugitive Emissions</b>										
Asphalt Load-Out, Silo Filling, On-Site Yard	1.94	1.94	1.94	0	0	30.01	5.05	0.50	0.16 (formaldehyde)	
Hot Oil System	0	0	0	0	0	2.6E-03	0.12	2.6E-03	1.6E-03 (naphthalene)	
Material Storage Piles	0.62	0.22	0.22	0	0	0	0	0	0	
Material Processing and Handling	8.28	3.92	0.59	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	55.59	20.31	20.31	0	0	0	0	0	0	
Unpaved Roads (worst case)	138.22	35.23	3.52	0	0	0	0	0	0	
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl.	0	negl.	negl.	
<b>Total Fugitive Emissions</b>	<b>204.65</b>	<b>61.61</b>	<b>26.58</b>	<b>0</b>	<b>0</b>	<b>30.01</b>	<b>5.16</b>	<b>0.50</b>	<b>0.16 (formaldehyde)</b>	
<b>Totals Unlimited/Uncontrolled PTE</b>	<b>49260.84</b>	<b>11449.92</b>	<b>2654.90</b>	<b>241.48</b>	<b>148.97</b>	<b>86.11</b>	<b>233.41</b>	<b>18.82</b>	<b>5.59 (formaldehyde)</b>	

negl = negligible

**Appendix A: Emissions Calculations**  
**Dryer/Mixer Fuel Combustion with Maximum Capacity > 100 MMBtu/hr**

**Company Name:** MAC Construction & Excavating, Inc.  
**Source Address:** 7172 South Tower Road, Leavenworth, Indiana 47137  
**Permit Number:** 025-26394-05315  
**Reviewer:** Brian Williams

The following calculations determine the Unlimited/Uncontrolled emissions created from the combustion of fuel oil, in the dryer/mixer at the source.

**Maximum Capacity**

Maximum Annual Asphalt Production =	3,504,000	ton/yr
Maximum Fuel Input Rate =	100.0	MMBtu/hr
Equivalent No. 4 Fuel Oil Usage =	6,257,143	gal/yr, and <input type="text" value="0.50"/> % sulfur

**Unlimited/Uncontrolled Emissions**

Criteria Pollutant	Emission Factor (units)	Unlimited/Uncontrolled Potential to Emit (tons/yr)
	No. 4 Fuel Oil* (lb/kgal)	No. 4 Fuel Oil (tons/yr)
PM	7.0	21.90
PM10 <sup>1</sup>	8.3	25.97
SO2	75.0	234.64
NOx	47.0	147.04
VOC	0.20	0.63
CO	5.0	15.64
<b>Hazardous Air Pollutant</b>		
Antimony	5.25E-03	1.6E-02
Arsenic	1.32E-03	4.1E-03
Beryllium	2.78E-05	8.7E-05
Cadmium	3.98E-04	1.2E-03
Chromium	8.45E-04	2.6E-03
Cobalt	6.02E-03	1.9E-02
Lead	1.51E-03	4.7E-03
Manganese	3.00E-03	9.4E-03
Mercury	1.13E-04	3.5E-04
Nickel	8.45E-02	2.6E-01
Selenium	6.83E-04	2.1E-03
1,1,1-Trichloroethane	2.36E-04	7.4E-04
Benzene	2.14E-04	6.7E-04
Ethylbenzene	6.36E-05	2.0E-04
Formaldehyde	3.30E-02	1.0E-01
Toluene	6.20E-03	1.9E-02
Total PAH Haps	1.13E-03	3.5E-03
Xylene	1.09E-04	3.4E-04
<b>Total HAPs</b>		<b>0.45</b>

**Methodology**

Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] \* [8,760 hrs/yr] \* [1 gal/0.140 MMBtu]

All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] \* [Emission Factor (lb/kgal)] \* [kgal/1000 gal] \* [ton/2000 lbs]

Sources of AP-42 Emission Factors for fuel combustion:

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

\*Since there are no specific AP-42 HAP emission factors for combustion of No. 4 fuel oil, it was assumed that HAP emissions from combustion of No. 4 fuel oil were equal to combustion of residual or No. 6 fuel oil.

<sup>1</sup>Assumes PM10 = PM2.5

**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
- PAH = Polyaromatic Hydrocarbon

**Appendix A: Emissions Calculations  
Dryer/Mixer**

**Volatile Organic Compounds and Hazardous Air Pollutants**

**Company Name:** MAC Construction & Excavating, Inc.  
**Source Address:** 7172 South Tower Road, Leavenworth, Indiana 47137  
**Permit Number:** 025-26394-05315  
**Reviewer:** Brian Williams

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

Maximum Annual Asphalt Production = **3,504,000** ton/yr

Criteria Pollutant	Uncontrolled Emission Factors (lb/ton)	Unlimited/Uncontrolled Potential to Emit (tons/yr)
	Drum-Mix Plant (dryer/mixer)	Drum-Mix Plant (dryer/mixer)
	No. 4 Fuel Oil*	<b>No. 4 Fuel Oil</b>
PM	28	<b>49056</b>
PM10	6.5	<b>11388</b>
PM2.5	1.5	<b>2628</b>
SO2	0.011	<b>19.3</b>
NOx	0.055	<b>96.4</b>
VOC	0.032	<b>56.1</b>
CO	0.13	<b>227.8</b>
<b>Hazardous Air Pollutant</b>		
Antimony	1.80E-07	<b>3.15E-04</b>
Arsenic	5.60E-07	<b>9.81E-04</b>
Beryllium	negl	<b>negl</b>
Cadmium	4.10E-07	<b>7.18E-04</b>
Chromium	5.50E-06	<b>9.64E-03</b>
Cobalt	2.60E-08	<b>4.56E-05</b>
Lead	1.50E-05	<b>2.63E-02</b>
Manganese	7.70E-06	<b>1.35E-02</b>
Mercury	2.60E-06	<b>4.56E-03</b>
Nickel	6.30E-05	<b>0.11</b>
Selenium	3.50E-07	<b>6.13E-04</b>
2,2,4 Trimethylpentane	4.00E-05	<b>0.07</b>
Acetaldehyde	1.30E-03	<b>2.28</b>
Acrolein	2.60E-05	<b>4.56E-02</b>
Benzene	3.90E-04	<b>0.68</b>
Ethylbenzene	2.40E-04	<b>0.42</b>
Formaldehyde	3.10E-03	<b>5.43</b>
Hexane	9.20E-04	<b>1.61</b>
Methyl chloroform	4.80E-05	<b>0.08</b>
MEK	2.00E-05	<b>0.04</b>
Propionaldehyde	1.30E-04	<b>0.23</b>
Quinone	1.60E-04	<b>0.28</b>
Toluene	2.90E-03	<b>5.08</b>
Total PAH Haps	8.80E-04	<b>1.54</b>
Xylene	2.00E-04	<b>0.35</b>

**Total HAPs** 18.31  
**Worst Single HAP** 5.43 (formaldehyde)

**Methodology**

Unlimited/Uncontrolled Potential to Emit (tons/yr) = (Maximum Annual Asphalt Production (tons/yr)) \* (Emission Factor (lb/ton)) \* (ton/2000 lbs)

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-3, 11.1-4, 11.1-7, 11.1-8, 11.1-10, and 11.1-12

\* Emission Factors for No. 4 Fuel Oil not available in AP-42 Chapter 11.1. Therefore, assumes No. 4 Fuel Oil emission factors equal to No. 2 Fuel Oil emission factors.

**Abbreviations**

VOC - Volatile Organic Compounds  
HCl = Hydrogen Chloride  
SO2 = Sulfur Dioxide

HAP = Hazardous Air Pollutant  
PAH = Polyaromatic Hydrocarbon

**Appendix A: Emissions Calculations**  
**Fuel Oil Heater Fuel Combustion with Maximum Capacity < 100 MMBtu/hr**

**Company Name:** MAC Construction & Excavating, Inc.  
**Source Address:** 7172 South Tower Road, Leavenworth, Indiana 47137  
**Permit Number:** 025-26394-05315  
**Reviewer:** Brian Williams

Maximum Fuel Input Rate =	3.08	MMBtu/hr
Equivalent No. 2 Fuel Oil Usage =	192,720	gal/yr, and <span style="margin-left: 20px;">0.50</span> % sulfur

Criteria Pollutant	Emission Factor (units)	Unlimited/Uncontrolled Potential to Emit (tons/yr)
	No. 2 Fuel Oil (lb/kgal)	No. 2 Fuel Oil (tons/yr)
PM	2.0	0.19
PM10 <sup>1</sup>	3.3	0.32
SO2	71.0	6.84
NOx	20.0	1.93
VOC	0.34	0.03
CO	5.0	0.48
<b>Hazardous Air Pollutant</b>		
Arsenic	5.6E-04	5.40E-05
Beryllium	4.2E-04	4.05E-05
Cadmium	4.2E-04	4.05E-05
Chromium	4.2E-04	4.05E-05
Lead	1.3E-03	1.21E-04
Manganese	8.4E-04	8.09E-05
Mercury	4.2E-04	4.05E-05
Nickel	4.2E-04	4.05E-05
Selenium	2.1E-03	2.02E-04
Formaldehyde	6.10E-02	5.88E-03
Polycyclic Organic Matter	3.30E-03	3.18E-04
<b>Total HAPs</b>		<b>0.01</b>

**Methodology**

Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] \* [8,760 hrs/yr] \* [1 gal/0.140 MMBtu]

All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] \* [Emission Factor (lb/kgal)] \* [kgal/1000 gal] \* [ton/2000 lbs]

<sup>1</sup>Assumes PM10 = PM2.5

Sources of AP-42 Emission Factors for fuel combustion:

No. 2 Fuel Oil: AP-42 Chapter 1.3 (dated 9/98), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11

**Abbreviations**

- PM = Particulate Matter
- PM10 = Particulate Matter (<10 um)
- SO2 = Sulfur Dioxide
- NOx = Nitrous Oxides
- VOC = Volatile Organic Compounds
- CO = Carbon Monoxide
- HAP = Hazardous Air Pollutant

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

**Company Name:** MAC Construction & Excavating, Inc.  
**Source Address:** 7172 South Tower Road, Leavenworth, Indiana 47137  
**Permit Number:** 025-26394-05315  
**Reviewer:** Brian Williams

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

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.5	
Maximum Annual Asphalt Production =	3,504,000	tons/yr

Pollutant	Emission Factor (lb/ton asphalt)			Unlimited/Uncontrolled Potential to Emit (tons/yr)			
	Load-Out	Silo Filling	On-Site Yard	Load-Out	Silo Filling	On-Site Yard	Total
Total PM	5.2E-04	5.9E-04	NA	0.91	1.03	NA	1.94
Organic PM	3.4E-04	2.5E-04	NA	0.60	0.445	NA	1.04
TOC	0.004	0.012	0.001	7.29	21.35	1.927	30.6
CO	0.001	0.001	3.5E-04	2.36	2.067	0.617	5.05

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

<b>PM/HAPs</b>	<b>0.042</b>	<b>0.051</b>	<b>0</b>	<b>0.093</b>
<b>VOC/HAPs</b>	<b>0.108</b>	<b>0.272</b>	<b>0.028</b>	<b>0.408</b>
<b>non-VOC/HAPs</b>	<b>5.6E-04</b>	<b>5.8E-05</b>	<b>1.5E-04</b>	<b>7.7E-04</b>
<b>non-VOC/non-HAPs</b>	<b>0.53</b>	<b>0.30</b>	<b>0.14</b>	<b>0.97</b>

<b>Total VOCs</b>	<b>6.85</b>	<b>21.35</b>	<b>1.8</b>	<b>30.0</b>
<b>Total HAPs</b>	<b>0.15</b>	<b>0.32</b>	<b>0.029</b>	<b>0.50</b>
		<b>Worst Single HAP</b>		<b>0.155</b>
				<b>(formaldehyde)</b>

**Methodology**

Unlimited/Uncontrolled Potential to Emit (tons/yr) = (Maximum Annual Asphalt Production (tons/yr)) \* (Emission Factor (lb/ton)) \* (ton/2000 lbs)

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-14, 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<sup>-(0.0251)(T+460)-20.43</sup>

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

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

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

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

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

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

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

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

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

**Abbreviations**

TOC = Total Organic Compounds

CO = Carbon Monoxide

PM = Particulate Matter

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

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

Company Name: MAC Construction & Excavating, Inc.  
 Source Address: 7172 South Tower Road, Leavenworth, Indiana 47137  
 Permit Number: 025-26394-05315  
 Reviewer: Brian Williams

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

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Unlimited/Uncontrolled Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of Total Organic PM)	Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)	Load-out	Silo Filling	Onsite Yard	Total
<b>PAH HAPs</b>										
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	0.47%	1.6E-03	2.1E-03	NA	3.6E-03
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	1.7E-04	6.2E-05	NA	2.3E-04
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	4.2E-04	5.8E-04	NA	1.0E-03
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	1.1E-04	2.5E-04	NA	3.6E-04
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	4.5E-05	0	NA	4.5E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	1.3E-05	0	NA	1.3E-05
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	1.1E-05	0	NA	1.1E-05
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	1.4E-05	0	NA	1.4E-05
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	4.7E-05	4.2E-05	NA	8.9E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	6.2E-04	9.3E-04	NA	1.5E-03
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	2.2E-06	0	NA	2.2E-06
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	3.0E-04	6.7E-04	NA	9.7E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	4.6E-03	4.5E-03	NA	9.1E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	2.8E-06	0	NA	2.8E-06
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	1.4E-02	2.3E-02	NA	0.038
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	7.5E-03	8.1E-03	NA	1.6E-02
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	1.3E-04	1.3E-04	NA	2.6E-04
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	4.8E-03	8.0E-03	NA	1.3E-02
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	9.0E-04	2.0E-03	NA	2.9E-03
<b>Total PAH HAPs</b>							<b>0.035</b>	<b>0.051</b>	<b>NA</b>	<b>0.086</b>
<b>Other semi-volatile HAPs</b>										
Phenol		PM/HAP	---	Organic PM	1.18%	0	7.0E-03	0	0	7.0E-03

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

**Methodology**

Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Speciation Profile (%)] \* [Organic PM (tons/yr)]  
 Speciation Profiles from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-15 and 11.1-16

**Abbreviations**

PM = Particulate Matter  
 HAP = Hazardous Air Pollutant  
 POM = Polycyclic Organic Matter

Organic Volatile-Based Compounds (Table 11.1-16)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Unlimited/Uncontrolled Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of TOC)	Silo Filling and Asphalt Storage Tank (% by weight of TOC)	Load-out	Silo Filling	Onsite Yard	Total
<b>VOC</b>		VOC	---	TOC	94%	100%	<b>6.85</b>	<b>21.35</b>	<b>1.81</b>	<b>30.01</b>
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	4.7E-01	5.6E-02	1.3E-01	0.654
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	3.4E-03	1.2E-02	8.9E-04	0.016
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	5.2E-02	2.3E-01	1.4E-02	0.300
<b>Total non-VOC/non-HAPS</b>					<b>7.30%</b>	<b>1.40%</b>	<b>0.532</b>	<b>0.299</b>	<b>0.141</b>	<b>0.97</b>
Volatile organic HAPS										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	3.8E-03	6.8E-03	1.0E-03	1.2E-02
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	7.0E-04	1.0E-03	1.9E-04	1.9E-03
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	3.6E-03	8.3E-03	9.4E-04	1.3E-02
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	9.5E-04	3.4E-03	2.5E-04	4.6E-03
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	1.5E-05	8.5E-04	4.0E-06	8.7E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	1.1E-03	4.9E-03	2.9E-04	6.3E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	8.0E-03	0	2.1E-03	1.0E-02
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	2.0E-02	8.1E-03	5.4E-03	0.034
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	6.4E-03	1.5E-01	1.7E-03	0.155
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	1.1E-02	2.1E-02	2.9E-03	0.035
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	1.3E-04	6.6E-05	3.5E-05	2.3E-04
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	5.8E-05	0	5.8E-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%	5.3E-04	1.2E-03	1.4E-04	1.8E-03
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	5.6E-04	0	1.5E-04	7.1E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	1.5E-02	1.3E-02	4.0E-03	0.033
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	9.5E-05	0	2.5E-05	1.2E-04
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	3.0E-02	4.3E-02	7.9E-03	0.080
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	5.8E-03	1.2E-02	1.5E-03	2.0E-02
<b>Total volatile organic HAPS</b>					<b>1.50%</b>	<b>1.30%</b>	<b>0.109</b>	<b>0.278</b>	<b>0.029</b>	<b>0.416</b>

**Methodology**

Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Speciation Profile (%)] \* [TOC (tons/yr)]

Speciation Profiles from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-15 and 11.1-16

**Abbreviations**

TOC = Total Organic Compounds

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

MTBE = Methyl tert butyl ether

**Appendix A: Emissions Calculations  
Hot Oil System**

**Company Name:** MAC Construction & Excavating, Inc.  
**Source Address:** 7172 South Tower Road, Leavenworth, Indiana 47137  
**Permit Number:** 025-26394-05315  
**Reviewer:** Brian Williams

The following calculations determine the unlimited/uncontrolled fugitive emissions from heating of the oil used in the the hot oil heating system.

Maximum Fuel Input Rate To Hot Oil Heater = 3.08 MMBtu/hr  
 Equivalent No. 2 Fuel Oil Usage = 192,720 gal/yr

Criteria Pollutant	Emission Factors	Unlimited/Uncontrolled Potential to Emit (tons/yr)
	No. 2 Fuel Oil (lb/gal)	No. 2 Fuel Oil
VOC	2.65E-05	0.003
CO	0.0012	0.116
<b>Hazardous Air Pollutant</b>		
Formaldehyde:	3.50E-06	3.37E-04
Acenaphthene	5.30E-07	5.11E-05
Acenaphthylene	2.00E-07	1.93E-05
Anthracene	1.80E-07	1.73E-05
Benzo(b)fluoranthene	1.00E-07	9.64E-06
Fluoranthene	4.40E-08	4.24E-06
Fluorene	3.20E-08	3.08E-06
Naphthalene	1.70E-05	1.64E-03
Phenanthrene	4.90E-06	4.72E-04
Pyrene	3.20E-08	3.08E-06

**Total HAPs** 2.56E-03  
**Worst Single HAP** 1.64E-03 (Naphthalene)

**Methodology**

Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] \* [8,760 hrs/yr] \* [1 MMCF/1,000 MMBtu]

Equivalent No. 2 Fuel Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] \* [8,760 hrs/yr] \* [1 gal/0.140 MMBtu]

Natural Gas: Potential to Emit (tons/yr) = (Natural Gas Usage (MMCF/yr))\*(Emission Factor (lb/CF))\*(1000000 CF/MMCF)\*(ton/2000 lbs)

No. 2 Fuel Oil: Potential to Emit (tons/yr) = (No. 2 Fuel Oil Usage (gals/yr))\*(Emission Factor (lb/gal))\*(ton/2000 lbs)

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Table 11.1-13

\*Note: Emissions associated with fuel combustion in the hot oil heater are included in the fuel combustion calculations. Emissions (withdraw and standing losses) associated with all volatile organic liquid (VOL) storage vessels are not included in the table above.

**Abbreviations**

CO = Carbon Monoxide

VOC = Volatile Organic Compound

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

**Company Name:** MAC Construction & Excavating, Inc.  
**Source Address:** 7172 South Tower Road, Leavenworth, Indiana 47137  
**Permit Number:** 025-26394-05315  
**Reviewer:** Brian Williams

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.

$E_f = 1.7 * (s / 1.5) * (365 - p) / 235 * (f / 15)$ <p>where <math>E_f</math> = emission factor (lb/acre/day)  <math>s</math> = silt content (wt %)  <math>p</math> = 118 days of rain greater than or equal to 0.01 inches  <math>f</math> = 15% of wind greater than or equal to 12 mph</p>
--

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10 (tons/yr)
Limestone	7.1	8.46	0.30	0.463	0.162
RAP	7.1	8.46	0.10	0.154	0.054
<b>Totals</b>				<b>0.62</b>	<b>0.22</b>

**Methodology**

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

PTE of PM10 (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 with an annual asphalt production of 450,000 tons/yr

**Abbreviations**

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

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

**Company Name:** MAC Construction & Excavating, Inc.  
**Source Address:** 7172 South Tower Road, Leavenworth, Indiana 47137  
**Permit Number:** 025-26394-05315  
**Reviewer:** Brian Williams

**Batch or Continuous Drop Operations (AP-42 Section 13.2.4)**

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

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

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

k (PM) =	0.74	= particle size multiplier (0.74 assumed for aerodynamic diameter <=100 um)
k (PM10) =	0.35	= particle size multiplier (0.35 assumed for aerodynamic diameter <=10 um)
k (PM2.5) =	0.053	= particle size multiplier (0.053 assumed for aerodynamic diameter <=2.5 um)
U =	10.2	= worst case annual mean wind speed (Source: NOAA, 2006*)
M =	5.0	= material % moisture content of aggregate (Source: AP-42 Section 11.1.1.1)
$E_f$ (PM) =	1.66E-03	lb PM/ton of material handled
$E_f$ (PM10) =	7.85E-04	lb PM10/ton of material handled
$E_f$ (PM2.5) =	1.19E-04	lb PM2.5/ton of material handled

Maximum Annual Asphalt Production =	3,504,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	3,328,800	tons/yr

Type of Activity	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM10 (tons/yr)	Unlimited/Uncontrolled PTE of PM2.5 (tons/yr)
Truck unloading of materials into storage piles	2.76	1.31	0.20
Front-end loader dumping of materials into feeder bins	2.76	1.31	0.20
Conveyor dropping material into dryer/mixer or batch tower	2.76	1.31	0.20
<b>Total (tons/yr)</b>	<b>8.28</b>	<b>3.92</b>	<b>0.59</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, 2006

**Material Screening and Conveying (AP-42 Section 11.19.2)**

To estimate potential fugitive dust emissions from raw material crushing, screening, and conveying, AP-42 emission factors for Crushed Stone Processing Operations, Section 11.19.2 (dated 8/04) are utilized.

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM10 (lbs/ton)*	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM10 (tons/yr) <sup>1</sup>
Crushing	0.0054	0.0024	8.99	3.99
Screening	0.025	0.0087	41.61	14.48
Conveying	0.003	0.0011	4.99	1.83
<b>Limited Potential to Emit (tons/yr) =</b>			<b>55.59</b>	<b>20.31</b>

**Methodology**

Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] \* [1 - Percent Asphalt Cement/Binder (weight %)]  
 Limited Potential to Emit (tons/yr) = [Maximum Material Handling Throughput (tons/yr)] \* [Emission Factor (lb/ton)] \* [ton/2000 lbs]  
 Raw materials may include stone/gravel, slag, and recycled asphalt pavement (RAP)  
 Emission Factors from AP-42 Chapter 11.19.2 (dated 8/04), Table 11.19.2-2

\*Uncontrolled emissions factors for PM/PM10 represent tertiary crushing of stone with moisture content ranging from 0.21 to 1.3 percent by weight (Table 11.19.2-2). The bulk moisture content of aggregate in the storage piles at a hot mix asphalt production plant typically stabilizes between 3 to 5 percent by weight (Source: AP-42 Section 11.1.1.1).

<sup>1</sup>Assumes PM10 = PM2.5

**Abbreviations**

PM = Particulate Matter  
 PM10 = Particulate Matter (<10 um)  
 PM2.5 = Particulate matter (< 2.5 um)  
 PTE = Potential to Emit

**Appendix A: Emissions Calculations**  
**Fugitive Dust Emissions - Unpaved Roads**

**Company Name:** MAC Construction & Excavating, Inc.  
**Source Address:** 7172 South Tower Road, Leavenworth, Indiana 47137  
**Permit Number:** 025-26394-05315  
**Reviewer:** Brian Williams

**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	3,504,000	tons/yr
Percent Asphalt Cement/Binder (weight %)	5.0%	
Maximum Material Handling Throughput	3,328,800	tons/yr
Maximum Asphalt Cement/Binder Throughput	175,200	tons/yr
Maximum No. 4 Fuel Oil Usage	6,257,143	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)	20.0	14.0	34	2.2E+05	7.4E+06	686	0.130	28470.0
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	20.0	0	20.0	2.2E+05	4.4E+06	686	0.130	28470.0
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	55.0	25.0	80.0	7.3E+02	5.8E+04	686	0.130	94.8
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	55.0	0	55.0	7.3E+02	4.0E+04	686	0.130	94.8
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	45.0	35.0	80.0	6.0E+02	4.8E+04	686	0.130	78.5
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	45.0	0	45.0	6.0E+02	2.7E+04	686	0.130	78.5
Aggregate/RAP Loader Full	Front-end loader (3 CY)	25.0	7.0	32.0	7.3E+04	2.3E+06	686	0.130	9484.5
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	25.0	0	25.0	7.3E+04	1.8E+06	686	0.130	9484.5
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	13.7	20.0	33.7	1.7E+05	5.6E+06	686	0.130	21624.6
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	13.7	0	13.7	1.7E+05	2.3E+06	686	0.130	21624.6
<b>Total</b>					<b>919548.5</b>	<b>24050338.7</b>			<b>119504.8</b>

Average Vehicle Weight Per Trip	26.2	tons/trip
Average Miles Per Trip	0.130	miles/trip

Unmitigated Emission Factor,  $E_f = k \cdot [(s/12)^a] \cdot [(W/3)^b]$  (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
W =	26.2	26.2	26.2	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor,  $E_{ext} = E \cdot [(365 - P)/365]$

Mitigated Emission Factor,  $E_{ext} = E \cdot [(365 - P)/365]$

where P = 118 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, $E_f$	6.84	1.74	0.17	lb/mile
Mitigated Emission Factor, $E_{ext}$	4.63	1.18	0.12	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	97.32	24.80	2.48	65.86	16.78	1.68	32.93	8.39	0.84
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	97.32	24.80	2.48	65.86	16.78	1.68	32.93	8.39	0.84
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.324	0.083	0.01	0.219	0.056	0.01	0.110	0.028	0.00
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.324	0.083	0.01	0.219	0.056	0.01	0.110	0.028	0.00
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.268	0.068	0.01	0.182	0.046	0.00	0.091	0.023	0.00
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.268	0.068	0.01	0.182	0.046	0.00	0.091	0.023	0.00
Aggregate/RAP Loader Full	Front-end loader (3 CY)	32.42	8.26	0.83	21.94	5.59	0.56	10.97	2.80	0.28
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	32.42	8.26	0.83	21.94	5.59	0.56	10.97	2.80	0.28
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	73.92	18.84	1.88	50.02	12.75	1.27	25.01	6.37	0.64
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	73.92	18.84	1.88	50.02	12.75	1.27	25.01	6.37	0.64
<b>Totals</b>		<b>408.49</b>	<b>104.11</b>	<b>10.41</b>	<b>276.43</b>	<b>70.45</b>	<b>7.05</b>	<b>138.22</b>	<b>35.23</b>	<b>3.52</b>

**Methodology**

Maximum Material Handling Throughput = [Annual Asphalt Production Limitation (tons/yr)] \* [1 - Percent Asphalt Cement/Binder (weight %)]  
 Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] \* [Percent Asphalt Cement/Binder (weight %)]  
 Maximum Weight of Vehicle and Load (tons/trip) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip)]  
 Maximum trips per year (trip/yr) = [Throughput (tons/yr)] / [Maximum Weight of Load (tons/trip)]  
 Total Weight driven per year (ton/yr) = [Maximum Weight of Vehicle and Load (tons/trip)] \* [Maximum trips per year (trip/yr)]  
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]  
 Maximum one-way miles (miles/yr) = [Maximum trips per year (trip/yr)] \* [Maximum one-way distance (mi/trip)]  
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]  
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]  
 Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) \* (Unmitigated Emission Factor (lb/mile)) \* (ton/2000 lbs)  
 Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) \* (Mitigated Emission Factor (lb/mile)) \* (ton/2000 lbs)  
 Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) \* (1 - Dust Control Efficiency)

**Abbreviations**

PM = Particulate Matter  
 PM10 = Particulate Matter (<10 um)  
 PM2.5 = Particulate matter (< 2.5 um)  
 PTE = Potential to Emit

**Appendix A: Emissions Calculations**  
**Limited Emission Summary**

Company Name: **MAC Construction & Excavating, Inc.**  
 Source Address: **7172 South Tower Road, Leavenworth, Indiana 47137**  
 Permit Number: **025-26394-05315**  
 Reviewer: **Brian Williams**

**Asphalt Plant Limitations**

Annual Asphalt Production Limitation =	450,000	ton/yr
No. 4 Fuel Oil Limitation =	2,350,933	gal/yr, and 0.50 % sulfur (Dryer burner)
PM Dryer/Mixer Limitation =	0.891	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation =	0.367	lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation =	0.403	lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation =	1.07	lb/ton of asphalt production
VOC Dryer/Mixer Limitation =	0.032	lb/ton of asphalt production
CO Dryer/Mixer Limitation =	0.130	lb/ton of asphalt production

(When located in any County classified nonattainment for PM2.5)  
 (When located in any County classified attainment for PM2.5)

**Limited/Controlled Emissions**

Process Description	Limited/Controlled Potential Emissions									
	(tons/year)									
	Criteria Pollutants								Hazardous Air Pollutants	
	PM	PM10	PM2.5*	PM2.5**	SO2	NOx	VOC	CO	Total HAPs	Worst Case HAP
<b>Ducted Emissions</b>										
Fuel Combustion (worst case)	8.23	9.76	9.76	9.76	88.16	55.25	0.24	5.88	0.17	0.10 (hydrogen chloride)
Dryer/Mixer	200.50	82.51	90.65	240.65	13.05	12.38	7.20	29.25	2.40	0.70 (formaldehyde)
Fuel Oil Heater	0.19	0.32	0.32	0.32	6.84	1.93	0.03	0.48	0.01	5.88E-03 (formaldehyde)
<b>Worst Case Emissions</b>	<b>200.69</b>	<b>82.83</b>	<b>90.97</b>	<b>240.97</b>	<b>95.00</b>	<b>57.17</b>	<b>7.23</b>	<b>29.73</b>	<b>2.41</b>	<b>0.70</b> (formaldehyde)
<b>Fugitive Emissions</b>										
Asphalt Load-Out, Silo Filling, On-Site Yard	0.25	0.25	0.25	0.25	0	0	3.85	0.65	0.06	0.02 (formaldehyde)
Hot Oil System	0	0	0	0	0	0	0.003	0.116	0.003	0.002 (naphthalene)
Material Storage Piles	0.62	0.22	0.22	0.22	0	0	0	0	0	0
Material Processing and Handling	0.81	0.38	0.06	0.06	0	0	0	0	0	0
Material Crushing, Screening, and Conveying	7.14	2.61	2.61	2.61	0	0	0	0	0	0
Unpaved Roads	35.44	9.03	0.90	0.90	0	0	0	0	0	0
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	0	negl.	0	negl.	negl.
<b>Total Fugitive Emissions</b>	<b>44.26</b>	<b>12.49</b>	<b>4.03</b>	<b>4.03</b>	<b>0</b>	<b>0</b>	<b>3.86</b>	<b>0.76</b>	<b>0.07</b>	<b>0.02</b> (formaldehyde)
<b>Totals Limited/Controlled Emissions</b>	<b>244.96</b>	<b>95.32</b>	<b>95.00</b>	<b>245.00</b>	<b>95.00</b>	<b>57.17</b>	<b>11.09</b>	<b>30.50</b>	<b>2.47</b>	<b>0.72</b> (formaldehyde)

negl = negligible

\*Limited Potential to Emit when located in any County classified nonattainment for PM2.5.

\*\*Limited Potential to Emit when located in any County classified attainment for PM2.5.

**Appendix A: Emissions Calculations  
Limited Emissions**

**Dryer/Mixer Fuel Combustion with Maximum Capacity > 100 MMBtu/hr**

**Company Name:** MAC Construction & Excavating, Inc.  
**Source Address:** 7172 South Tower Road, Leavenworth, Indiana 47137  
**Permit Number:** 025-26394-05315  
**Reviewer:** Brian Williams

The following calculations determine the limited emissions created from the combustion of fuel oil in the dryer/mixer at the source.

**Production and Fuel Limitations**

Annual Asphalt Production Limitation =	450,000	ton/yr
No. 4 Fuel Oil Limitation =	2,350,933	gal/yr, and <input type="text" value="0.50"/> % sulfur

**Limited Emissions**

Criteria Pollutant	Emission Factor (units)	Limited Potential to Emit (tons/yr)
	No. 4 Fuel Oil* (lb/kgal)	No. 4 Fuel Oil (tons/yr)
PM	7	8.23
PM10 <sup>1</sup>	8.3	9.76
SO2	75.0	88.16
NOx	47.0	55.25
VOC	0.20	0.24
CO	5.0	5.88
<b>Hazardous Air Pollutant</b>		
Antimony	5.25E-03	6.17E-03
Arsenic	1.32E-03	1.55E-03
Beryllium	2.78E-05	3.27E-05
Cadmium	3.98E-04	4.68E-04
Chromium	8.45E-04	9.93E-04
Cobalt	6.02E-03	7.08E-03
Lead	1.51E-03	1.77E-03
Manganese	3.00E-03	3.53E-03
Mercury	1.13E-04	1.33E-04
Nickel	8.45E-02	9.93E-02
Selenium	6.83E-04	8.03E-04
1,1,1-Trichloroethane	2.36E-04	2.77E-04
Benzene	2.14E-04	2.52E-04
Ethylbenzene	6.36E-05	7.48E-05
Formaldehyde	3.30E-02	3.89E-02
Toluene	6.20E-03	7.29E-03
Total PAH Haps	1.13E-03	1.33E-03
Xylene	1.09E-04	1.28E-04
<b>Total HAPs</b>		<b>0.17</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:

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

\*Since there are no specific AP-42 HAP emission factors for combustion of No. 4 fuel oil, it was assumed that HAP emissions from combustion of No. 4 fuel oil were equal to combustion of residual or No. 6 fuel oil.

<sup>1</sup>Assumes PM10 = PM2.5

**Abbreviations**

PM = Particulate Matter	CO = Carbon Monoxide
PM10 = Particulate Matter (<10 um)	HAP = Hazardous Air Pollutant
SO2 = Sulfur Dioxide	HCl = Hydrogen Chloride
NOx = Nitrous Oxides	PAH = Polyaromatic Hydrocarbon
VOC = Volatile Organic Compounds	

**Appendix A: Emissions Calculations**

**Limited Emissions**

**Dryer/Mixer**

**Volatile Organic Compounds and Hazardous Air Pollutants**

**Company Name:** MAC Construction & Excavating, Inc.  
**Source Address:** 7172 South Tower Road, Leavenworth, Indiana 47137  
**Permit Number:** 025-26394-05315  
**Reviewer:** Brian Williams

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

Annual Asphalt Production Limitation =	450,000	ton/yr	
PM Dryer/Mixer Limitation =	0.891	lb/ton of asphalt production	
PM10 Dryer/Mixer Limitation =	0.367	lb/ton of asphalt production	
PM2.5 Dryer/Mixer Limitation =	0.403	lb/ton of asphalt production	(When located in any County classified nonattainment for PM2.5)
PM2.5 Dryer/Mixer Limitation =	1.070	lb/ton of asphalt production	(When located in any County classified attainment for PM2.5)
VOC Dryer/Mixer Limitation =	0.032	lb/ton of asphalt production	
CO Dryer/Mixer Limitation =	0.130	lb/ton of asphalt production	

Criteria Pollutant	Emission Factor or Limitation (lb/ton)	Limited/Controlled Potential to Emit (tons/yr)
	Drum-Mix Plant (dryer/mixer, controlled by fabric filter)	Drum-Mix Plant (dryer/mixer, controlled by fabric filter)
	No. 4 Fuel Oil*	No. 4 Fuel Oil
PM	0.891	200.5
PM10	0.367	82.5
PM2.5 (nonattainment)	0.403	90.7
PM2.5 (attainment)	1.070	240.7
SO2	0.058	13.1
NOx	0.055	12.4
VOC	0.032	7.2
CO	0.13	29.3
<b>Hazardous Air Pollutant</b>		
HCl	2.10E-04	0.05
Antimony	1.80E-07	4.05E-05
Arsenic	5.60E-07	1.26E-04
Beryllium	negl	negl
Cadmium	4.10E-07	9.23E-05
Chromium	5.50E-06	1.24E-03
Cobalt	2.60E-08	5.85E-06
Lead	1.50E-05	3.38E-03
Manganese	7.70E-06	1.73E-03
Mercury	2.60E-06	5.85E-04
Nickel	6.30E-05	1.42E-02
Selenium	3.50E-07	7.88E-05
2,2,4 Trimethylpentane	4.00E-05	9.00E-03
Acetaldehyde	1.30E-03	0.29
Acrolein	2.60E-05	5.85E-03
Benzene	3.90E-04	0.09
Ethylbenzene	2.40E-04	0.05
Formaldehyde	3.10E-03	0.70
Hexane	9.20E-04	0.21
Methyl chloroform	4.80E-05	0.01
MEK	2.00E-05	0.00
Propionaldehyde	1.30E-04	0.03
Quinone	1.60E-04	0.04
Toluene	2.90E-03	0.65
Total PAH Haps	8.80E-04	0.20
Xylene	2.00E-04	0.05

**Total HAPs** 2.40  
**Worst Single HAP** 0.70 (formaldehyde)

**Methodology**

Limited/Controlled Potential to Emit (tons/yr) = (Annual Asphalt Production Limitation (tons/yr)) \* (Emission Factor (lb/ton)) \* (ton/2000 lbs)  
 Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-3, 11.1-7, 11.1-8, 11.1-10, and 11.1-12

**Abbreviations**

VOC - Volatile Organic Compounds  
 HCl = Hydrogen Chloride  
 SO2 = Sulfur Dioxide

HAP = Hazardous Air Pollutant  
 PAH = Polyaromatic Hydrocarbon

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

**Company Name:** MAC Construction & Excavating, Inc.  
**Source Address:** 7172 South Tower Road, Leavenworth, Indiana 47137  
**Permit Number:** 025-26394-05315  
**Reviewer:** Brian Williams

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

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.5	
Annual Asphalt Production Limitation =	450,000	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	0.12	0.13	NA	0.25
Organic PM	3.4E-04	2.5E-04	NA	0.08	0.057	NA	0.13
TOC	0.004	0.012	0.001	0.94	2.74	0.248	3.9
CO	0.001	0.001	3.5E-04	0.30	0.265	0.079	0.65

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

<b>PM/HAPs</b>	<b>0.005</b>	<b>0.007</b>	<b>0</b>	<b>0.012</b>
<b>VOC/HAPs</b>	<b>0.014</b>	<b>0.035</b>	<b>0.004</b>	<b>0.052</b>
<b>non-VOC/HAPs</b>	<b>7.2E-05</b>	<b>7.4E-06</b>	<b>1.9E-05</b>	<b>9.9E-05</b>
<b>non-VOC/non-HAPs</b>	<b>0.07</b>	<b>0.04</b>	<b>0.02</b>	<b>0.12</b>

<b>Total VOCs</b>	<b>0.88</b>	<b>2.74</b>	<b>0.2</b>	<b>3.9</b>
<b>Total HAPs</b>	<b>0.02</b>	<b>0.04</b>	<b>0.004</b>	<b>0.06</b>
<b>Worst Single HAP</b>				<b>0.020</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)::

$$\text{Total PM/PM}_{10} \text{ Ef} = 0.000181 + 0.00141(-V)e^{((0.0251)(T+460)-20.43)}$$

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

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

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

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

$$\text{PM/PM}_{10} \text{ Ef} = 0.000332 + 0.00105(-V)e^{((0.0251)(T+460)-20.43)}$$

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

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

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

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

Company Name: MAC Construction & Excavating, Inc.  
 Source Address: 7172 South Tower Road, Leavenworth, Indiana 47137  
 Permit Number: 025-26394-05315  
 Reviewer: Brian Williams

**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%	2.0E-04	2.7E-04	NA	4.7E-04
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	2.1E-05	8.0E-06	NA	2.9E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	5.4E-05	7.4E-05	NA	1.3E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	1.5E-05	3.2E-05	NA	4.7E-05
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	5.8E-06	0	NA	5.8E-06
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	1.7E-06	0	NA	1.7E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	1.5E-06	0	NA	1.5E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	1.8E-06	0	NA	1.8E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	6.0E-06	5.4E-06	NA	1.1E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	7.9E-05	1.2E-04	NA	2.0E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	2.8E-07	0	NA	2.8E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	3.8E-05	8.6E-05	NA	1.2E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	5.9E-04	5.8E-04	NA	1.2E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	3.6E-07	0	NA	3.6E-07
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	1.8E-03	3.0E-03	NA	0.005
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	9.6E-04	1.0E-03	NA	2.0E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	1.7E-05	1.7E-05	NA	3.4E-05
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	6.2E-04	1.0E-03	NA	1.6E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	1.2E-04	2.5E-04	NA	3.7E-04
<b>Total PAH HAPs</b>							<b>0.005</b>	<b>0.007</b>	<b>NA</b>	<b>0.011</b>
<b>Other semi-volatile HAPs</b>										
Phenol		PM/HAP	---	Organic PM	1.18%	0	9.1E-04	0	0	9.1E-04

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

**Organic Volatile-Based Compounds (Table 11.1-16)**

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Limited Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of TOC)	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>0.88</b>	<b>2.74</b>	<b>0.23</b>	<b>3.85</b>
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	6.1E-02	7.1E-03	1.6E-02	0.084
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	4.3E-04	1.5E-03	1.1E-04	0.002
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	6.6E-03	3.0E-02	1.8E-03	0.039
<b>Total non-VOC/non-HAPS</b>					<b>7.30%</b>	<b>1.40%</b>	<b>0.068</b>	<b>0.038</b>	<b>0.018</b>	<b>0.12</b>
Volatile organic HAPS										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	4.9E-04	8.8E-04	1.3E-04	1.5E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	9.0E-05	1.3E-04	2.4E-05	2.5E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	4.6E-04	1.1E-03	1.2E-04	1.6E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	1.2E-04	4.4E-04	3.2E-05	5.9E-04
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	2.0E-06	1.1E-04	5.2E-07	1.1E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	1.4E-04	6.3E-04	3.7E-05	8.1E-04
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	1.0E-03	0	2.7E-04	1.3E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	2.6E-03	1.0E-03	6.9E-04	0.004
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	8.2E-04	1.9E-02	2.2E-04	0.020
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	1.4E-03	2.7E-03	3.7E-04	0.005
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	1.7E-05	8.5E-06	4.5E-06	3.0E-05
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	7.4E-06	0	7.4E-06
MTBE	1634-04-4	VOC/HAP	---	TOC	0	0	0	0	0	0
Styrene	100-42-5	VOC/HAP	---	TOC	0.0073%	0.0054%	6.8E-05	1.5E-04	1.8E-05	2.3E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	7.2E-05	0	1.9E-05	9.1E-05
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	2.0E-03	1.7E-03	5.2E-04	0.004
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	1.2E-05	0	3.2E-06	1.5E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	3.8E-03	5.5E-03	1.0E-03	0.010
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	7.5E-04	1.6E-03	2.0E-04	2.5E-03
<b>Total volatile organic HAPS</b>					<b>1.50%</b>	<b>1.30%</b>	<b>0.014</b>	<b>0.036</b>	<b>0.004</b>	<b>0.053</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: Emissions Calculations**

**Limited Emissions  
Fugitive Dust Emissions - Material Processing and Handling**

**Company Name: MAC Construction & Excavating, Inc.**  
**Source Address: 7172 South Tower Road, Leavenworth, Indiana 47137**  
**Permit Number: 025-26394-05315**  
**Reviewer: Brian Williams**

**Batch or Continuous Drop Operations (AP-42 Section 13.2.4)**

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

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

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

$k$ (PM) =	0.74	= particle size multiplier (0.74 assumed for aerodynamic diameter $\leq 100$ $\mu$ m)
$k$ (PM10) =	0.35	= particle size multiplier (0.35 assumed for aerodynamic diameter $\leq 10$ $\mu$ m)
$k$ (PM2.5) =	0.053	= particle size multiplier (0.053 assumed for aerodynamic diameter $\leq 2.5$ $\mu$ m)
$U$ =	8.3	= worst case annual mean wind speed (Source: NOAA, 2006*)
$M$ =	5.0	= material % moisture content of aggregate (Source: AP-42 Section 11.1.1.1)
$E_f$ (PM) =	1.27E-03	lb PM/ton of material handled
$E_f$ (PM10) =	6.00E-04	lb PM10/ton of material handled
$E_f$ (PM2.5) =	9.09E-05	lb PM2.5/ton of material handled

Annual Asphalt Production Limitation =	450,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	427,500	tons/yr

Type of Activity	Limited PTE of PM (tons/yr)	Limited PTE of PM10 (tons/yr)	PTE of PM2.5 (tons/yr)
Truck unloading of materials into storage piles	0.27	0.13	0.02
Front-end loader dumping of materials into feeder bins	0.27	0.13	0.02
Conveyor dropping material into dryer/mixer or batch tower	0.27	0.13	0.02
<b>Total (tons/yr)</b>	<b>0.81</b>	<b>0.38</b>	<b>0.06</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 (Louisville, KY) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2006

**Material Screening and Conveying (AP-42 Section 19.2.2)**

To estimate potential fugitive dust emissions from raw material crushing, screening, and conveying, AP-42 emission factors for Crushed Stone Processing Operations, Section 19.2.2 (dated 8/04) are utilized.

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM10 (lbs/ton)*	Limited PTE of PM (tons/yr)	Limited PTE of PM10 (tons/yr)
Crushing	0.0054	0.0024	1.15	0.51
Screening	0.025	0.0087	5.34	1.86
Conveying	0.003	0.0011	0.64	0.24
<b>Limited Potential to Emit (tons/yr) =</b>			<b>7.14</b>	<b>2.61</b>

**Methodology**

Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] \* [1 - Percent Asphalt Cement/Binder (weight %)]

Limited Potential to Emit (tons/yr) = [Maximum Material Handling Throughput (tons/yr)] \* [Emission Factor (lb/ton)] \* [ton/2000 lbs]

Raw materials may include stone/gravel, slag, and recycled asphalt pavement (RAP)

Emission Factors from AP-42 Chapter 11.19.2 (dated 8/04), Table 11.19.2-2

\*Uncontrolled emissions factors for PM/PM10 represent tertiary crushing of stone with moisture content ranging from 0.21 to 1.3 percent by weight (Table 11.19.2-2). The bulk moisture content of aggregate in the storage piles at a hot mix asphalt production plant typically stabilizes between 3 to 5 percent by weight (Source: AP-42 Section 11.1.1.1).

**Abbreviations**

PM = Particulate Matter  
 PM10 = Particulate Matter (<10  $\mu$ m)  
 PM2.5 = Particulate Matter (<2.5  $\mu$ m)  
 PTE = Potential to Emit

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

**Company Name: MAC Construction & Excavating, Inc.**  
**Source Address: 7172 South Tower Road, Leavenworth, Indiana 47137**  
**Permit Number: 025-26394-05315**  
**Reviewer: Brian Williams**

**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	450,000	tons/yr
Percent Asphalt Cement/Binder (weight %)	5.0%	
Maximum Material Handling Throughput	427,500	tons/yr
Maximum Asphalt Cement/Binder Throughput	22,500	tons/yr
No. 4 Fuel Oil Limitation	2,350,933	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)	20.0	14.0	34	3.1E+04	1.0E+06	686	0.130	3967.3
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	20.0	0	20.0	3.1E+04	6.1E+05	686	0.130	3967.3
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	55.0	25.0	80.0	9.0E+02	7.2E+04	686	0.130	116.9
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	55.0	0	55.0	9.0E+02	5.0E+04	686	0.130	116.9
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	45.0	35.0	80.0	2.3E+02	1.8E+04	686	0.130	29.5
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	45.0	0	45.0	2.3E+02	1.0E+04	686	0.130	29.5
Aggregate/RAP Loader Full	Front-end loader (3 CY)	25.0	7.0	32.0	6.1E+04	2.0E+06	686	0.130	7934.7
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	25.0	0	25.0	6.1E+04	1.5E+06	686	0.130	7934.7
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	13.7	20.0	33.7	2.3E+04	7.6E+05	686	0.130	2923.3
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	13.7	0	13.7	2.3E+04	3.1E+05	686	0.130	2923.3
<b>Total</b>					<b>2.3E+05</b>	<b>6.3E+06</b>			<b>3.0E+04</b>

Average Vehicle Weight Per Trip	27.5	tons/trip
Average Miles Per Trip	0.130	miles/trip

Unmitigated Emission Factor,  $E_f = k \cdot [(s/12)^a] \cdot [(W/3)^b]$  (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
W =	27.5	27.5	27.5	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor,  $E_{ext} = E_f \cdot [(365 - P)/365]$

Mitigated Emission Factor,  $E_{ext} = E_f \cdot [(365 - P)/365]$   
 where P = 118 days of rain greater than or equal to 0.01 inches (NOAA, 2006)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, $E_f$	7.00	1.78	0.18	lb/mile
Mitigated Emission Factor, $E_{ext}$	4.73	1.21	0.12	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	13.88	3.54	0.35	9.39	2.39	0.24	4.70	1.20	0.12
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	13.88	3.54	0.35	9.39	2.39	0.24	4.70	1.20	0.12
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.409	0.104	0.01	0.277	0.071	0.01	0.138	0.035	0.00
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.409	0.104	0.01	0.277	0.071	0.01	0.138	0.035	0.00
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.103	0.026	0.00	0.070	0.018	0.00	0.035	0.009	0.00
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.103	0.026	0.00	0.070	0.018	0.00	0.035	0.009	0.00
Aggregate/RAP Loader Full	Front-end loader (3 CY)	27.76	7.07	0.71	18.78	4.79	0.48	9.39	2.39	0.24
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	27.76	7.07	0.71	18.78	4.79	0.48	9.39	2.39	0.24
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	10.23	2.61	0.26	6.92	1.76	0.18	3.46	0.88	0.09
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	10.23	2.61	0.26	6.92	1.76	0.18	3.46	0.88	0.09
<b>Totals</b>		<b>104.75</b>	<b>26.70</b>	<b>2.67</b>	<b>70.89</b>	<b>18.07</b>	<b>1.81</b>	<b>35.44</b>	<b>9.03</b>	<b>0.90</b>

**Methodology**

Maximum Material Handling Throughput = [Annual Asphalt Production Limitation (tons/yr)] \* [1 - Percent Asphalt Cement/Binder (weight %)]  
 Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] \* [Percent Asphalt Cement/Binder (weight %)]  
 Maximum Weight of Vehicle and Load (tons/trip) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip)]  
 Maximum trips per year (trip/yr) = [Throughput (tons/yr)] / [Maximum Weight of Load (tons/trip)]  
 Total Weight driven per year (ton/yr) = [Maximum Weight of Vehicle and Load (tons/trip)] \* [Maximum trips per year (trip/yr)]  
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]  
 Maximum one-way miles (miles/yr) = [Maximum trips per year (trip/yr)] \* [Maximum one-way distance (mi/trip)]  
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]  
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]  
 Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) \* (Unmitigated Emission Factor (lb/mile)) \* (ton/2000 lbs)  
 Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) \* (Mitigated Emission Factor (lb/mile)) \* (ton/2000 lbs)  
 Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) \* (1 - Dust Control Efficiency)

**Abbreviations**

PM = Particulate Matter  
 PM10 = Particulate Matter (<10 um)  
 PM2.5 = Particulate Matter (<2.5 um)  
 PTE = Potential to Emit