



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant
DATE: August 24, 2007
RE: Standard Asphalt / 149-23748-00083
FROM: Nisha Sizemore
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, Room 1049, 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.dot 03/23/06



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Federally Enforceable State Operating Permit Renewal OFFICE OF AIR QUALITY

**Standard Asphalt
12598 S. Main Street
Clinton, Indiana 47842**

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

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

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.: F165-23748-00083	
Issued by: <i>Original signed by</i> Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: August 24, 2007 Expiration Date: August 24, 2012

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SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary hot batch-mix asphalt production source.

Source Address:	12598 S. Main Street, Clinton, Indiana 47842
Mailing Address:	P.O. Box 249, Clinton, Indiana 47842
General Source Phone Number:	(800) 355-9401
SIC Code:	2951
County Location:	Vermillion
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

- (a) One (1) aggregate dryer/mixer, constructed in 1972, with a maximum capacity of 150 tons per hour, having a burner with a maximum capacity of 129 million British thermal units per hour, using #4 distillate fuel oil, including #2 distillate fuel oil as a backup fuel exhausting through twin cyclones and a scrubber at stack SV1.

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

This stationary source also includes the following insignificant activities:

- (a) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuel:
Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.
 - (1) Two (2) hot oil heaters each with a maximum heat input rate of 1.9 million British thermal units per hour, fired only by #2 distillate fuel oil containing less than 0.5 percent sulfur by weight.
- (b) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]
- (c) A laboratory as defined in 326 IAC 2-7-1(21) (D).
- (d) The following equipment related to manufacturing activities not resulting in the emissions of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
 - (1) Plant maintenance activities, including grinding, welding, and sanding. [326 IAC 6-3-2]
- (e) Emission units with PM and PM10 emissions less than five (5) tons per year, SO₂, NO_x, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five

(25) tons per year, lead emissions less than two-tenths (0.2) tons per year, single HAP emissions less than one (1) ton per year, and combination of HAPs emissions less than two and a half (2.5) tons per year:

- (1) One (1) material conveying and handling operation. [326 IAC 6-3-2]
- (2) One (1) 30,000 gallon storage tank ID#14 for #2 distillate fuel oil.
- (3) One (1) 12,000 gallon storage tank ID#15 for liquid asphalt emulsion AE-90.
- (4) One (1) 7,000 gallon storage tank ID#16 for liquid asphalt emulsion AE-T.
- (5) One (1) 25,000 gallon storage tank ID#17 for liquid asphalt AC-20.
- (6) One (1) 20,000 gallon storage tank ID#18 for liquid asphalt AC-20.
- (7) One (1) 25,000 gallon storage tank ID#19 for liquid asphalt AC-20.

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

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

SECTION B GENERAL CONDITIONS

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

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

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

(a) This permit, F165-23748-00083, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

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

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability [326 IAC 2-8-6]

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

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

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

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

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

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

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

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

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

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

- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

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

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

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

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

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

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

B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.12 Emergency Provisions [326 IAC 2-8-12]

-
- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-0178 (ask for Compliance Section)
Facsimile Number: 317-233-6865
 - (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue

MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

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

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

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

- (a) All terms and conditions of permits established prior to F165-23748-00083 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted
- (b) All previous registrations and permits are superseded by this permit.

B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

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

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

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

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

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

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

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

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
 - (1) That this permit contains a material mistake.

- (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
- (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.17 Permit Renewal [326 IAC 2-8-3(h)]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

- (b) A timely renewal application is one that is:
 - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

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

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

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

B.19 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) without a prior permit revision, if each of the following conditions is met:

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

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

and

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

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

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

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

- (b) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).

- (c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.20 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

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

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

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

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

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

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

B.24 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

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

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

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

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) The potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period. This limitation shall make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD) not applicable.

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

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

C.3 Opacity [326 IAC 5-1]

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

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

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

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 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using ambient air quality modeling pursuant to 326 IAC 1-7-4.

C.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

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

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

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

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

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

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

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

C.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

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

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

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

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

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

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

- (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 pressure gauge or other 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 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.15 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.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

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

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

C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

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

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.
- (f) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

Stratospheric Ozone Protection

C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with 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 (326 IAC 2-8):

- (a) One (1) aggregate dryer/mixer, constructed in 1972, with a maximum capacity of 150 tons per hour, having a burner with a maximum capacity of 129 million British thermal units per hour, using #4 distillate fuel oil, including #2 distillate fuel oil as a backup fuel exhausting through twin cyclones and a scrubber at stack SV1.

(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 Emission Limitations [326 IAC 6-3-5]

Pursuant to 326 IAC 6-3-2, the PM emission from the aggregate dryer/mixer shall not exceed 55 pounds per hour when operating at a process weight rate of 150 tons per hour.

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

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

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

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

D.1.2 Particulate Matter (PM and PM₁₀) [326 IAC 2-8-4] [326 IAC 2-2]

- (a) PM₁₀ emissions shall not exceed 0.14 pounds PM₁₀ per ton of asphalt produced from the aggregate dryer/mixer. Compliance with this limit in conjunction with PM₁₀ from other emission units, shall limit the source-wide PM₁₀ emissions to less than one hundred (100) tons per year and render 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD) not applicable.
- (b) PM emissions from the aggregate dryer/mixer shall not exceed 0.14 pounds PM per ton of asphalt produced. Compliance with this limit in conjunction with PM from other emission units shall limit the source-wide PM emissions to less than two hundred fifty (250) tons per year and render 326 IAC 2-2 (PSD) not applicable.

D.1.3 Carbon Monoxide (CO) [326 IAC 2-8-4] [326 IAC 2-2]

CO emissions from the aggregate dryer/mixer shall not exceed 0.1435 pounds CO per ton of asphalt produced. Compliance with this limit, in conjunction with CO from other emission units, shall limit the source-wide CO emissions to less than one hundred (100) tons per year and render 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD) not applicable.

D.1.4 Sulfur Dioxide (SO₂) [326 IAC 2-8-4] [326 IAC 2-2]

- (a) The total usage of #4 fuel oil for the aggregate dryer/mixer shall be limited to 2,415,200 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The emissions of SO₂ shall be limited to 70.02 lb/Kgal of #2 fuel oil and 75.0 lb/Kgal of #4 fuel oil. For the purpose of determining compliance with this limit, one gallon of #2 fuel oil shall be considered equivalent to 0.93 gallons of #4 fuel oil. Compliance with this limit in conjunction with SO₂ emissions from other emission units shall limit source-wide SO₂ emissions to less than one hundred (100) tons per year and render 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD) not applicable.

D.1.5 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-2]

Pursuant to 326 IAC 7-1.1-2, the sulfur content of the No. 2 and No. 4 distillate oils used in the dryer/mixer shall not exceed five-tenths (0.5) pounds per mmBtu.

D.1.6 Volatile Organic Compounds (VOC) [326 IAC 2-8-4] [326 IAC 2-2]

- (a) The VOC emissions from the use of liquid binders in cold mix asphalt production shall be limited to 68.3 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. This shall be achieved by limiting the total VOC of any selected binder to not exceed the stated limit in (c) for that binder during the last twelve (12) months. When more than one binder is used, the formula in (c)(6) must be applied so that the total VOC emitted does not exceed 68.3 tons per twelve (12) consecutive month period.
- (b) Liquid binders used in the production of cold mix asphalt shall be defined as follows:
 - (1) Cut back asphalt rapid cure, containing a maximum of 25.3% of the liquid binder by weight of VOC solvent and 95% by weight of VOC solvent evaporating.
 - (2) Cut back asphalt medium cure, containing a maximum of 28.6% of the liquid binder by weight of VOC solvent and 70% by weight of VOC solvent evaporating.
 - (3) Cut back asphalt slow cure, containing a maximum of 20% of the liquid binder by weight of VOC solvent and 25% by weight of VOC solvent evaporating.
 - (4) Emulsified asphalt with solvent, containing a maximum of 15% of liquid binder by weight of VOC solvent and 46.4% by weight of the VOC solvent in the liquid blend evaporating. The percent oil distillate in emulsified asphalt with solvent liquid, as determined by ASTM, must be 7% or less of the total emulsion by volume
 - (5) Other asphalt with solvent binder, containing a maximum 25.9% of the liquid binder of VOC solvent and 2.5% by weight of the VOC solvent evaporating
- (c) The liquid binder used in cold mix asphalt production shall be limited as follows:
 - (1) Cutback asphalt rapid cure liquid binder usage shall not exceed 71.9 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.
 - (2) Cutback asphalt medium cure liquid binder usage shall not exceed 97.6 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.
 - (3) Cutback asphalt slow cure liquid binder usage shall not exceed 273.2 tons of VOC solvent per twelve (12) consecutive month period, with compliance

determined at the end of each month.

- (4) Emulsified asphalt with solvent liquid binder usage shall not exceed 147.2 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (5) Other asphalt with solvent liquid binder shall not exceed 2,732 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (6) The VOC solvent allotments in subpart (c)(1) through (c)(5) of this condition shall be adjusted when more than one type of binder is used per twelve (12) month consecutive period. In order to determine the tons of VOC per year for each type of binder, use the following formula and divide the tons of VOC solvent used per year for each type of binder by the corresponding adjustment ratio listed in the table that follows.

$$\text{Equivalent Rapid Cure Binder Usage (tons/year)} = \frac{\text{VOC solvent used for each binder (tons/year)}}{\text{Adjustment Ratio}}$$

Type of binder	VOC solvent used (tons/year)	Adjustment Ratio	Equivalent Rapid Cure Binder Usage (tons/year)
cutback asphalt rapid cure		1	
cutback asphalt medium cure		1.36	
cutback asphalt slow cure		3.8	
emulsified asphalt		2.04	
other asphalt		38	

The equivalent total tons of VOC of the combined liquid binders shall be less than 71.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. Compliance with the equivalent VOC limit, will limit the cold mix asphalt VOC emissions to less than 68.3 tons per year.

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

D.1.7 Volatile Organic Compounds (VOC) [326 IAC 8-5-2]

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

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

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

A Preventive Maintenance Plan, in accordance with Section B – Preventive Maintenance Plan, of this permit, is required for the mixer/dryer burner and any control devices.

Compliance Determination Requirements

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

The Permittee shall perform PM, PM₁₀ and CO testing, in order to demonstrate compliance with Conditions D.1.1, D.1.2 and D.1.3 utilizing methods as approved by the Commissioner. This test shall be performed by July 16, 2008 and shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM₁₀ includes filterable and condensable PM₁₀. Testing shall be conducted in accordance with Section C – Performance Testing.

D.1.10 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 7-2-1]

Pursuant to 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements), compliance with Condition D.1.5 shall be demonstrated on a thirty (30) day calendar-month average.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur content of distillate fuel oil does not exceed five-tenths (0.5) pounds per million British thermal units heat input by:
 - (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 129 million British thermal units per hour burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

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

D.1.11 Particulate Control [326 IAC 2-8-6(6)]

In order to comply with condition D.1.1 and D.1.2 the twin cyclones and a scrubber for PM and PM₁₀ control shall be in operation and control emissions from the dryer/mixer at all times that the dryer/mixer is in operation.

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

D.1.12 Visible Emissions Notations

- (a) Visible emission notations of the conveyers, material transfer points, and the mixer/dryer stack exhaust shall be performed at least 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) When an abnormal emission is observed, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. Failure to take response steps in accordance with Section C – Response to Excursions and Exceedances shall be considered a deviation from this permit.

D.1.13 Cyclone Failure Detection

In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C – Response to Excursions and Exceedances shall be considered a deviation from this permit.

D.1.14 Parametric Monitoring

- (a) The Permittee shall record the water pump pressure, the fan motor amperage, and the pressure drop across the scrubber used in conjunction with the aggregate dryer/mixer at least once per day when the aggregate dryer/mixer is in operation. When the water pump pressure and the fan motor amperage are abnormal and the pressure drop across the scrubber 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.
- (b) The instrument used for determining the pressure shall comply with Section C – Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.15 Record Keeping Requirements

- (a) To document compliance with the fuel oil usage, sulfur content and SO₂ emission limit established in Conditions D.1.4, and D.1.5, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken monthly and shall be complete and sufficient to establish compliance with the fuel oil usage, sulfur content and the SO₂ emission limit established in Conditions D.1.4 and D.1.5.

- (1) Calendar dates covered in the compliance determination period;
- (2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;
- (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:
 - (4) Fuel supplier certifications;
 - (5) The name of the fuel supplier; and
 - (6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
- (b) To document compliance with Conditions D.1.6 and D.1.7, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limit established in Conditions D.1.6 and D.1.7.
 - (1) Calendar dates covered in the compliance determination period;
 - (2) Amount and type of liquid binder used in the production of cold mix asphalt each day;
 - (3) Type and VOC solvent content by weight of the liquid binder used in the production of cold mix asphalt each day;
 - (4) The equivalent weight of cutback asphalt rapid cure liquid binder used each month.
 - (5) Amount of VOC solvent used in the production of cold mix asphalt and amount of VOC emitted each month.
- (c) The Permittee shall maintain records sufficient to verify compliance with the procedures specified in Condition D.1.10.
- (d) To document compliance with Condition D.1.12, the Permittee shall maintain records of visible emission notations of the dryer/burner stack exhaust SV1 at least 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, (i.e. the process did not operate that day).
- (e) To document compliance with Condition D.1.14, the Permittee shall maintain records of the pressure drop once per day. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (i.e. the process did not operate that day).
- (f) All records shall be maintained in accordance with Section C – General Record Keeping Requirements, of this permit.

D.1.16 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.4 and D.1.6 shall be submitted to the address 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 (326 IAC 2-8): Insignificant Activities

- (d) The following equipment related to manufacturing activities not resulting in the emissions of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
 - (1) Plant maintenance activities, including grinding, welding, and sanding. [326 IAC 6-3-2]
- (e) Emission units with PM and PM10 emissions less than five (5) tons per year, SO₂, NO_x, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, lead emissions less than two-tenths (0.2) tons per year, single HAP emissions less than one (1) ton per year, and combination of HAPs emissions less than two and a half (2.5) tons per year:
 - (1) One (1) material conveying and handling operation. [326 IAC 6-3-2]

(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 Particulate Emissions Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations), the particulate emission rate from the welding, grinding and sanding operations shall be limited by the following:

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

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

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

D.2.2 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations), the particulate emission rate from the material conveying and handling operations shall each not exceed 55 pounds per hour when operating at a process weight of 300,000 pounds per hour.

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

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

$$E = 55.0 P^{0.67} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour;} \\ P = \text{process weight rate in tons per hour}$$

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

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

Source Name: Standard Asphalt
Source Address: 12598 S. Main Street, Clinton, Indiana 47842
Mailing Address: P.O. Box 249, Clinton, Indiana 47842
FESOP Permit No.: F165-23748-00083

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify) _____
- Report (specify) _____
- Notification (specify) _____
- Affidavit (specify) _____
- Other (specify) _____

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

Signature:

Printed Name:

Title/Position:

Date:

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

**100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865**

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

Source Name: Standard Asphalt
Source Address: 12598 S. Main Street, Clinton, Indiana 47842
Mailing Address: P.O. Box 249, Clinton, Indiana 47842
FESOP Permit No.: F165-23748-00083

This form consists of 2 pages

Page 1 of 2

- | |
|---|
| <input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none">• The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and• The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16 |
|---|

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

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

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

Page 2 of 2

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

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

FESOP Quarterly Report

Source Name: Standard Asphalt
Source Address: 12598 S. Main Street, Clinton, Indiana 47842
Mailing Address: P.O. Box 249, Clinton, Indiana 47842
FESOP Permit No.: F165-23748-00083
Facility: Burner for aggregate dryer
Parameter: Fuel Oil Usages
Limit: 2,415,200 gallons of distillate fuel No. 4 per twelve (12) month period, with compliance determined at the end of each month
1 gal of No. 2 fuel oil = 0.93 gal of No. 4 fuel oil

YEAR: _____

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

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

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

Attach a signed certification to complete this report.

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

Single Liquid Binder Quarterly Report

Source Name: Standard Asphalt
 Source Address: 12598 S. Main Street, Clinton, Indiana 47842
 Mailing Address: P.O. Box 249, Clinton, Indiana 47842
 FESOP Permit No.: F165-23748-00083
 Facility: Cold Mix Asphalt Production
 Parameter: VOC Usage
 Limit: Cutback asphalt rapid cure liquid binder usage shall not exceed 71.9 tons of VOC solvent per twelve (12) consecutive month period. Cutback asphalt medium cure liquid binder usage shall not exceed 97.6 tons of VOC solvent per twelve (12) consecutive month period. Cutback asphalt slow cure liquid binder usage shall not exceed 273.2 tons of VOC solvent per twelve (12) consecutive month period. Emulsified asphalt with solvent liquid binder usage shall not exceed 147.2 tons of VOC solvent per twelve (12) consecutive month period. Other asphalt with solvent liquid binder shall not exceed 2,732 tons of VOC solvent per twelve (12) consecutive month period.

The following liquid binder was the only liquid binder used over the previous 12 month period: _____ Limit applicable: _____

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 month.

Deviation/s occurred in this month.
 Deviation has been reported on _____

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

Attach a signed certification to complete this report.

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

Multiple Liquid Binder Quarterly Report

Source Name: Standard Asphalt
 Source Address: 12598 S. Main Street, Clinton, Indiana 47842
 Mailing Address: P.O. Box 249, Clinton, Indiana 47842
 FESOP Permit No.: F165-23748-00083
 Facility: Cold Mix Asphalt Production
 Parameter: VOC Usage
 Limit: 71.9 Tons per year

Month	Type of Liquid binder	VOC Usage This Month (tons)	Divisor	Equivalent Rapid Cure Binder Usage This Month (Tons) for each binder	Equivalent Rapid Cure Binder This Month (tons)	Equivalent Rapid Cure Binder Usage Previous 11 Months (tons)	This month + Previous 11 months, 12 Month Total (tons)
Month 1	Cutback asphalt rapid cure		1				
	Cutback asphalt medium cure		1.36				
	Cutback asphalt slow cure		3.8				
	Emulsified asphalt		2.04				
	other asphalt		38				
Month 2	Cutback asphalt rapid cure		1				
	Cutback asphalt medium cure		1.36				
	Cutback asphalt slow cure		3.8				
	Emulsified asphalt		2.04				
	other asphalt		38				
Month 3	Cutback asphalt rapid cure		1				
	Cutback asphalt medium cure		1.36				
	Cutback asphalt slow cure		3.8				
	Emulsified asphalt		2.04				
	other asphalt		38				

No deviation occurred in this reporting period.

Deviation/s occurred in this reporting period.

Deviation has been reported on _____

Submitted by: _____
 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**

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

Source Name: Standard Asphalt
 Source Address: 12598 S. Main Street, Clinton, Indiana 47842
 Mailing Address: P.O. Box 249, Clinton, Indiana 47842
 FESOP Permit No.: F165-23748-00083

Months: _____ **to** _____ **Year:** _____

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

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

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

Source Background and Description

Source Name:	Standard Asphalt
Source Location:	12598 S. Main Street, Clinton, IN 47842
County:	Vermillion
SIC Code:	2951
Operation Permit No.:	F165-14174-03227
Operation Permit Issuance Date:	February 20, 2002
Permit Renewal No.:	F165-23748-00083
Permit Reviewer:	Tamra L. Reece

The Office of Air Quality (OAQ) has reviewed a FESOP renewal application from Standard Asphalt relating to the operation of a stationary hot batch-mix asphalt plant.

Permitted Emission Units and Pollution Control Equipment

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

- (a) One (1) aggregate dryer/mixer, constructed in 1972, with a maximum capacity of 150 tons per hour, having a burner with a maximum capacity of 129 million British thermal units per hour, using #4 distillate fuel oil, including #2 distillate fuel oil as a backup fuel exhausting through twin cyclones and a scrubber at stack SV1.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuel: Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight.
 - (1) Two (2) hot oil heaters each with a maximum heat input rate of 1.9 million British thermal units per hour, fired only by #2 distillate fuel oil containing less than 0.5 percent sulfur by weight.
- (b) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]
- (c) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (d) The following equipment related to manufacturing activities not resulting in the emissions of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
 - (1) Plant maintenance activities, including grinding, welding, and sanding. [326 IAC 6-3-2]

- (e) Emission units with PM and PM10 emissions less than five (5) tons per year, SO₂, NO_x, and VOC emissions less than ten (10) tons per year, CO emissions less than twenty-five (25) tons per year, lead emissions less than two-tenths (0.2) tons per year, single HAP emissions less than one (1) ton per year, and combination of HAPs emissions less than two and a half (2.5) tons per year:
- (1) One (1) material conveying and handling operation. [326 IAC 6-3-2]
 - (2) One (1) 30,000 gallon storage tank ID#14 for #2 distillate fuel oil.
 - (3) One (1) 12,000 gallon storage tank ID#15 for liquid asphalt emulsion AE-90.
 - (4) One (1) 7,000 gallon storage tank ID#16 for liquid asphalt emulsion AE-T.
 - (5) One (1) 25,000 gallon storage tank ID#17 for liquid asphalt AC-20.
 - (6) One (1) 20,000 gallon storage tank ID#18 for liquid asphalt AC-20.
 - (7) One (1) 25,000 gallon storage tank ID#19 for liquid asphalt AC-20.

Existing Approvals

The source has been operating under the previous FESOP 165-14174-03227 issued on February 20, 2002, with an expiration date of February 20, 2007.

The Source Identification number was changed from 165-03227 to 165-00083 to indicate that this is a stationary source because this source has never relocated during the term of the permit, F165-14174-03227, therefore it is not a portable source pursuant to the definition of 326 IAC 2-1.1-1(15).

All conditions from previous approvals were incorporated into this FESOP except for the portable source requirements and the following:

FESOP 165-14174-03227 limits the VOC content of the solvent used in the cold mix cut back to 98.7 tons per year.

The above limit was adjusted, taking into account the following VOC emissions:

The batch mixer and dryer VOC emissions of 23.7 tons per year (only the waste oil VOC emissions of 0.3 tons per year were included in the FESOP 14174);
Load out or Silo VOC emissions of 2.7 tons per year (not included in FESOP 14174); and
Load out and Storage VOC emissions of 5.3 tons per year (not included in FESOP 14174).

Therefore, the maximum VOC usage in the liquid binder in cold mix asphalt production shall be limited to 68.3 tons per year.

Enforcement Issue

Enforcement action was pending, regarding a late FESOP/ Title 5 renewal. Enforcement action resolved upon receipt of penalty payment on June 20, 2007.

Recommendation

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

Unless otherwise stated, information used in this review was derived from the application submitted October 11, 2006 and additional information submitted on March 28, 2007 by the applicant.

Emission Calculations

See Appendix A of this document for detailed emission calculations (Pages 1 through 18).

Unrestricted Potential Emissions

This table reflected the unrestricted potential emissions of the source, excluding emission limits that were contained in the previous FESOP.

Pollutant	Potential to Emit (tons/yr)
PM	21,073.5
PM-10	2,969.9
SO ₂	290.9
VOC	>100
CO	263.4
NO _x	179.4

HAPs	Potential to Emit (tons/yr)
Acetaldehyde	Less than 10
Arsenic	Less than 10
Benzene	Less than 10
Beryllium	Less than 10
Cadmium	Less than 10
Chromium	Less than 10
Ethyl benzene	Less than 10
Formaldehyde	Less than 10
Lead	Less than 10
Manganese	Less than 10
Mercury	Less than 10
Nickel	Less than 10
Quinone	Less than 10
Toluene	Less than 10
Polycyclic Organic Matter	Less than 10
Xylene	Less than 10
Total	Less than 25

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7. The source will be issued a FESOP because the source will limit its emissions below the Title V levels.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a

combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7 and will be issued a FESOP.

- (c) **Fugitive Emissions**
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 but there are applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are counted toward determination of PSD applicability.

Potential to Emit After Issuance

The source has opted to remain a FESOP source. The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this FESOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit. Since the source has not constructed any new emission units, the source's potential to emit is based on the emission units included in the original FESOP and information submitted in the renewal application dated October 11, 2006.

Process/emission unit	Potential To Emit (tons/year)						HAPs
	PM	PM-10	SO ₂	VOC	CO	NO _x	
Batch Mixer Dryer including Burner	92.0	92.0	90.6 ⁽¹⁾	23.7	94.3 ⁽¹⁾	56.8	<10
Cold-mix	--	--	--	68.3 ⁽¹⁾	--	--	
Silo filling or load-out	0.34	0.34	--	2.7	--	--	
Loadout-yard/storage	--	--	--	5.3	--	--	
Tri-axle Truck	6.5	1.8	--	--	--	--	
Front-End Loader	17.0	4.5	--	--	--	--	
Conveying	1.7	0.2	--	--	--	--	
Hot oil heater	0.2	0.1	8.4	--	0.6	2.4	
Storage Piles	0.1	0.04	--	--	--	--	
Other Insignificant	5.0	1.0	--	--	5.0	--	
Total Emissions	<250	<100	<100	<100	<100	<100	

Note:

(1) Maximum allowable emissions in order to comply with 326 IAC 2-8 (FESOP).

County Attainment Status

The source is located in Vermillion County.

Pollutant	Status
PM-2.5	Attainment
PM-10	Attainment
SO ₂	Attainment
NO ₂	Attainment
8 hour Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and Nitrogen Oxide (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 the ozone standards. Vermillion County has been designated as attainment for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

- (b) Vermillion County has been classified as attainment for PM-2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM-2.5. Therefore, until the U.S. EPA adopts specific provisions for PSD revision for PM-2.5 emissions, it has directed states to regulate PM-10 emissions as surrogate for PM-2.5 emissions. See the State Rule Applicability for the source section.
- (c) Vermillion County has been classified as attainment for all other pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

Source Status

Existing Source PSD, Part 70, or FESOP Definitions (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or otherwise limited):

Pollutant	Emissions (tons/yr)
PM	Less than 250
PM-10	Less than 100
SO ₂	
VOC	
CO	
NO _x	
Single HAP	Less than 10
Combination HAPs	Less than 25

- (a) This existing source is not a major stationary source because no regulated pollutant is emitted at a rate of 250 tons per year or greater, and it is not in one of the 28 listed source categories.
- (b) This source is not a major source for Part 70 because no criteria pollutant is emitted at a rate of equal or greater than 100 tons per year.

Federal Rule Applicability

- (a) 40 CFR 60, Subpart I – Standards of Performance for Hot Mix Asphalt Facilities
 The source manufactures hot mix asphalt by heating and drying aggregate and mixing with asphalt cements but it was not subject to this rule because it was constructed prior to June 11, 1973, the applicable date of this rule. There have been no modifications or reconstruction of equipment since that time.
- (b) 40 CFR 60, Subpart K and Ka --Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels). The storage tanks ID# 14, 15, 16, 17, 18, and 19 are not subject to the requirements of 326 IAC 12, 40 CFR 60, Subpart K and Ka because each tank has a storage capacity less than 40,000 gallons. Therefore, the requirements of 40 CFR 60, Subpart K and Ka are not included in this permit.

(c) 40 CFR 60, Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984. The storage tanks ID# 14, 15, 16, 17, 18, and 19 are not subject to the requirements of 326 IAC 12, 40 CFR 60, Subpart Kb since all of these tanks were built prior to July 23, 1984, the applicable date of this rule. Therefore, the requirements of 40 CFR 60, Subpart Kb are not included in this permit.

(d) 40 CFR 60, Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants

The hot batch-mix asphalt production source is not subject to this rule because the source does not recycle asphalt pavement by crushers or grinding mills. Therefore, the requirements of 40 CFR 60, Subpart OOO are not included in this permit.

(e) 40 CFR 60, Subpart UU – Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture

The hot batch-mix asphalt production source is not subject to this rule because this NSPS applies only to asphalt roofing plants, petroleum refineries and other asphalt processing plants that blow asphalt for the manufacture of asphalt products. This source does not manufacture roofing products, is not a petroleum refinery and does not blow asphalt. Therefore, the requirements of 40 CFR 60, Subpart UU are not included in this permit.

(f) 40 CFR 60, Subpart UUU – Standards of Performance for Calciners and Dryers in Mineral Industries

The hot batch-mix asphalt production source is not subject to this rule because this NSPS applies only to sources that process or produce alumina, ball clay, bentonite, diatomite, feldspar, fire clay, fuller's earth, gypsum, industrial sand, kaolin, lightweight aggregate, magnesium compounds, perlite, roofing granules, talc, titanium dioxide, and vermiculite. This source does not process or produce any of these materials. Therefore, the requirements of 40 CFR 60, Subpart UUU are not included in this permit.

(g) The National Emission Standards for Hazardous Air Pollutants (NESHAPs) 40 CFR 63, Subpart LLLLL for Asphalt Processing and Asphalt Roofing Manufacturing are not included in this permit because the source is not a major source for HAP emissions.

(h) The National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 63 Subpart DDDDD for Industrial, Commercial, and Institutional Boilers and Process Heaters are not included in this permit because the dryer burner is not located at a major source of HAP.

(i) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 20 and 40 CFR Part 61, 63) included in this permit.

State Rule Applicability – Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

(a) The source was constructed in 1972 but it is not subject to 326 IAC 2-2 (Prevention of Significant Deterioration) because the source has limited the PM₁₀, VOC, SO₂, NO_x and CO emissions to less than two hundred fifty (250) tons per year. Therefore, the

requirements of Prevention of Significant Deterioration are not applicable. (See FESOP requirements below).

- (b) The PM emissions from the aggregate dryer/mixer shall not exceed 0.14 pounds PM per ton of asphalt produced. This is equivalent to PM emission of 92 tons per year. This limit in conjunction with PM from other emission units shall limit the entire source PM emissions to less than two hundred and fifty (250) tons per year. Compliance with this limit renders 326 IAC 2-2 (PSD) not applicable.

326 IAC 2-8-4 (FESOP) and 326 IAC 2-7 (Operating Permit)

The amount of PM₁₀, VOC, CO, SO₂ and NO_x emissions shall be limited to less than one hundred (100) tons per year to render 326 IAC 2-7 (Operating Permit) not applicable. Therefore, the following requirements are necessary:

- (a) The PM₁₀ emissions shall not exceed 0.14 pounds PM₁₀ per ton of asphalt produced. This limit in conjunction with PM₁₀ emissions from other units, shall limit the entire source PM₁₀ emissions to less than one hundred (100) tons per year.
- (b) The CO emissions shall not exceed 0.1435 pounds CO per ton of asphalt produced. This limit in conjunction with CO emissions from other units, shall limit the entire source CO emissions to less than one hundred (100) tons per year.
- (c) The total usage of #4 fuel oil for the aggregate dryer/mixer shall be limited to 2,415,200 gallons per twelve consecutive month period. For the purpose of determining compliance with this limit, one gallon of #2 fuel oil shall be considered equivalent to 0.93 gallons of #4 fuel oil. This usage limit is equivalent to SO₂ emissions of 90.6 tons per year and NO_x emissions of 56.8 tons per year.

This limit in conjunction with SO₂ from other emission units, shall limit the entire source SO₂ emissions to less than one hundred (100) tons per year.

These fuel usage limits, in conjunction with NO_x emissions from other units, shall limit the entire source NO_x emissions to less than one hundred (100) tons per year.

- (d) The VOC emissions from the use of liquid binders in cold mix asphalt production shall be limited to 68.3 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

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

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

The liquid binder used in cold mix asphalt production shall be limited as follows:

- (1) Cutback asphalt rapid cure liquid binder usage shall not exceed 71.9 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (2) Cutback asphalt medium cure liquid binder usage shall not exceed 97.6 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (3) Cutback asphalt slow cure liquid binder usage shall not exceed 273.2 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (4) Emulsified asphalt with solvent liquid binder usage shall not exceed 147.2 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (5) Other asphalt with solvent liquid binder shall not exceed 2732 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.

The VOC solvent allotments above shall be adjusted when more than one type of binder is used per twelve (12) month consecutive period. In order to determine the tons of VOC equivalent binder usage per year, for each type of binder, use the following formula and divide the tons of VOC solvent used per year for each type of binder by the corresponding adjustment ratio listed in the table that follows.

$$\text{Equivalent VOC binder usage (tons/year)} = \frac{\text{VOC solvent used for each binder (tons/year)}}{\text{Adjustment Ratio}}$$

Type of binder	VOC solvent used (tons/year)	Adjustment Ratio	VOC Equivalent Binder Usage (tons/year)
cutback asphalt rapid cure		1	
cutback asphalt medium cure		1.36	
cutback asphalt slow cure		3.8	
emulsified asphalt		2.04	
other asphalt		38	

Compliance with these limits combined with the potential emissions from all other

emission units at this source, shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (PSD) not applicable.

- (e) The PTE of any single HAP and any combination of HAPs is less than 10 and 25 tons per year, therefore, the requirements of 326 IAC 2-7 are not applicable.

326 IAC 2-6 (Emission Reporting)

This source is located in Vermillion County and will be operating under a FESOP, therefore, the requirements of 326 IAC 2-6 do not apply.

326 IAC 2-4.1-1 (New Source Toxics Control)

PTE of any single HAP and combined HAPs at the source is less than 10 and 25 tons per year, therefore, the requirements of 326 IAC 2-4.1 do not apply to this source.

326 IAC 6-3-2 (Particulate Emission Limitations)

- (a) Pursuant to 326 IAC 6-3-2, the PM emission from the aggregate dryer/mixer, material conveying and handing operations shall each not exceed 55 pounds per hour when operating at a process weight of 150 tons per hour.

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

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

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

The twin cyclones and scrubber shall be in operation at all times the aggregate dryer/mixer is in operation, in order to comply with this limit.

- (b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations), the particulate emission rate from the welding, grinding and sanding operations shall be limited by the following:

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

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

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

326 IAC 6-4 (Fugitive Dust Emissions)

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

326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)

Pursuant to 326 IAC 7-1.1-1, the dryer/mixer is subject to 326 IAC 7-1.1-2 because it has potential SO₂ emissions greater than 25 tons per year. Pursuant to 326 IAC 7-1.1-2, sulfur dioxide emissions from the 129 MMBtu/hr burner shall be limited to 0.5 pounds per MMBtu heat input for No. 4 (or No. 2) distillate fuel oil.

326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements)

Pursuant to this rule, the source shall submit reports of sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate (pounds SO₂ per MMBtu), based on calendar month average, to the OAQ upon request.

326 IAC 8-5-2 (Asphalt Paving Rules)

This rule applies to any asphalt paving application made after January 1, 1980. No person shall cause or allow the use of cutback asphalt or asphalt containing more than seven percent (7%) oil distillate by volume of emulsion for any paving application except the following purposes:

- (1) penetrating prime coating
- (2) stockpile storage
- (3) application during the months of November, December, January, February and March

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

The rule applied to source located in Clark, Floyd, Lake or Porter County. Therefore, the requirements are not applicable to this source, which is located in Vermillion County.

Testing Requirements

The PM, PM₁₀ and CO testing is required to demonstrate compliance with 326 IAC 6-3-2 (Particulate Emission Limitations), 326 IAC 2-8 (FESOP) and 326 IAC 2-2 (PSD).

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

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

The aggregate dryer/mixer has applicable compliance monitoring conditions as specified below:

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

These monitoring conditions are necessary to ensure compliance with 326 IAC 6-3-2 (Particulate Emission Limitations) and 326 IAC 2-8 (FESOP) and 326 IAC 2-2 (PSD).

Conclusion

The operation of a stationary batch mix asphalt plant shall be subject to the conditions of the FESOP 165-23748-00083.

Appendix A: Emissions Calculations

Company Name: Standard Asphalt
 Address, City IN Zip: 12598 South Main Street, Clinton, Indiana 47842
 Permit Number: F165-23748-00083
 Reviewer: Tamra L. Reece
 Date: December 20, 2006

Aggregate drying, hot screen and mixer

The following calculations determine the amount of emissions created by aggregate drying, hot screen and mixer based on 8760 hours of use and EPA SCC #3-05-002-47 and AP 42, Ch 11.1:

P M:	32 lbs/ton x	$\frac{150.0 \text{ tons/hr x } 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}}$	=	21024.0	tons/yr
P M-10:	4.5 lbs/ton x	$\frac{150 \text{ tons/hr x } 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}}$	=	2956.5	tons/yr
CO:	0.4 lbs/ton x	$\frac{150.0 \text{ tons/hr x } 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}}$	=	262.8	tons/yr
VOC:	0.036 lbs/ton x	$\frac{150.0 \text{ tons/hr x } 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}}$	=	23.7	tons/yr
Lead:	3.30E-06 lbs/ton x	$\frac{150 \text{ tons/hr x } 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}}$	=	2.17E-03	tons/yr
HAPS:					
Non-PAH-HAPs					
Acetaldehyde 75-07-0	3.2E-04 lbs/ton x	$\frac{150.0 \text{ tons/hr x } 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}}$	=	0.2	tons/yr
Benzene 71-43-2	2.8E-04 lbs/ton x	$\frac{150 \text{ tons/hr x } 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}}$	=	0.2	tons/yr
Ethylbenzene 100-41-4	2.2E-03 lbs/ton x	$\frac{150.0 \text{ tons/hr x } 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}}$	=	1.4	tons/yr
Formaldehyde 50-00-0	7.4E-04 lbs/ton x	$\frac{150 \text{ tons/hr x } 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}}$	=	0.5	tons/yr
Quinone 106-51-4	2.7E-04 lbs/ton x	$\frac{150.0 \text{ tons/hr x } 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}}$	=	0.2	tons/yr
Toluene 108-88-3	1.0E-03 lbs/ton x	$\frac{150 \text{ tons/hr x } 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}}$	=	0.7	tons/yr
Xylene 1330-20-7	2.7E-03 lbs/ton x	$\frac{150.0 \text{ tons/hr x } 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}}$	=	1.8	tons/yr
Total non-PAH HAPs	7.5E-03 lbs/ton			4.9	
PAH-HAPs					
2-Methylnaphthalene 91-57-6	7.1E-05 lbs/ton x	$\frac{150.0 \text{ tons/hr x } 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}}$	=	4.7E-02	tons/yr
Acenaphthene 83-32-9	9.0E-07 lbs/ton x	$\frac{150 \text{ tons/hr x } 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}}$	=	5.9E-04	tons/yr
Acenaphthylene 208-96-8	5.8E-07 lbs/ton x	$\frac{150.0 \text{ tons/hr x } 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}}$	=	3.8E-04	tons/yr
Anthracene 120-12-7	2.1E-07 lbs/ton x	$\frac{150 \text{ tons/hr x } 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}}$	=	1.4E-04	tons/yr
Benzo(a)anthracene 56-55-3	4.6E-09 lbs/ton x	$\frac{150.0 \text{ tons/hr x } 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}}$	=	3.0E-06	tons/yr
Benzo(a)pyrene 50-32-8	3.1E-10 lbs/ton x	$\frac{150 \text{ tons/hr x } 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}}$	=	2.0E-07	tons/yr

Appendix A: Emissions Calculations

Company Name: Standard Asphalt
 Address, City IN Zip: 12598 South Main Street, Clinton, Indiana 47842
 Permit Number: F165-23748-00083
 Reviewer: Tamra L. Reece
 Date: December 20, 2006

PAH-HAPs continue

Benzo(b)fluoranthene 205-99-2	9.4E-09 lbs/ton x	150.0 tons/hr x	8760 hrs/yr =	6.2E-06 tons/yr
		2000 lbs/ton		
Benzo(g,h,i)perylene 1-1-24-2	5.0E-10 lbs/ton x	150.0 tons/hr x	8760 hrs/yr =	3.3E-07 tons/yr
		2000 lbs/ton		
Benzo(k)fluoranthene 207-08-9	1.3E-08 lbs/ton x	150 tons/hr x	8760 hrs/yr =	8.5E-06 tons/yr
		2000 lbs/ton		
Chrysene 218-01-9	3.8E-09 lbs/ton x	150.0 tons/hr x	8760 hrs/yr =	2.5E-06 tons/yr
		2000 lbs/ton		
Dibenz(a,h)anthracene 53-70-3	9.5E-11 lbs/ton x	150 tons/hr x	8760 hrs/yr =	6.2E-08 tons/yr
		2000 lbs/ton		
Fluoranthene 206-44-0	1.6E-07 lbs/ton x	150.0 tons/hr x	8760 hrs/yr =	1.1E-04 tons/yr
		2000 lbs/ton		
Fluorene 86-73-7	1.6E-06 lbs/ton x	150 tons/hr x	8760 hrs/yr =	1.1E-03 tons/yr
		2000 lbs/ton		
Indeno(1,2,3-cd)pyrene 193-39-5	3.0E-10 lbs/ton x	150.0 tons/hr x	8760 hrs/yr =	2.0E-07 tons/yr
		2000 lbs/ton		
Naphthalene 91-20-3	3.6E-05 lbs/ton x	150.0 tons/hr x	8760 hrs/yr =	2.4E-02 tons/yr
		2000 lbs/ton		
Phenanthrene 85-01-8	3.7E-05 lbs/ton x	150 tons/hr x	8760 hrs/yr =	2.4E-02 tons/yr
		2000 lbs/ton		
Pyrene 129-00-0	6.2E-08 lbs/ton x	150.0 tons/hr x	8760 hrs/yr =	4.1E-05 tons/yr
		2000 lbs/ton		
Total PAH HAPs	0.0077 lbs/ton			0.1 tons/yr

Metal HAPs

Arsenic	4.6E-07 lbs/ton x	150.0 tons/hr x	8760 hrs/yr =	3.0E-04 tons/yr
		2000 lbs/ton		
Barium	1.5E-06 lbs/ton x	150 tons/hr x	8760 hrs/yr =	9.9E-04 tons/yr
		2000 lbs/ton		
Beryllium	1.5E-07 lbs/ton x	150.0 tons/hr x	8760 hrs/yr =	9.9E-05 tons/yr
		2000 lbs/ton		
Cadmium	6.1E-07 lbs/ton x	150 tons/hr x	8760 hrs/yr =	4.0E-04 tons/yr
		2000 lbs/ton		
Chromium	5.7E-07 lbs/ton x	150.0 tons/hr x	8760 hrs/yr =	3.7E-04 tons/yr
		2000 lbs/ton		
Hexavalent chromium	4.8E-08 lbs/ton x	150 tons/hr x	8760 hrs/yr =	3.2E-05 tons/yr
		2000 lbs/ton		
Manganese	6.9E-06 lbs/ton x	150.0 tons/hr x	8760 hrs/yr =	4.5E-03 tons/yr
		2000 lbs/ton		
Mercury	4.1E-07 lbs/ton x	150.0 tons/hr x	8760 hrs/yr =	2.7E-04 tons/yr
		2000 lbs/ton		
Nickel	3.0E-06 lbs/ton x	150 tons/hr x	8760 hrs/yr =	2.0E-03 tons/yr
		2000 lbs/ton		
Selenium	4.9E-07 lbs/ton x	150.0 tons/hr x	8760 hrs/yr =	3.2E-04 tons/yr
		2000 lbs/ton		
	1.4E-05 lbs/ton			9.3E-03

Total HAP

5.0

**Appendix A: Emission Calculations
Aggregate Dryer
#4 Fuel Oil**

**Company Name: Standard Asphalt
Address City IN Zip: 12598 South Main Street, Clinton, Indiana 47842
FESOP No.: F165-23748-00083
Reviewer: Lek R. Traivaranon
Date: December 20, 2006**

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
129.0	7533.6	0.5

Emission Factor in lb/kgal	Pollutant			
	SO ₂	NO _x	VOC	CO
75.0 (150 S)	47.0	0.34	5.0	
Potential Emission in tons/yr	282.5	177.0	1.3	18.8

Methodology

1 gallon of No. 4 Fuel Oil has a heating value of 150,000 Btu

* The weight % sulfur is calculated to be 0.5 % sulfur in order to be in compliance with 326 IAC 7-1.1-2.

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 kgal/1,000 gal x 1 gal/0.150 MMBtu

Emission Factors are from AP-42, Tables 1.3-1(SCC 1-03-005-01) Supplement E 9/98 (see errata file)

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

**Appendix A: Emission Calculations
Aggregate Dryer
#4 Fuel Oil Limited Throughput
Limited Throughput**

**Company Name: Standard Asphalt
Address City IN Zip: 12598 South Main Street, Clinton, Indiana 47842
FESOP No.: F165-23748-00083
Reviewer: Lek R. Traivaranon
Date: December 20, 2006**

Limited Throughput
kgals/year

S = Weight % Sulfur

0.5

2415.2

Emission Factor in lb/kgal	Pollutant			
	SO ₂	NO _x	VOC	CO
75.0 (150 S)	47.0	0.216	5.0	
Potential Emission in tons/yr	90.6	56.8	0.3	6.0

Methodology

1 gallon of No. 4 Fuel Oil has a heating value of 150,000 Btu

* The weight % sulfur is calculated to be 0.5 % sulfur in order to be in compliance with 326 IAC 7-1.1-2.

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 kgal/1,000 gal x 1 gal/0.150 MMBtu

Emission Factors are from AP-42, Tables 1.3-1 (SCC 1-03-005-01) Supplement E 9/98 (see errata file)

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

**Appendix A: Emission Calculations
Aggregate Dryer
#2 Fuel Oil (Back up fuel oil)**

**Company Name: Standard Asphalt
Address City IN Zip: 12598 South Main Street, Clinton, Indiana 47842
FESOP No.: F165-23748-00083
Reviewer: Lek R. Traivaranon
Date: December 20, 2006**

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
129.0	8071.7	0.446

Emission Factor in lb/kgal	Pollutant			
	SO ₂	NO _x	VOC	CO
70.022 (157.0 S)	24.0	0.34	5.0	
Potential Emission in tons/yr	282.6	96.9	1.4	20.2

Methodology

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

* The weight % sulfur is calculated to be 0.446 % sulfur in order to be in compliance with 326 IAC 7-1.1-2.

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 kgal/1,000 gal x 1 gal/0.140 MMBtu

Emission Factors are from AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/98 (see errata file)

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

**Appendix A: Emission Calculations
Aggregate Dryer
#2 Fuel Oil (back up fuel oil)
Limited Throughput**

**Company Name: Standard Asphalt
Address City IN Zip: 12598 South Main Street, Clinton, Indiana 47842
FESOP No.: F165-23748-00083
Reviewer: Lek R. Traivaranon
Date: December 20, 2006**

Limited Throughput
kgals/year

S = Weight % Sulfur

0.446

2587.7

Emission Factor in lb/kgal	Pollutant			
	SO ₂	NO _x	VOC	CO
70.022 (157.0 S)	24.0	0.34	5.0	
Potential Emission in tons/yr	90.6	31.1	0.4	6.5

Methodology

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

* The weight % sulfur is calculated to be 0.446 % sulfur in order to be in compliance with 326 IAC 7-1.1-2.

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 kgal/1,000 gal x 1 gal/0.140 MMBtu

Emission Factors are from AP-42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/98 (see errata file)

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

Appendix A: Emission Calculations
Insignificant Heaters (Two hot oil heaters each with a maximum heat input capacity of 1.9 MMBtu/hr)
#2 Fuel Oil

Company Name: Standard Asphalt
Address City IN Zip: 12598 South Main Street, Clinton, Indiana 47842
FESOP No.: F165-23748-00083
Reviewer: Lek R. Traivaranon
Date: December 20, 2006

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur				
3.8	237.8	0.5				
	Pollutant					
Emission Factor in lb/kgal	PM*	PM10	SO2 71 (142.0 S)	NO _x 20.0	VOC 0.34	CO 5.0
Potential Emission in tons/yr	0.2	0.1	8.4	2.4	0.0	0.6

Methodology

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

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 kgal/1,000 gal x 1 gal/0.140 MMBtu

Emission Factors are from AP-42, Tables 1.3-1(SCC 1-03-005-01) Supplement E 9/98 (see errata file)

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

**Appendix A: Emission Calculations
Fuel Usage Limit for the Aggregate Dryer/Mixer**

Company Name: Standard Asphalt
Address City IN Zip: 12598 South Main Street, Clinton, Indiana 47842
FESOP No.: F165-23748-00083
Reviewer: Tamra L. Reece
Date: December 20, 2006

Maximum Heat Input =	129 MMBtu/hr
Potential Emissions From Fuel Oil #4 in	
SO ₂	282.6
NO _x	177
VOC	1.3
CO	18.8

SO₂

99 tpy - 8.4 tpy = 90.6 tpy limited SO₂

Potential #4 usage = (129 MMBtu/hr)*(8760 hr/yr)*(1 gal/0.15 MMBtu)*(1 kgal/1000 gal) = 7533.6 kgal/yr

Fuel Usage Limit for #4 = (90.6 tpy/282.6 tpy)*(7533.6 kgal/yr) = 2415.2 kgal/year

Maximum Heat Input =	129 MMBtu/hr
Potential Emissions From Fuel Oil #2 in	
SO ₂	282.6
NO _x	96.9
VOC	1.4
CO	20.2

SO₂

99 tpy - 8.4 tpy = 90.6 tpy limited SO₂

Potential #2 usage = (129 MMBtu/hr)*(8760 hr/yr)*(1 gal/.14 MMBtu)*(1 kgal/1000 gal) = 8071.7 kgal/yr

Fuel Usage Limit for #2 = (90.6 tpy/282.6 tpy)*(8071.7 kgal/yr) = 2587.8 kgal/year

Determine Fuel Equivalence:

Primary fuel is #4 oil. The potential emissions of sulfur dioxide are 282.6 tons/yr. Take a fuel limit of 2,415.2 kgal/year.

Then, (282.6 tons of SO₂/yr)*(1 yr/2,415.2 kgal) = 0.117 ton of SO₂ per Kgal of #4 oil.

Back-up fuel is #2 oil. The potential emissions of sulfur dioxide are 282.6 tons/year. Take a fuel limit of 2,587.8 kgal/year.

Then, (282.6 tons of SO₂/yr)*(1 yr/2587.8 kgal) = 0.109 ton of SO₂ per Kgal of #2 oil.

To determine fuel equivalence: (0.109/0.117) = 0.93

Appendix A: Emissions Calculations
Batch Mixer
Load-Out
PM/CO

Company Name: Standard Asphalt
Address, City IN Zip: 12598 S. Main Street, Clinton, IN 47842
Permit Number: F165-23748-00083
Plt ID: 165-00083
Reviewer: Lek R. Traivaranon
Date: December 20, 2006

Throughput: 150 tons/hr

	Emission Factor in lb/ton product	Potential Emissions in ton/yr
<p style="text-align: center;">Total PM*</p> $EF = 0.000181 + 0.00141(-V)e^{((0.0251)(T+460) - 20.43)}$	Total PM* 0.0005	0.34
<p style="text-align: center;">Organic PM**</p> $EF = 0.00141(-V)e^{((0.0251)(T+460) - 20.43)}$	Organic PM 0.0003	0.2
<p style="text-align: center;">TOC***</p> $EF = 0.0172(-V)e^{((0.0251)(T+460) - 20.43)}$	TOC 0.0042	2.7
<p style="text-align: center;">CO</p> $EF = 0.00558(-V)e^{((0.0251)(T+460) - 20.43)}$	CO 0.0013	0.9

Where:

V = -0.5

T = 325

Methodology

EF = Emission Factor in lb/ton product

V = asphalt volatility. The default value of "-0.5" was used.

T = HMA mix temperature in °F. The default temperature of 325°F was used.

Emission Factors are from AP 42, Table 11.1-14, (SCC 3-05-002-14) 3/04

*Total PM is assumed to be predominantly PM_{2.5} since emissions consist of condensed vapors.

**Extractable organic PM, as measured by EPA Method 315.

***TOC as propane, as measured with EPA Method 25A sampling train or equivalent sampling train.

Potential Emissions (ton/yr) = throughput (ton/hr) x emission factor (lb/ton) x 8760 hr/yr x 1 ton/2000 lb

**Appendix A: Emissions Calculations
Batch Mixer
Silo Filling Operations
PM/CO**

**Company Name: Standard Asphalt
Address, City IN Zip: 12598 S. Main Street, Clinton, IN 47842
Permit Number: F165-23748-00083
Plt ID: 165-00083
Reviewer: Lek R. Traivaranon
Date: December 20, 2006**

Throughput: 150 tons/hr

	Emission Factor in lb/ton product	Potential Emissions in ton/yr
Total PM* $EF = 0.000332 + 0.00105(-V)e^{((0.0251)(T+460) - 20.43)}$	Total PM* 0.0005	0.34
Organic PM** $EF = 0.00105(-V)e^{((0.0251)(T+460) - 20.43)}$	Organic PM 0.0003	0.2
TOC*** $EF = 0.0504(-V)e^{((0.0251)(T+460) - 20.43)}$	TOC 0.0042	2.7
CO $EF = 0.00488(-V)e^{((0.0251)(T+460) - 20.43)}$	CO 0.0013	0.9

Where:
V = -0.5
T = 325

Methodology

EF = Emission Factor in lb/ton product
V = asphalt volatility. The default value of "-0.5" was used.
T = HMA mix temperature in °F. The default temperature of 325°F was used.

Emission Factors are from AP 42, Table 11.1-14, (SCC 3-05-002-13) 3/04
*Total PM is assumed to be predominantly PM_{2.5} since emissions consist of condensed vapors.
**Extractable organic PM, as measured by EPA Method 315.
***TOC as propane, as measured with EPA Method 25A sampling train or equivalent sampling train.

Potential Emissions (ton/yr) = throughput (ton/hr) x emission factor (lb/ton) x 8760 hr/yr x 1 ton/2000 lb

Appendix A: Emissions Calculations
Batch Mixer
Load-Out and Storage
VOC/HAP

Company Name: Standard Asphalt
Address, City IN Zip: 12598 S. Main Street, Clinton, IN 47842
Permit Number: F165-23748-00083
Pit ID: 165-00083
Reviewer: Tamra L. Reece
Date: December 20, 2006

Throughput: 150 tons/hr
Emission Factor for organic volatile-based
compounds in lb/ton product: 0.004

Pollutant	CASRN ¹	Speciation Profile for Load-Out and Storage Emissions (Compound / TOC ²)	Speciation Profile for Asphalt Storage Tank Emissions (Compound / TOC ²)	Load-Out and Yard Emissions (ton/yr)	Asphalt Storage Tank Emissions (ton/yr)
VOC ³		94%	100%	2.5691	2.7331
Non-VOC/non-HAPs					
Methane	74-82-8	6.5%	0.26%	0.1777	0.0071
Acetone	67-64-1	0.046%	0.055%	0.0013	0.0015
Ethylene	74-85-1	0.71%	1.1%	0.0194	0.0301
Total non-VOC/non-HAPs		7.3%	1.4%	0.1995	0.0383
Volatile Organic HAPs					
Benzene	71-43-2	0.052%	0.032%	0.0014	ND
Bromomethane	74-83-9	0.0096%	0.0049%	0.0003	0.0001
2-Butanone	78-93-3	0.049%	0.039%	0.0013	0.0011
Carbon Disulfide	75-15-0	0.013%	0.016%	0.0004	ND
Chloroethane	75-00-3	0.00021%	0.0040%	0.0000	0.0001
Chloromethane	74-87-3	0.015%	0.023%	0.0004	0.0006
Cumene	92-82-8	0.11%	ND ⁴	0.0030	ND
Ethylbenzene	100-41-4	0.28%	0.038%	0.0077	0.0010
Formaldehyde	50-00-0	0.088%	0.69%	0.0024	0.0189
n-Hexane	100-54-3	0.15%	0.10%	0.0041	0.0027
Isooctane	540-84-1	0.0018%	0.00031%	0.0000	0.0000
Methylene Chloride	75-09-2	0.0% ⁵	0.00027%	0.0000	0.0000
MTBE	596899	0.0% ⁵	ND ⁴	0.0000	ND
Styrene	100-42-5	0.0073%	0.0054%	0.0002	0.0001
Tetrachloroethene	127-18-4	0.0077%	ND ⁴	0.0002	ND
Toluene	100-88-3	0.21%	0.062%	0.0057	0.0017
1,1,1-Trichloroethane	71-55-6	0.0% ⁵	ND ⁴	0.0000	ND
Trichloroethene	79-01-6	0.0% ⁵	ND ⁴	0.0000	ND
Trichlorofluoromethane	75-69-4	0.0013%	ND ⁴	0.0000	ND
m-/p-Xylene	1330-20-7	0.41%	0.2%	0.0112	0.0055
o-Xylene	95-47-6	0.08%	0.057%	0.0022	0.0016
Total volatile organic HAPs		1.5%	1.3%	0.0410	0.0355

Methodology

Emission Factors are from AP 42, Table 11.1-16, 3/04

¹Chemical Abstract Service Registry Number²Emission factor for compound is determined by multiplying the percentage presented for the compound by the emission factor for total organic compounds (TOC) as determined from Table 11.1-14.³The VOC percentages are equal to 100 percent of TOC minus the methane, acetone, methylene chloride, and 1,1,1-trichloroethane percentages.⁴ND = Measured data below detection limits.⁵Values presented as 0.0% had background concentrations higher than the capture efficiency-corrected measured concentration.

Emissions (ton/yr) = throughput, ton/hr * Emission Factor, lb/ton * 8760 hr/yr * 1 ton/2000 lb

Appendix A: Emissions Calculations
Batch Mixer
Load-Out and Storage

Company Name: Standard Asphalt
Address, City IN Zip: 12598 S. Main Street, Clinton, IN 47842
Permit Number: F165-23748-00083
Pit ID: 165-00083
Reviewer: Tamra L. Reece
Date: December 20, 2006

Throughput: 150 tons/hr
Emission Factor for organic particulate-based
compounds in lb/ton product: 0.0003

Pollutant	CASRN ¹	Speciation Profile for Load-Out and Yard Emissions ² (Compound / Organic PM ³)	Speciation Profile for Asphalt Storage Tank Emissions (Compound / Organic PM ³)	Load-Out and Yard Emissions (ton/yr)	Asphalt Storage Tank Emissions (ton/yr)
PAH ⁴ HAPs					
Acenaphthene	83-32-9	0.26%	0.47%	0.0006	0.0010
Acenaphthylene	208-96-8	0.028%	0.014%	0.0001	0.0000
Anthracene	120-1207	0.070%	0.13%	0.0002	0.0003
Benzo(a)anthracene	56-55-3	0.019%	0.056%	0.0000	0.0001
Benzo(b)fluoranthene	205-99-2	0.0076%	ND ⁵	0.0000	ND
Benzo(k)fluoranthene	207-08-9	0.0022%	ND ⁵	0.0000	ND
Benzo(g,h,i)perylene	191-24-2	0.0019%	ND ⁵	0.0000	ND
Benzo(a)pyrene	50-32-8	0.0023%	ND ⁵	0.0000	ND
Benzo(e)pyrene	192-97-2	0.0078%	0.0095%	0.0000	0.0000
Chrysene	218-01-9	0.103%	0.21%	0.0002	0.0005
Dibenz(a,h)anthracene	53-70-3	0.00037%	ND ⁵	0.0000	ND
Flouranthene	206-44-0	0.050%	0.15%	0.0001	0.0003
Flourene	86-73-7	0.77%	1.01%	0.0017	0.0023
Indeno(1,2,3-cd)pyrene	193-39-5	0.00047%	ND ⁵	0.0000	ND
2-Methylnaphthalene	91-57-6	2.38%	5.27%	0.0053	0.0118
Naphthalene	91-20-3	1.25%	1.82%	0.0028	0.0041
Perylene	198-55-0	0.022%	0.030%	0.0000	0.0001
Phenanthrene	85-01-8	0.81%	1.80%	0.0018	0.0040
Pyrene	129-00-0	0.15%	0.44%	0.0003	0.0010
Total PAH HAPs		5.93%	11.40%	0.0132	0.0255
Other semi-volatile HAPs					
Phenol		1.18%	ND ⁵	0.0026	ND

Methodology

Emission Factors are from AP 42, Table 11.1-15, 3/04

¹Chemical Abstract Service Registry Number²Emissions from loaded trucks during the period between load-out and the time the truck departs the plant.³Emission factor for compound is determined by multiplying the percentage presented for the compound by the emission factor for⁴PAH = Polycyclic Aromatic Hydrocarbon.⁵ND = Measured data below detection limits.

Emissions (ton/yr) = throughput, ton/hr * Emission Factor, lb/ton * 8760 hr/yr * 1 ton/2000 lb

**Appendix A: Emission Calculations
Unpaved Roads**

**Company Name: Standard Asphalt
Address, City: 12598 S. Main Street, Clinton, IN 47842
FESOP NO. : F165-23748-00083
Reviewer: Lek R. Traivaranon
Date: 12/20/2006**

Equation:
$$E_f = \frac{k \cdot (s/12)^a \cdot (w/3)^b}{(M_{dry}/0.2)^c}$$

where:

- E_f = emission factor (lb/VMT)
- k = empirical constants
- s = surface material silt content (%)
- W = mean vehicle weight (tons)
- M = surface material moisture content (%)
- a = empirical constant
- b = empirical constant
- c = empirical constant
- S = average vehicle speed (miles/hour)

Tri-axle Truck

	PM-10	PM
k =	2.6	10
s =	4.8	4.8
W =	21	21
a =	0.8	0.8
b =	0.4	0.5
c =	0.3	0.4
M =	3	3
S =	10	10
E _f =	1.21	4.30
Miles traveled per year =	9054.34	9054.34
Emissions (tons/year) =	5.47	19.48
Emissions Corrected (tons/year) =	3.64	12.99

The emissions were corrected by multiplying by (S/15) in order to correct for the speeds being lower than 15 miles/hour.

The equation and constants were taken from AP-42, Chapter 13.2.2 Unpaved Roads.

**Appendix A: Emission Calculations
Unpaved Roads**

**Company Name: Standard Asphalt
Address, City: 12598 S. Main Street, Clinton, IN 47842
FESOP NO. : F165-23748-00083
Reviewer: Lek R. Traivaranon
Date: 12/20/2006**

Equation:
$$E_f = \frac{k \cdot (s/12)^a \cdot (w/3)^b}{(M_{dry}/0.2)^c}$$

where:

- E_f = emission factor (lb/VMT)
- k = empirical constants
- s = surface material silt content (%)
- W = mean vehicle weight (tons)
- M = surface material moisture content (%)
- a = empirical constant
- b = empirical constant
- c = empirical constant
- S = average vehicle speed (miles/hour)

Front End Loader

	PM-10	PM
k =	2.6	10
s =	4.8	4.8
W =	35	35
a =	0.8	0.8
b =	0.4	0.5
c =	0.3	0.4
M =	3	3
S =	10	10
E _f =	1.48	5.56
Miles traveled per year =	18396	18396
Emissions (tons/year) =	13.62	51.09
Emissions Corrected (tons/year) =	9.08	34.06

The emissions were corrected by multiplying by (S/15) in order to correct for the speeds being lower than 15 miles/hour.

The equation and constants were taken from AP-42, Chapter 13.2.2 Unpaved Roads.

**Appendix A: Emission Calculations
Conveying and Handling**

Company Name: Standard Asphalt
Address City IN Zip: 12598 South Main Street, Clinton, Indiana 478
FESOP No.: F165-23748-00083
Reviewer: Lek R. Traivaranon
Date: December 20, 2006

Handle: 142.5 tons/hr

$$E_f = .0032 * \frac{(U/5)^{1.3} * k}{(M/2)^{1.4}}$$

where:

k = 1 1 (particle size multiplier)
M = 5 % moisture
U = 12 mph mean wind speed (worst case)

$$E_f = 0.0028 \text{ lb/ton}$$

PM = 1.73 tons/yr
PM-10 = 0.17 tons/yr

Methodology:

Use the above equation to determine the emission factor (Ef).

Then, (Ef)*(142.5 tons/yr)*(8760 hr/yr)*(1 ton/2000 lbs)

The emission factor equation was taken from AP-42, Chapter 13.2.4.

**Appendix A: Emission Calculations
Storage Piles**

Company Name: Standard Asphalt
Address City IN Zip: 12598 South Main Street, Clinton, Indiana 47842
FESOP No.: F165-23748-00083
Reviewer: Tamra L. Reece
Date: December 20, 2006

$$E_f = \frac{1.7 * (s/1.5) * (365-p)}{235 * (f/15)}$$
 where:

s = 1.1 % silt for sand
s = 1.2 % silt for stone
s = 1 % silt for slag
s = 0.9 % silt for gravel
s = 0.8 % silt for RAP
p = 125 days of rain greater than or equal to 0.01 inches
f = 15 % of wind greater than or equal to 12 mph

E_f = 1.27 lb/acre/day for sand
E_f = 1.39 lb/acre/day for stone
E_f = 1.16 lb/acre/day for slag
E_f = 1.04 lb/acre/day for gravel
E_f = 0.93 lb/acre/day for RAP

$$E_p(\text{storage}) = \frac{E_f * sc * (20 \text{ cuft/ton}) * (365 \text{ day/yr})}{(2000 \text{ lb/ton}) * (43560 \text{ sqft/acre}) * (25 \text{ ft})}$$

sc = 22,000 tons storage capacity for sand
sc = 8,000 tons storage capacity for stone
sc = 10000 tons storage capacity for slag
sc = 12000 tons storage capacity for gravel
sc = 0 tons storage capacity for RAP

E_p = 0.09 tons/yr for sand
E_p = 0.04 tons/yr for stone
E_p = 0.04 tons/yr for slag
E_p = 0.04 tons/yr for gravel
E_p = 0.00 tons/yr for RAP
E_p Total = 0.21 tons/yr of PM

PM-10 = 35% of PM:

E_p = 0.03 tons/yr for sand
E_p = 0.01 tons/yr for stone
E_p = 0.01 tons/yr for slag
E_p = 0.01 tons/yr for gravel
E_p = 0.00 tons/yr for RAP
E_p Total = 0.07 tons/yr of PM-10

50% is emitted after controls
PM = 0.11 tons/yr
PM-10 = 0.04 tons/yr

Appendix A: Emissions Calculations

Company Name: Standard Asphalt
Address, City IN Zip: 12598 South Main Street, Clinton, Indiana 47842
Permit Number: F165-23748-00083
Reviewer: Tamra L. Reece
Date: December 20, 2006

Source Emissions after control

In order to comply with FESOP requirements, the source must limit the emissions as follows:

Aggregate drying, hot screen and mixer

P M:	0.14 lbs/ton x	$\frac{1,314,000 \text{ tons/yr}}{2000 \text{ lbs/ton}}$	=	<u>92.0 tons/yr</u>
P M-10:	0.14 lbs/ton x	$\frac{1,314,000 \text{ tons/yr}}{2000 \text{ lbs/ton}}$	=	<u>92.0 tons/yr</u>
CO:	0.1435 lbs/ton x	$\frac{1,314,000 \text{ tons/yr}}{2000 \text{ lbs/ton}}$	=	<u>94.3 tons/yr</u>
VOC:	0.036 lbs/ton x	$\frac{1,314,000 \text{ tons/yr}}{2000 \text{ lbs/ton}}$	=	<u>23.7 tons/yr</u>
SO2:	See page 4-6 of 18 of this Appendix A	=	90.6 tons/yr	or
		#4 Fuel Oil =	<u>2,415,200 gals/yr</u>	or
		#2 Fuel Oil =	<u>2,587,800 gals/yr</u>	

Unpave Road-see detail page 13-14

Tri-axle Truck				50% control efficiency
Total PM:	12.99 tons/yr (with speed control)	=	6.5 tons/yr	
Total PM-10:	3.64 tons/yr (with speed control)	=	1.8 tons/yr	
Front End Loader				
Total PM:	34.06 tons/yr (with speed control)	=	17.0 tons/yr	
Total PM-10:	9.08 tons/yr (with speed control)	=	4.5 tons/yr	

Appendix A: Emissions Calculations

Summary

Company Name: Standard Asphalt
Address, City IN Zip: 12598 South Main Street, Clinton, Indiana 47842
Permit Number: F165-23748-00083
Reviewer: Tamra L. Reece
Date: December 20, 2006

Uncontrolled Emissions in tons/year

	PM	PM-10	SO ₂	NO _x	VOC	CO	HAPs
Batch Mixer and Dryer	21024	2956.5	282.5	177.0	1.3	262.8	5
Storage	0.2	0.1	----	----	----	----	----
Conveying	1.7	0.2	----	----	----	----	----
Tri-axle Truck	13.0	3.6	----	----	----	----	----
Front End Loader	34.1	9.1	----	----	----	----	----
Silo/load out	0.3	0.3	----	----	2.7	----	----
Loadout-yard-storage	----	----	----	----	5.3	----	----
Cold Mix	----	----	----	----	>100	----	----
Insignificant Heaters	0.2	0.1	8.4	2.4	----	0.6	----
Other insignificant	5	1	----	----	>100	5	----
Total =	21073.5	2969.9	290.9	179.4	>100	263.4	5.0

Controlled and Limited Emissions in tons/year

	PM	PM-10	SO ₂	NO _x	VOC	CO	HAPs
Batch Mixer and Dryer	92.0	92.0	90.6	56.8	23.7	94.3	5.0
Storage	0.1	0.0	----	----	----	----	----
Conveying	1.7	0.2	----	----	----	----	----
Tri-axle Truck	6.5	1.8	----	----	----	----	----
Front End Loader	17.0	4.5	----	----	----	----	----
Silo/load out	0.3	0.3	----	----	2.7	----	----
Loadout-yard-storage	----	----	----	----	5.3	----	----
Cold Mix	----	----	----	----	68.3	----	----
Insignificant Heaters	0.2	0.1	8.4	2.4	----	0.6	----
Other insignificant	5	0.9	----	----	----	5	----
Total =	122.9	99.9	99.0	59.2	<100	99.9	5.0