



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: December 30, 2009

RE: Onyx Paving Company / 071-28331-03180

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

Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures
FNPER.dot12/03/07



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Federally Enforceable State Operating Permit Renewal OFFICE OF AIR QUALITY

**Onyx Paving Company
6201 E 525 N
Seymour, Indiana 47274**

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

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

Operation Permit No.: 071-28331-03180	
Issued by:  Iryn Caillung, Section Chief Permits Branch Office of Air Quality	Issuance Date: December 30, 2009 Expiration Date: December 30, 2019

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SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary hot mix asphalt production facility that does not use slag or produce cold mix.

Source Address:	6201 E 525 N, Seymour, Indiana 47274
Mailing Address:	101 N Poplar, Seymour, IN 47274
General Source Phone Number:	812-522-1304
SIC Code:	2951
County Location:	Jackson
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

- (a) One (1) hot mix batch mixer, equipped with a cyclone and scrubber connected in series for particulate control, exhausting through Stack #2, constructed in 1968, capacity: 100 tons per hour, with no slag usage. [An affected facility under 40 CFR 60, Subpart I]
- (b) One (1) natural gas-fired dryer-burner, rated at 40 million British thermal units per hour, exhausting through Stack #2, installed in 1986. [An affected facility under 40 CFR 60, Subpart I]
- (c) One (1) natural gas-fired hot oil heater rated at 1.5 million British thermal units per hour, exhausting through Stack #1, installed in 1986, replaced in-kind in 1996. [An affected facility under 40 CFR 60, Subpart I]
- (d) One (1) pug mill, installed in 1986, capacity: 2 tons of asphalt per batch. [An affected facility under 40 CFR 60, Subpart I]
- (e) Three (3) liquid asphalt storage tanks, installed in 1986, exhausting through Stack #1, capacity: 15,000, 10,000 and 10,000 gallons, respectively. [An affected facility under 40 CFR 60, Subpart I]

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) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.
- (b) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 British thermal units per hour, except where total capacity of equipment operated

by one stationary source exceeds 2,000,000 British thermal units per hour.

- (c) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (d) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. (326 IAC 6-3-2)
- (e) Closed loop heating and cooling systems.
- (f) Heat exchanger cleaning and repair.
- (g) Unpaved roads and parking lots with public access.

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, 071-28331-03180, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

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

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

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

B.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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

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 and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Compliance and Enforcement Branch)

Facsimile Number: 317-233-6865

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

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

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

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

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

The notification which shall be submitted by the Permittee does not require 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. Any emergencies that have been previously reported pursuant to paragraph (b)(5) of this condition and certified by an "authorized individual" need only referenced by the date of the original report.

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

- (a) All terms and conditions of permits established prior to 071-28331-03180 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

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

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

- (b) A timely renewal application is one that is:
 - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the

document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

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

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

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

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

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

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

and

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

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

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

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

- (b) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

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

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

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

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

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

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

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

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

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

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

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

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

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

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

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

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

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

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

C.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 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
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue

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

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

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

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

C.8 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

Compliance Requirements [326 IAC 2-1.1-11]

C.9 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.10 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 or ninety (90) days of initial start-up, whichever is later. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

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

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

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

C.11 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.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

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

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

C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

- (a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.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 or ninety (90) days of initial start-up, whichever is later.

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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or

certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

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

Stratospheric Ozone Protection

C.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:

- (a) One (1) hot mix batch mixer, equipped with a cyclone and scrubber connected in series for particulate control, exhausting through Stack #2, constructed in 1968, capacity: 100 tons per hour. [An affected facility under 40 CFR 60, Subpart I]

This plant does not use slag or produce cold mix asphalt.

(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 FESOP Limits [326 IAC 2-8][326 IAC 2-7]

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

- (a) The amount of asphalt processed shall not exceed four hundred ninety-two thousand two hundred forty-one (492,241) tons per twelve (12) month consecutive period, with compliance determined at the end of each month.
- (b) The PM₁₀ emissions from the mixer shall not exceed 0.385 pounds per ton of asphalt processed.
- (c) The PM_{2.5} emissions from the mixer shall not exceed 0.389 pounds per ton of asphalt processed.
- (d) The CO emissions from the mixer shall not exceed 0.400 pounds per ton of asphalt processed.
- (e) The VOC emissions from the mixer shall not exceed 0.036 pounds per ton of asphalt processed.
- (e) The Permittee shall not use slag as an aggregate additive in its hot mix asphalt operations.

Compliance with this limit, combined with the potential to emit PM₁₀, PM_{2.5}, CO and VOC from all other emission units at this source, shall limit the source-wide total potential to emit of PM₁₀, PM_{2.5}, CO, and VOC to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.2 PSD Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following limits:

- (a) The amount of asphalt processed shall not exceed four hundred ninety-two thousand two hundred forty-one (492,241) tons per twelve (12) month consecutive period, with compliance determined at the end of each month.
- (b) The PM emissions from the mixer shall not exceed 0.965 pounds per ton of asphalt processed.

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

D.1.3 Volatile Organic Compounds [326 IAC 8-5-2]

Pursuant to 326 IAC 8-5-2, the Permittee shall use cutback asphalt or asphalt emulsion containing seven percent (7%) or less of 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) Any change or modification which adds the use of cold mix asphalt, requires prior IDEM, OAQ approval.

D.1.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements

D.1.5 Testing Requirements [326 IAC 2-1.1-11]

- (a) In order to demonstrate compliance with Condition D.1.1, the Permittee shall perform PM10 and PM2.5 testing for the cyclone and scrubber within 180 days of publication of the new or revised condensable PM10 and PM2.5 test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008 or within 180 days of initial re-start of the plant, whichever is later. This testing shall be conducted utilizing methods as approved by the Commissioner or within 180 days of initial re-start of the plant, whichever is later. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM2.5 includes filterable and condensable PM10 and PM2.5.
- (b) In order to demonstrate compliance with Condition D.1.2, the Permittee shall perform PM for the cyclone and scrubber testing within one hundred and eighty (180) days of initial re-start of the plant. This testing shall be conducted utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing. PM includes filterable and condensable PM.

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

D.1.6 Particulate Control

In order to comply with Conditions D.1.1 and D.1.2, the cyclone and scrubber for particulate control shall be in operation at all times the mixer is in operation.

D.1.7 Visible Emission Notations

- (a) Visible emission notations of stack (Stack #2) exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.1.8 Parametric Monitoring

- (a) The Permittee shall record the total static pressure drop across the scrubber used in conjunction with the mixer at least once per day when the mixer and is in operation. When for any one reading, the pressure drop across the scrubber is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions 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 instruments used for determining the pressure and temperature shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.9 Cyclone and Scrubber Failure Detection

In the event that a cyclone or scrubber failure is observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. The emission unit shall be shut down no later than the completion of the processing of material in the unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

D.1.10 Record Keeping Requirement

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

- (b) In order to document compliance with Condition D.1.7, the Permittee shall maintain records of visible emission notations of the mixer stack exhaust once per day. The Permittee shall include daily records when a visible emission notation is not taken and the reason for the lack of a visible emission notation (i.e. the process did not operate that day).
- (c) In order to document compliance with Condition D.1.8, the Permittee shall maintain daily records of the pressure drop across the scrubber controlling the mixer. The Permittee shall include in its daily recording when a pressure drop is not taken and the reason for the lack of a pressure drop reading (i.e. the process did not operate that day).
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.11 Reporting Requirements

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

SECTION E.1 New Source Performance Standards (NSPS)

Emissions Unit Description:

- (a) One (1) hot mix batch mixer, equipped with a cyclone and scrubber connected in series for particulate control, exhausting through Stack #2, constructed in 1968, capacity: 100 tons per hour. [An affected facility under 40 CFR 60, Subpart I]
- (b) One (1) natural gas-fired dryer-burner, rated at 40 million British thermal units per hour, exhausting through Stack #2, installed in 1986. [An affected facility under 40 CFR 60, Subpart I]
- (c) One (1) natural gas-fired hot oil heater rated at 1.5 million British thermal units per hour, exhausting through Stack #1, installed in 1986, replaced in-kind in 1996. [An affected facility under 40 CFR 60, Subpart I]
- (d) One (1) pug mill, installed in 1986, capacity: 2 tons of asphalt per batch. [An affected facility under 40 CFR 60, Subpart I]
- (e) Three (3) liquid asphalt storage tanks, installed in 1986, exhausting through Stack #1, capacity: 15,000, 10,000 and 10,000 gallons, respectively. [An affected facility under 40 CFR 60, Subpart I]

This source does not use slag or produce cold mix asphalt.

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

E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1][40 CFR Part 60, Subpart A]

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

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

E.1.2 Standards of Performance for Hot Mix Asphalt Facilities [40 CFR Part 60, Subpart I]

Pursuant to 40 CFR Part 60, Subpart I, the Permittee shall comply with the provisions of Standards of Performance for Hot Mix Asphalt Facilities, which are incorporated by reference as 326 IAC 12 for the entire source as specified as follows.

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

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

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

Source Name: Onyx Paving Company
Source Address: 6201 E 525 N, Seymour, Indiana 47274
Mailing Address: 101 N Poplar, Seymour, IN 47274
FESOP Permit No.: 071-28331-03180

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Date:

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

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

Source Name: Onyx Paving Company
Source Address: 6201 E 525 N, Seymour, Indiana 47274
Mailing Address: 101 N Poplar, Seymour, IN 47274
FESOP Permit No.: 071-28331-03180

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

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

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

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

Page 2 of 2

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

FESOP Quarterly Report

Source Name: Onyx Paving Company
 Source Address: 6201 E 525 N, Seymour, Indiana 47274
 Mailing Address: 101 N Poplar, Seymour, IN 47274
 FESOP Permit No.: 071-28331-03180
 Facility: Mixer
 Parameter: Hot mix asphalt production
 Limit: The amount of asphalt processed shall not exceed four hundred ninety-two thousand two hundred forty-one (492,241) tons per twelve (12) month consecutive period, with compliance determined at the end of each month

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Hot Mix Asphalt Processed This Month	Hot Mix Asphalt Processed Previous 11 Months	12 Month Total Hot Mix Asphalt Processed (tons)
Month 1			
Month 2			
Month 3			

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

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

Attach a signed certification to complete this report.

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

Source Name: Onyx Paving Company
 Source Address: 6201 E 525 N, Seymour, Indiana 47274
 Mailing Address: 101 N Poplar, Seymour, IN 47274
 FESOP Permit No.: 071-28331-03180

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 "No deviations occurred this reporting period".</p>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
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.

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

**Onyx Paving Company
6201 E 525 N
Seymour, IN 47274**

Attachment A

Title 40: Protection of Environment

Part 60 - Standards of Performance for New Stationary Sources

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

F071-28331-03180

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

[Browse Previous](#) | [Browse Next](#)

Subpart I—Standards of Performance for Hot Mix Asphalt Facilities

§ 60.90 Applicability and designation of affected facility.

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

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

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

§ 60.91 Definitions.

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

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

[51 FR 12325, Apr. 10, 1986]

§ 60.92 Standard for particulate matter.

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

- (1) Contain particulate matter in excess of 90 mg/dscm (0.04 gr/dscf).
- (2) Exhibit 20 percent opacity, or greater.

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

§ 60.93 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).

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

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

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

[54 FR 6667, Feb. 14, 1989]

Indiana Department of Environmental Management
Office of Air Quality

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

Source Background and Description

Source Name:	Onyx Paving Company
Source Location:	6201 E 525 N, Seymour, IN 47274
County:	Jackson
SIC Code:	2951
Permit Renewal No.:	071-28331-03180
Permit Reviewer:	Jillian Bertram

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Onyx Paving Company relating to the operation of a stationary hot mix asphalt production source. The source does not use slag or produce cold mix.

History

On August 10, 2009, Onyx Paving Company submitted an application to the OAQ requesting to renew its operating permit. Onyx Paving Company was issued a FESOP Renewal on March 5, 2004.

Emission Units and Pollution Control Equipment Operated without a Permit

- (a) One (1) hot mix batch mixer, equipped with a cyclone and scrubber connected in series for particulate control, exhausting through Stack #2, constructed in 1968, capacity: 100 tons per hour, with no slag usage.
- (b) One (1) natural gas-fired dryer-burner, rated at 40 million British thermal units per hour, exhausting through Stack #2, installed in 1986.
- (c) One (1) natural gas-fired hot oil heater rated at 1.5 million British thermal units per hour, exhausting through Stack #1, installed in 1986, replaced in-kind in 1996.
- (d) One (1) pug mill, installed in 1986, capacity: 2 tons of asphalt per batch.
- (e) Three (3) liquid asphalt storage tanks, installed in 1986, exhausting through Stack #1, capacity: 15,000, 10,000 and 10,000 gallons, respectively.

Insignificant Activities

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.
- (b) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 British thermal units per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 British thermal units per hour.
- (c) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.

- (d) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment. (326 IAC 6-3-2)
- (e) Closed loop heating and cooling systems.
- (f) Heat exchanger cleaning and repair.
- (g) Unpaved roads and parking lots with public access.

Existing Approvals

Since the issuance of the FESOP Renewal (071-17214-03180) on March 5, 2004, the source has not been issued any additional approvals.

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

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

NSPS I has been added to the permit, see Federal Rule Applicability section of this document for an explanation.

- (b) Fugitive emissions are now counted toward the source-wide potential to emit; this is because NSPS I was issued before August 7, 1980.
- (c) Limits have been changed due to the addition of fugitive emissions.
- (d) Emission factors and calculations have been updated.
- (e) Monitoring has changed from once per shift to once per day.
- (f) Various administrative changes (ex. IDEM contact addresses, model language).

Enforcement Issue

IDEM is aware that the previous permit for this source expired prior to submittal of an application for renewal. The subject equipment is listed in this Technical Support Document under the condition entitled "Emission Units and Pollution Control Equipment Operated without a Permit".

- (a) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the operation permit rules.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Jackson County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective December 29, 2005, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM2.5.	

(a) Ozone Standards

- (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, and St. Joseph Counties as attainment for the 8-hour ozone standard.
- (3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph Counties as attainment for the 8-hour ozone standard.
- (4) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Jackson County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) PM2.5

Jackson County has been classified as attainment for PM2.5. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, and the effective date of these rules was July 15th, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM2.5 emissions until 326 IAC 2-2 is revised.

(c) Other Criteria Pollutants

Jackson County has been classified as attainment or unclassifiable in Indiana for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(d) Fugitive Emissions

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

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Pollutant	tons/year
PM	14036.51
PM ₁₀	1978.80
PM _{2.5}	124.19
SO ₂	2.02
NO _x	18.18
VOC	11.13
CO	177.01

HAPs	tons/year
xylene	1.22
hexane	0.33
formaldehyde	0.04
Total	3.48

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM₁₀, PM_{2.5}, and CO are equal to or greater than 100 tons per year. The source is subject to the provisions of 326 IAC 2-7. However, the source has agreed to limit their PM₁₀, PM_{2.5}, and CO emissions to less than Title V levels, therefore the source will be issued a FESOP Renewal.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants are less than 100 tons per year.
- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year.

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

Process/ Emission Unit	Potential To Emit (tons/year)							
	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	VOC	CO	HAPs
Ducted Emissions								
Dryer fuel Combustion	0.33	1.33	1.33	0.11	17.50	0.96	14.70	0.33
Dryer/Mixer and Batch Tower	237.56	94.71	95.76	1.13	6.15	2.02	98.45	1.32
Hot Oil Heater Fuel Combustion	0.01	0.05	0.05	0.00	0.66	0.04	0.55	0.01
Fugitive Emissions								
Asphalt Load-Out, Silo Filling, On-Site Yard	0.14	0.14	0.14	0	0	3.00	0.29	0.05
Material Storage Piles	0.10	0.03	0.03	0	0	0	0	0
Material Processing and Handling	1.59	0.75	0.11	0	0	0	0	0
Material Crushing, Screening, and Conveying	7.81	2.85	2.85	0	0	0	0	0
Unpaved Roads	1.79	0.46	0.05	0	0	0	0	0
Total Emissions	249.00	99.00	99.00	1.14	18.16	11.90	99.29	1.38

(a) FESOP Status

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

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

- (1) The amount of asphalt processed shall not exceed four hundred ninety-two thousand two hundred forty-one (492,241) tons per twelve (12) month consecutive period, with compliance determined at the end of each month.
- (2) The PM10 emissions from the mixer shall not exceed 0.385 pounds per ton of asphalt processed.
- (3) The PM2.5 emissions from the mixer shall not exceed 0.389 pounds per ton of asphalt processed.

- (4) The CO emissions from the mixer shall not exceed 0.400 pounds per ton of asphalt processed.
- (5) The VOC emissions from the mixer shall not exceed 0.036 pounds per ton of asphalt processed.

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

Notes:

- The source is able to comply with these limits using only an asphalt processing limit, no fuel usage limit is necessary.
- Limits in the previous approval were written as pounds of pollutant per hour limitations. This approval is written with pounds of pollutant per ton of asphalt produced limits and an asphalt production limit. A PM2.5 limit was also added, as this is now a regulated pollutant under 326 IAC 2-8 and 326 IAC 2-2.

(b) PSD Minor Source

This renewal to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

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

- (1) The amount of asphalt processed shall not exceed four hundred ninety-two thousand two hundred forty-one (492,241) tons per twelve (12) month consecutive period, with compliance determined at the end of each month.
- (2) The PM emissions from the mixer shall not exceed 0.965 pounds per ton of asphalt processed.

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

(c) Fugitive Emissions

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

Federal Rule Applicability

The following federal rules are applicable to the source:

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

- (b) This source is now subject to the New Source Performance Standard for Standards of Performance for Hot Mix Asphalt Facilities (40 CFR 60.9, Subpart I), which is incorporated by reference as 326 IAC 12. This source is a hot mix asphalt facility and the dryer-burner and the hot oil heater were both constructed after June 11, 1973.

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

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

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

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Jackson County and the potential to emit of each criteria pollutant is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

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

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

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

This rule applies to any paving application in the State of Indiana. Pursuant to this rule, no person shall cause or allow the use of cutback asphalt or asphalt emulsion containing more than seven percent (7%) oil distillate by volume of emulsion for any paving except the following purposes:

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

The applicant has agreed to limit the percent distillate in the liquid binder to five percent (5%) and therefore will comply with this rule.

State Rule Applicability – Individual Facilities

Mixer

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

326 IAC 6-3 does not apply because the mixer is subject to a more stringent limit of 0.04 gr/dcsf in 40 CFR 60.9, New Source Performance Standards for Hot Mix Asphalt Facilities.

326 IAC 7 (Sulfur Dioxide Rules)

326 IAC 7 does not apply because the mixer does not combust oil or coal.

Hot oil heater

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

326 IAC 6-3 does not apply because the heater is subject to a more stringent limit of 0.04 gr/dscf in 40 CFR 60.9, New Source Performance Standards for Hot Mix Asphalt Facilities.

326 IAC 7 (Sulfur Dioxide Rules)

326 IAC 7 does not apply because the heater does not combust oil or coal.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

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

The mixer has applicable compliance determination conditions as specified below:

Control	Parameter	Frequency	Range	Excursions and Exceedances
Cyclone	Visible Emissions Failure Detection	Daily	Normal-Abnormal	Response Steps
Scrubber	Pressure Drop	Daily	3.0 to 6.0 inches	Response Steps

These monitoring conditions are necessary because the cyclone and scrubber for the dryer/mixer must operate properly to ensure compliance with 326 IAC 2-7 (Part 70) and 326 IAC 2-8 (FESOP).

The testing requirements applicable to this source are as follows:

Emission Unit	Control Device	Timeframe for Testing	Pollutant	Frequency of Testing	Limit or Requirement
Mixer	cyclone/scrubber	180 days after initial re-start of plant*	PM	Once every 5 years	0.865 lb/ton asphalt processed
Mixer	cyclone/scrubber	180 days after initial re-start of plant or within 180 days of promulgation of the new test method, whichever is later*	PM10/PM2.5**	Once every 5 years	0.385 lb/ton asphalt processed

* The limits have been changed for this renewal because fugitive emissions have been included and new emission factors have been used, therefore, the source is required to re-test. The source is not currently operating, therefore tests will be required within 180 days of plant re-start.

** PM2.5 testing methods are not yet approved by the USEPA, PM10 currently serves as a surrogate for PM2.5. PM2.5 testing will be required within 180 days of approval of a PM2.5 test method or within 180 days of plant re-start, whichever is later.

Recommendation

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

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

An application for the purposes of this review was received on August 10, 2009.

Conclusion

The operation of this stationary hot mix asphalt plant shall be subject to the conditions of the attached FESOP Renewal 071-28331-03180.

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

Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

Asphalt Plant Maximum Capacity

Maximum Hourly Asphalt Production =	100	ton/hr									
Maximum Annual Asphalt Production =	876,000	ton/yr									
Maximum Annual Slag Usage =	367,920	ton/yr		0	% sulfur						
Maximum Dryer Fuel Input Rate =	40.0	MMBtu/hr									
Natural Gas Usage =	350	MMCF/yr									
No. 2 Fuel Oil Usage =	0	gal/yr, and		0.00	% sulfur						
No. 4 Fuel Oil Usage =	0	gal/yr, and		0.00	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and		0.00	% sulfur						
Propane Usage =	0	gal/yr, and		0.00	gr/100 ft3 sulfur						
Butane Usage =	0	gal/yr, and		0.00	gr/100 ft3 sulfur						
Used/Waste Oil Usage =	0	gal/yr, and		0.00	% sulfur	0.00	% ash	0.000	% chlorine,	0.000	% lead
Unlimited PM Dryer/Mixer Emission Factor =	32.0	lb/ton of asphalt production									
Unlimited PM10 Dryer/Mixer Emission Factor =	4.5	lb/ton of asphalt production									
Unlimited PM2.5 Dryer/Mixer Emission Factor =	0.27	lb/ton of asphalt production									
Unlimited VOC Dryer/Mixer Emission Factor =	0.008	lb/ton of asphalt production									
Unlimited CO Dryer/Mixer Emission Factor =	0.4	lb/ton of asphalt production									
Unlimited Slag SO2 Dryer/Mixer Emission Factor =	0.00	lb/ton of slag processed									

Unlimited/Uncontrolled Emissions

Process Description	Unlimited/Uncontrolled Potential to Emit (tons/year)									
	Criteria Pollutants							Hazardous Air Pollutants		
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Case HAP	
Ducted Emissions										
Dryer Fuel Combustion (worst case)	0.33	1.33	1.33	0.11	17.52	0.96	14.72	0.33	0.32	(hydrogen chloride)
Dryer/Mixer and Batch Tower (Process)	14016.00	1971.00	118.26	38.54	52.56	15.77	175.20	0.00	0.00	(formaldehyde)
Dryer/Mixer Slag Processing	0	0	0	0.00	0	0	0	0	0	
Hot Oil Heater Fuel Combustion (worst case)	0.01	0.05	0.05	0.00	0.66	0.04	0.55	0.012	0.012	(hexane)
Worst Case Emissions*	14016.01	1971.05	118.31	38.55	53.22	15.80	175.75	0.34	0.32	(hydrogen chloride)
Fugitive Emissions										
Asphalt Load-Out, Silo Filling, On-Site Yard	0.49	0.49	0.49	0	0	7.50	1.26	0.13	0.04	(formaldehyde)
Material Storage Piles	0.10	0.03	0.03	0	0	0	0	0	0	
Material Processing and Handling	2.83	1.34	0.20	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	13.90	5.08	5.08	0	0	0	0	0	0	
Unpaved and Paved Roads (worst case)	3.19	0.81	0.08	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	0	0.00	0	0.00	0.00	(xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0.00	0	0.00	0.00	(xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	negl	0	
Total Fugitive Emissions	20.50	7.75	5.88	0	0.00	7.50	1.26	0.13	0.00	(xylenes)
Totals Unlimited/Uncontrolled PTE	14036.51	1978.80	124.19	38.55	53.22	23.31	177.01	0.47	0.32	(xylenes)

negl = negligible

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

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

Fuel component percentages provided by the source.

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

Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

Asphalt Plant Maximum Capacity

Maximum Hourly Asphalt Production =	100	ton/hr									
Maximum Annual Asphalt Production =	876,000	ton/yr									
Maximum Annual Slag Usage =	367,920	ton/yr		0	% sulfur						
Maximum Dryer Fuel Input Rate =	40.0	MMBtu/hr									
Natural Gas Usage =	350	MMCF/yr									
No. 2 Fuel Oil Usage =	0	gal/yr, and		0.00	% sulfur						
No. 4 Fuel Oil Usage =	0	gal/yr, and		0.00	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and		0.00	% sulfur						
Propane Usage =	0	gal/yr, and		0.00	gr/100 ft3 sulfur						
Butane Usage =	0	gal/yr, and		0.00	gr/100 ft3 sulfur						
Used/Waste Oil Usage =	0	gal/yr, and		0.00	% sulfur	0.00	% ash	0.000	% chlorine,	0.000	% lead
Unlimited PM Dryer/Mixer Emission Factor =	32.0	lb/ton of asphalt production									
Unlimited PM10 Dryer/Mixer Emission Factor =	4.5	lb/ton of asphalt production									
Unlimited PM2.5 Dryer/Mixer Emission Factor =	0.27	lb/ton of asphalt production									
Unlimited VOC Dryer/Mixer Emission Factor =	0.008	lb/ton of asphalt production									
Unlimited CO Dryer/Mixer Emission Factor =	0.4	lb/ton of asphalt production									
Unlimited Slag SO2 Dryer/Mixer Emission Factor =	0.00	lb/ton of slag processed									

Unlimited/Uncontrolled Emissions

Process Description	Unlimited/Uncontrolled Potential to Emit (tons/year)									
	Criteria Pollutants							Hazardous Air Pollutants		
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Case HAP	
Ducted Emissions										
Dryer Fuel Combustion (worst case)	0.33	1.33	1.33	0.11	17.52	0.96	14.72	0.33	0.32	(hydrogen chloride)
Dryer/Mixer and Batch Tower (Process)	14016.00	1971.00	118.26	38.54	52.56	15.77	175.20	0.00	0.00	(formaldehyde)
Dryer/Mixer Slag Processing	0	0	0	0.00	0	0	0	0	0	
Hot Oil Heater Fuel Combustion (worst case)	0.01	0.05	0.05	0.00	0.66	0.04	0.55	0.012	0.012	(hexane)
Worst Case Emissions*	14016.01	1971.05	118.31	38.55	53.22	15.80	175.75	0.34	0.32	(hydrogen chloride)
Fugitive Emissions										
Asphalt Load-Out, Silo Filling, On-Site Yard	0.49	0.49	0.49	0	0	7.50	1.26	0.13	0.04	(formaldehyde)
Material Storage Piles	0.10	0.03	0.03	0	0	0	0	0	0	
Material Processing and Handling	2.83	1.34	0.20	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	13.90	5.08	5.08	0	0	0	0	0	0	
Unpaved and Paved Roads (worst case)	3.19	0.81	0.08	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	0	0.00	0	0.00	0.00	(xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0.00	0	0.00	0.00	(xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	negl	0	
Total Fugitive Emissions	20.50	7.75	5.88	0	0.00	7.50	1.26	0.13	0.00	(xylenes)
Totals Unlimited/Uncontrolled PTE	14036.51	1978.80	124.19	38.55	53.22	23.31	177.01	0.47	0.32	(xylenes)

negl = negligible

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

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

Fuel component percentages provided by the source.

Appendix A.1: Unlimited Emissions Calculations
Dryer/Mixer Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

The following calculations determine the unlimited/uncontrolled emissions created from the combustion of natural gas, fuel oil, propane, butane, or used/waste oil in the dryer/mixer at the source.

Maximum Capacity

Maximum Hourly Asphalt Production =	100	ton/hr
Maximum Annual Asphalt Production =	876,000	ton/yr
Maximum Fuel Input Rate =	40	MMBtu/hr
Natural Gas Usage =	350	MMCF/yr
No. 2 Fuel Oil Usage =	0	gal/yr, and
No. 4 Fuel Oil Usage =	0	gal/yr, and
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and
Propane Usage =	0	gal/yr, and
Butane Usage =	0	gal/yr, and
Used/Waste Oil Usage =	0	gal/yr, and
	0.00	% sulfur
	0.00	% sulfur
	0.00	% sulfur
	0.00	gr/100 ft3 sulfur
	0.00	gr/100 ft3 sulfur
	0.00	% sulfur
	0.00	% ash
	0.000	% chlorine
	0.000	% lead

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units)									Unlimited/Uncontrolled Potential to Emit (tons/yr)							Worse Case Fuel (tons/yr)
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/ Diesel Engine (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/ Waste Oil (tons/yr)			
PM	1.9	2.0	7.0	3.22	0.5	0.6	0.0	43.4	0.33	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.33
PM10/PM2.5	7.6	3.3	8.3	4.72	0.5	0.6	0.0	43.4	1.33	0.00	0.00	0.00	0.000	0.000	0.00	0.00	1.33
SO2	0.6	0.0	0.0	0.0	0.000	0.000	0.0	40.6	0.11	0.00	0.00	0.00	0.000	0.000	0.00	0.00	0.11
NOx	100	20.0	20.0	55.0	13.0	15.0	19.0	617.4	17.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.52
VOC	5.5	0.20	0.20	0.28	1.00	1.10	1.0	49.0	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	133.0	14.7168	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.72
Hazardous Air Pollutant																	
HCl								0.0									0.00
Antimony			5.25E-03	5.25E-03				negl			0.00E+00	0.00E+00					negl
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03				1.1E-01	3.5E-05	0.00E+00	0.00E+00	0.00E+00					0.00E+00
Beryllium	1.2E-05	4.2E-04	2.79E-05	2.79E-05				negl	2.1E-06	0.00E+00	0.00E+00	0.00E+00					negl
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04				9.3E-03	1.9E-04	0.00E+00	0.00E+00	0.00E+00					0.00E+00
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04				2.0E-02	2.5E-04	0.00E+00	0.00E+00	0.00E+00					0.00E+00
Cobalt	8.4E-05	6.02E-03	6.02E-03	6.02E-03				2.1E-04	1.5E-05	0.00E+00	0.00E+00	0.00E+00					0.00E+00
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03				0	8.8E-05	0.00E+00	0.00E+00	0.00E+00					0.0E+00
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03				6.8E-02	6.7E-05	0.00E+00	0.00E+00	0.00E+00					0.00E+00
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04					4.6E-05	0.00E+00	0.00E+00	0.00E+00					4.6E-05
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02				1.1E-02	3.7E-04	0.00E+00	0.00E+00	0.00E+00					0.00E+00
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04				negl	4.2E-06	0.00E+00	0.00E+00	0.00E+00					negl
1,1,1-Trichloroethane			2.36E-04	2.36E-04							0.00E+00	0.00E+00					0.0E+00
1,3-Butadiene								5.47E-03									0.0E+00
Acetaldehyde								1.07E-01									0.0E+00
Acrolein								1.30E-02									0.0E+00
Benzene	2.1E-03		2.14E-04	2.14E-04				1.31E-01	3.7E-04	0.00E+00	0.00E+00						3.7E-04
Bis(2-ethylhexyl)phthalate								2.2E-03									0.00E+00
Dichlorobenzene	1.2E-03							8.0E-07	2.1E-04								0.00E+00
Ethylbenzene			6.36E-05	6.36E-05						0.00E+00	0.00E+00						0.0E+00
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				1.65E-01	1.3E-02	0.00E+00	0.00E+00	0.00E+00					0.013
Hexane	1.8E+00								0.32								0.315
Phenol								2.4E-03									0.00E+00
Toluene	3.4E-03		6.20E-03	6.20E-03					5.73E-02	6.0E-04	0.00E+00	0.00E+00					6.0E-04
Total PAH Haps	negl		1.13E-03	1.13E-03				3.9E-02	2.3E-02	negl	0.00E+00	0.00E+00					0.00E+00
Polycyclic Organic Matter		3.30E-03								0.00E+00							0.0E+00
Xylene			1.09E-04	1.09E-04					3.99E-02		0.00E+00	0.00E+00					0.0E+00
Total HAPS									0.33	0.00	0.00	0.00	0	0	0.00	0.33	

Methodology

Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
 Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
 Propane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0905 MMBtu]
 Butane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0974 MMBtu]
 Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
 All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
 Sources of AP-42 Emission Factors for fuel combustion:

- Natural Gas: AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
- No. 2, No. 4, and No. 6 Fuel Oil: AP-42 Chapter 1.3 (dated 9/98), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-4, 1.3-9, 1.3-10, and 1.3-11
- Propane and Butane: AP-42 Chapter 1.5 (dated 7/08), Tables 1.5-1 (assuming PM = PM10)
- Waste Oil: AP-42 Chapter 1.11 (dated 10/96), Tables 1.11-1, 1.11-2, 1.11-3, 1.11-4, and 1.11-5

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

Abbreviations

- PM = Particulate Matter
- PM10 = Particulate Matter (<10 um)
- PM2.5 = Particulate Matter (< 2.5 um)
- SO2 = Sulfur Dioxide
- NOx = Nitrous Oxides
- VOC = Volatile Organic Compounds
- CO = Carbon Monoxide
- HAP = Hazardous Air Pollutant

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

**Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram**

The following calculations determine the unlimited/uncontrolled emissions from the aggregate drying/mixing and the batch tower.

Maximum Hourly Asphalt Production = ton/hr
Maximum Annual Asphalt Production = ton/yr

Criteria Pollutant	Uncontrolled Emission Factors (lb/ton)			Unlimited/Uncontrolled Potential to Emit (tons/yr)			Worse Case PTE
	Batch-Mix Plant (dryer, hot screens, and mixer)			Batch-Mix Plant (dryer, hot screens, and mixer)			
	Natural Gas	No. 2 Fuel Oil	Waste Oil	Natural Gas	No. 2 Fuel Oil	Waste Oil	
PM*	32	32	32	14016	14016	14016	14016
PM10*	4.5	4.5	4.5	1971	1971	1971	1971
PM2.5*	0.27	0.27	0.27	118.26	118.26	118.26	118.3
SO2**	0.0046	0.088	0.088	2.0	38.5	38.5	38.5
NOx**	0.025	0.12	0.12	11.0	52.6	52.6	52.6
VOC**	0.0082	0.0082	0.036	3.6	3.6	15.8	15.8
CO***	0.4	0.4	0.4	175.2	175.2	175.2	175.2
Hazardous Air Pollutant							
Arsenic	4.60E-07	4.60E-07	4.60E-07	2.01E-04	2.01E-04	2.01E-04	2.01E-04
Beryllium	1.50E-07	1.50E-07	1.50E-07	6.57E-05	6.57E-05	6.57E-05	6.57E-05
Cadmium	6.10E-07	6.10E-07	6.10E-07	2.67E-04	2.67E-04	2.67E-04	2.67E-04
Chromium	5.70E-07	5.70E-07	5.70E-07	2.50E-04	2.50E-04	2.50E-04	2.50E-04
Lead	8.90E-07	8.90E-07	1.00E-05	3.90E-04	3.90E-04	4.38E-03	4.38E-03
Manganese	6.90E-06	6.90E-06	6.90E-06	3.02E-03	3.02E-03	3.02E-03	3.02E-03
Mercury	4.10E-07	4.10E-07	4.10E-07	1.80E-04	1.80E-04	1.80E-04	1.80E-04
Nickel	3.00E-06	3.00E-06	3.00E-06	1.31E-03	1.31E-03	1.31E-03	1.31E-03
Selenium	4.90E-07	4.90E-07	4.90E-07	2.15E-04	2.15E-04	2.15E-04	2.15E-04
Acetaldehyde	3.20E-04	3.20E-04	3.20E-04	0.14	0.12	0.14	0.14
Benzene	2.80E-04	2.80E-04	2.80E-04	0.12	0.12	0.12	0.12
Ethylbenzene	2.20E-03	2.20E-03	2.20E-03	0.96	0.96	0.96	0.96
Formaldehyde	7.40E-04	7.40E-04	7.40E-04	0.32	0.32	0.32	0.32
Quinone	2.70E-04	2.70E-04	2.70E-04	0.12	0.12	0.12	0.12
Toluene	1.00E-03	1.00E-03	1.00E-03	0.44	0.44	0.44	0.44
Total PAH Haps	1.10E-04	1.10E-04	2.30E-04	0.05	0.05	0.10	0.10
Xylene	2.70E-03	2.70E-03	2.70E-03	1.18	1.18	1.18	1.18

Total HAPs 3.40

Worst Single HAP 1.18 (formaldehyde)

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

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-1, 11.1-2, 11.1-5, 11.1-6, 11.1-19, and 11.1-11

Natural gas, No. 2 fuel oil, and waste oil represent the worst possible emissions scenario. AP-42 did not provide emission factors for any other fuels.

* PM, PM10, and PM2.5 AP-42 emission factors based on drum mix dryer fired with natural gas, propane, fuel oil, and waste oil. According to AP-42 fuel type does not significantly effect PM, PM10, and PM2.5 emissions.

** SO2, NOx, and VOC AP-42 emission factors are for natural gas, No. 2 fuel oil, and waste oil only.

*** CO AP-42 emission factor determined by combining data from drum mix dryer fired with natural gas, No. 6 fuel oil, and No. 2 fuel oil to develop single CO emission factor.

Abbreviations

VOC - Volatile Organic Compounds

HAP = Hazardous Air Pollutant

HCl = Hydrogen Chloride

PAH = Polyaromatic Hydrocarbon

SO2 = Sulfur Dioxide

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

Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

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

Maximum Annual Slag Usage* = ton/yr % sulfur

	Emission Factor (lb/ton)**	Unlimited Potential to Emit (tons/yr)
Criteria Pollutant	Slag Processing	Slag Processing
SO2	0.00	0.0

Methodology

The source does not use slag.

Abbreviations

SO2 = Sulfur Dioxide

Appendix A.1: Unlimited Emissions Calculations
Hot Oil Heater
Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Onyx Paving Company
Source Location: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

Maximum Hot Oil Heater Fuel Input Rate = 1.50 MMBtu/hr
 Natural Gas Usage = 13 MMCF/yr
 No. 2 Fuel Oil Usage = 0 gal/yr, and 0.00 % sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		Worse Case Fuel (tons/yr)
	Hot Oil Heater		Hot Oil Heater		
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	
PM	1.9	2.0	0.012	0.000	0.01
PM10/PM2.5	7.6	3.3	0.050	0.000	0.05
SO2	0.6	71.0	0.004	0.000	0.00
NOx	100	20.0	0.657	0.000	0.66
VOC	5.5	0.20	0.036	0.000	0.04
CO	84	5.0	0.552	0.000	0.55
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	1.3E-06	0.00E+00	1.3E-06
Beryllium	1.2E-05	4.2E-04	7.9E-08	0.00E+00	7.9E-08
Cadmium	1.1E-03	4.2E-04	7.2E-06	0.00E+00	7.2E-06
Chromium	1.4E-03	4.2E-04	9.2E-06	0.00E+00	9.2E-06
Cobalt	8.4E-05		5.5E-07		5.5E-07
Lead	5.0E-04	1.3E-03	3.3E-06	0.00E+00	3.3E-06
Manganese	3.8E-04	8.4E-04	2.5E-06	0.00E+00	2.5E-06
Mercury	2.6E-04	4.2E-04	1.7E-06	0.00E+00	1.7E-06
Nickel	2.1E-03	4.2E-04	1.4E-05	0.00E+00	1.4E-05
Selenium	2.4E-05	2.1E-03	1.6E-07	0.00E+00	1.6E-07
Benzene	2.1E-03		1.4E-05		1.4E-05
Dichlorobenzene	1.2E-03		7.9E-06		7.9E-06
Ethylbenzene					0.0E+00
Formaldehyde	7.5E-02	6.10E-02	4.9E-04	0.00E+00	4.9E-04
Hexane	1.8E+00		0.01		1.2E-02
Phenol					0.0E+00
Toluene	3.4E-03		2.2E-05		2.2E-05
Total PAH Haps	negl		negl		0.0E+00
Polycyclic Organic Matter		3.30E-03		0.00E+00	0.0E+00
Total HAPs =			1.2E-02	0.0E+00	0.012

Methodology

Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
 Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
 Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
 All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
 Sources of AP-42 Emission Factors for fuel combustion:
 Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
 No. 2 Fuel Oil: AP-42 Chapter 1.3 (dated 9/98), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11

Abbreviations

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

**Appendix A.1: Unlimited Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions**

**Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram**

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

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.5	
Maximum Annual Asphalt Production =	876,000	tons/yr

Pollutant	Emission Factor (lb/ton asphalt)			Unlimited/Uncontrolled Potential to Emit (tons/yr)			
	Load-Out	Silo Filling	On-Site Yard	Load-Out	Silo Filling	On-Site Yard	Total
Total PM*	5.2E-04	5.9E-04	NA	0.23	0.26	NA	0.49
Organic PM	3.4E-04	2.5E-04	NA	0.15	0.111	NA	0.26
TOC	0.004	0.012	0.001	1.82	5.34	0.482	7.6
CO	0.001	0.001	3.5E-04	0.59	0.517	0.154	1.26

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

PM/HAPs	0.011	0.013	0	0.023
VOC/HAPs	0.027	0.068	0.007	0.102
non-VOC/HAPs	1.4E-04	1.4E-05	3.7E-05	1.9E-04
non-VOC/non-HAPs	0.13	0.08	0.03	0.24

Total VOCs	1.71	5.34	0.5	7.5
Total HAPs	0.04	0.08	0.007	0.13
		Worst Single HAP		0.039
				(formaldehyde)

Methodology

The asphalt temperature and volatility factor were provided by the source.

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

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-14, 11.1-15, and 11.1-16

Plant Load-Out Emission Factor Equations (AP-42 Table 11.1-14)::

Total PM/PM10/PM2.5 Ef = 0.000181 + 0.00141(-V)e^{-(0.0251)(T+460)-20.43)}

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

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

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

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

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

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

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

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

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

*No emission factors available for PM10 or PM2.5, therefore IDEM assumes PM10 and PM2.5 are equivalent to Total PM.

Abbreviations

TOC = Total Organic Compounds

CO = Carbon Monoxide

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

**Appendix A.1: Unlimited Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)**

Company Name: Onyx Paving Company
 Source Address: 6201 E 525 N Seymour, IN 47274
 Permit Number: 071-28331-03180
 Reviewer: Jillian Bertram

Organic Particulate-Based Compounds (Table 11.1-15)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Unlimited/Uncontrolled Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of Total Organic PM)	Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)	Load-out	Silo Filling	Onsite Yard	Total
PAH HAPs										
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	0.47%	3.9E-04	5.2E-04	NA	9.1E-04
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	4.2E-05	1.6E-05	NA	5.7E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	1.0E-04	1.4E-04	NA	2.5E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	2.8E-05	6.2E-05	NA	9.1E-05
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	1.1E-05	0	NA	1.1E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	3.3E-06	0	NA	3.3E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	2.8E-06	0	NA	2.8E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	3.4E-06	0	NA	3.4E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	1.2E-05	1.1E-05	NA	2.2E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	1.5E-04	2.3E-04	NA	3.9E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	5.5E-07	0	NA	5.5E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	7.5E-05		NA	7.5E-05
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	1.1E-03	1.1E-03	NA	2.3E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	7.0E-07	0	NA	7.0E-07
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	3.6E-03	5.9E-03	NA	0.009
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	1.9E-03	2.0E-03	NA	3.9E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	3.3E-05	3.3E-05	NA	6.6E-05
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	1.2E-03	2.0E-03	NA	3.2E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	2.2E-04	4.9E-04	NA	7.1E-04
Total PAH HAPs							0.009	0.013	NA	0.021
Other semi-volatile HAPs										
Phenol		PM/HAP	---	Organic PM	1.18%	0	1.8E-03	0	0	1.8E-03

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

Methodology

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

Abbreviations

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

**Appendix A.1: Unlimited Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)**

Organic Volatile-Based Compounds (Table 11.1-16)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Unlimited/Uncontrolled Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of TOC)	Silo Filling and Asphalt Storage Tank (% by weight of TOC)	Load-out	Silo Filling	Onsite Yard	Total
VOC		VOC	---	TOC	94%	100%	1.71	5.34	0.45	7.50
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	1.2E-01	1.4E-02	3.1E-02	0.164
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	8.4E-04	2.9E-03	2.2E-04	0.004
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	1.3E-02	5.9E-02	3.4E-03	0.075
Total non-VOC/non-HAPS					7.30%	1.40%	0.133	0.075	0.035	0.24
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	9.5E-04	1.7E-03	2.5E-04	2.9E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	1.7E-04	2.6E-04	4.6E-05	4.8E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	8.9E-04	2.1E-03	2.4E-04	3.2E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	2.4E-04	8.5E-04	6.3E-05	1.2E-03
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	3.8E-06	2.1E-04	1.0E-06	2.2E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	2.7E-04	1.2E-03	7.2E-05	1.6E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	2.0E-03	0	5.3E-04	2.5E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	5.1E-03	2.0E-03	1.3E-03	0.008
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	1.6E-03	3.7E-02	4.2E-04	0.039
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	2.7E-03	5.3E-03	7.2E-04	0.009
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	3.3E-05	1.7E-05	8.7E-06	5.8E-05
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	1.4E-05	0	1.4E-05
MTBE	1634-04-4	VOC/HAP	---	TOC	0	0	0	0	0	0
Styrene	100-42-5	VOC/HAP	---	TOC	0.0073%	0.0054%	1.3E-04	2.9E-04	3.5E-05	4.6E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	1.4E-04	0	3.7E-05	1.8E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	3.8E-03	3.3E-03	1.0E-03	0.008
1,1,1-Trichloroethane	71-55-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichloroethene	79-01-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichlorofluoromethane	75-69-4	VOC/HAP	---	TOC	0.0013%	0	2.4E-05	0	6.3E-06	3.0E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	7.5E-03	1.1E-02	2.0E-03	0.020
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	1.5E-03	3.0E-03	3.9E-04	4.9E-03
Total volatile organic HAPs					1.50%	1.30%	0.027	0.069	0.007	0.104

Methodology

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

Abbreviations

TOC = Total Organic Compounds
 HAP = Hazardous Air Pollutant
 VOC = Volatile Organic Compound
 MTBE = Methyl tert butyl ether

**Appendix A.1: Unlimited Emissions Calculations
Material Storage Piles**

Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8,760 hours of use and USEPA's AP-42 (Pre 1983 Edition), Section 11.2.3.

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

where E_f = emission factor (lb/acre/day)
 s = silt content (wt %)
 p = days of rain greater than or equal to 0.01 inches
 f = % of wind greater than or equal to 12 mph

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10/PM2.5 (tons/yr)
Sand	2.6	3.01	0.10	0.055	0.019
Limestone	1.6	1.85	0.12	0.041	0.014
RAP	0.5	0.58	0.00	0.000	0.000
Gravel	1.6	1.85	0.00	0.000	0.000
Slag	3.8	4.40	0.00	0.000	0.000
Totals				0.10	0.03

Methodology

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

PTE of PM10/PM2.5 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%

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

**Maximum anticipated pile size (acres) provided by the source.

RAP - recycled asphalt pavement

Abbreviations

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

PM2.5 = PM10

PTE = Potential to Emit

Appendix A.1: Unlimited Emissions Calculations
Material Processing, Handling, Crushing, Screening, and Conveying

Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

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

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

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

where: E_f = Emission factor (lb/ton)

k (PM) =	0.74	= particle size multiplier (0.74 assumed for aerodynamic diameter <=100 um)
k (PM10) =	0.35	= particle size multiplier (0.35 assumed for aerodynamic diameter <=10 um)
k (PM2.5) =	0.053	= particle size multiplier (0.053 assumed for aerodynamic diameter <=2.5 um)
U =	10.2	= worst case annual mean wind speed (Source: NOAA, 2006*)
M =	4.0	= material % moisture content of aggregate (Source: AP-42 Section 11.1.1.1)
Ef (PM) =	2.27E-03	lb PM/ton of material handled
Ef (PM10) =	1.07E-03	lb PM10/ton of material handled
Ef (PM2.5) =	1.62E-04	lb PM2.5/ton of material handled

Maximum Annual Asphalt Production =	876,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	832,200	tons/yr

Type of Activity	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM10 (tons/yr)	Unlimited/Uncontrolled PTE of PM2.5 (tons/yr)
Truck unloading of materials into storage piles	0.94	0.45	0.07
Front-end loader dumping of materials into feeder bins	0.94	0.45	0.07
Conveyor dropping material into dryer/mixer or batch tower	0.94	0.45	0.07
Total (tons/yr)	2.83	1.34	0.20

Methodology

The percent asphalt cement/binder provided by the source.
 Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
 Unlimited Potential to Emit (tons/yr) = (Maximum Material Handling Throughput (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
 Raw materials may include limestone, sand, recycled asphalt pavement (RAP), gravel, slag, and other additives
 *Worst case annual mean wind speed (Indianapolis, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2006

Material Screening and Conveying (AP-42 Section 11.19.2)

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

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM10 (lbs/ton)*	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM10/PM2.5 (tons/yr)**
Crushing	0.0054	0.0024	2.25	1.00
Screening	0.025	0.0087	10.40	3.62
Conveying	0.003	0.0011	1.25	0.46
Unlimited Potential to Emit (tons/yr) =			13.90	5.08

Methodology

Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
 Unlimited Potential to Emit (tons/yr) = [Maximum Material Handling Throughput (tons/yr)] * [Emission Factor (lb/ton)] * [ton/2000 lbs]
 Raw materials may include stone/gravel, slag, and recycled asphalt pavement (RAP)
 Emission Factors from AP-42 Chapter 11.19.2 (dated 8/04), Table 11.19.2-2
 *Uncontrolled emissions factors for PM/PM10 represent tertiary crushing of stone with moisture content ranging from 0.21 to 1.3 percent by weight (Table 11.19.2-2). The bulk moisture content of aggregate in the storage piles at a hot mix asphalt production plant typically stabilizes between 3 to 5 percent by weight (Source: AP-42 Section 11.1.1.1).
 **Assumes PM10 = PM2.5

Abbreviations

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

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

Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

Unpaved Roads at Industrial Site

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

Maximum Annual Asphalt Production	876,000	tons/yr
Percent Asphalt Cement/Binder (weight %)	5.0%	
Maximum Material Handling Throughput	832,200	tons/yr
Maximum Asphalt Cement/Binder Throughput	43,800	tons/yr
Maximum No. 2 Fuel Oil Usage	0	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	28.0	22.4	50.4	3.7E+04	1.9E+06	168	0.032	1182.1
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	28.0	0	28.0	3.7E+04	1.0E+06	168	0.032	1182.1
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.0	0.0	0.0	0.0E+00	0.0E+00	0	0.000	0.0
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.0	0	0.0	0.0E+00	0.0E+00	0	0.000	0.0
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.0	0.0	0.0	0.0E+00	0.0E+00	0	0.000	0.0
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.0	0.0	0.0	0.0E+00	0.0E+00	0	0.000	0.0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0.0	0.0	0.0	0.0E+00	0.0E+00	0	0.000	0.0
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0.0	0.0	0.0	0.0E+00	0.0E+00	0	0.000	0.0
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.0	0.0	0.0	0.0E+00	0.0E+00	0	0.000	0.0
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.0	0	0.0	0.0E+00	0.0E+00	0	0.000	0.0
Total						7.4E+04	2.9E+06		2.4E+03

Average Vehicle Weight Per Trip = $\frac{39.2}{0.032}$ tons/trip
Average Miles Per Trip = $\frac{0.032}{0.032}$ miles/trip

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

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
W =	39.2	39.2	39.2	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

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

Mitigated Emission Factor, $E_{ext} = E_f \cdot [(365 - P)/365]$
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, E_f	8.20	2.09	0.21	lb/mile
Mitigated Emission Factor, E_{ext}	5.39	1.37	0.14	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	4.85	1.24	0.12	3.19	0.81	0.08	1.59	0.41	0.04
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	4.85	1.24	0.12	3.19	0.81	0.08	1.59	0.41	0.04
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.000	0.000	0.00	0.000	0.000	0.00	0.000	0.000	0.00
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.000	0.000	0.00	0.000	0.000	0.00	0.000	0.000	0.00
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.000	0.000	0.00	0.000	0.000	0.00	0.000	0.000	0.00
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.000	0.000	0.00	0.000	0.000	0.00	0.000	0.000	0.00
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals		9.70	2.47	0.25	6.38	1.62	0.16	3.19	0.81	0.08

Methodology

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

Abbreviations

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

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

Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

Paved Roads at Industrial Site

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

Maximum Annual Asphalt Production	= 876,000	tons/yr
Percent Asphalt Cement/Binder (weight %)	= 5.0%	
Maximum Material Handling Throughput	= 832,200	tons/yr
Maximum Asphalt Cement/Binder Throughput	= 43,800	tons/yr
Maximum No. 2 Fuel Oil Usage	= 0	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per day (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	0.0	0.0	0.00	0.0E+00	0.0E+00	0	0.000	0.0
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.0	0	0.00	0.0E+00	0.0E+00	0	0.000	0.0
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.0	0.00	0.00	0.0E+00	0.0E+00	0	0.000	0.0
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.0	0	0.00	0.0E+00	0.0E+00	0	0.000	0.0
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.0	0.00	0.00	0.0E+00	0.0E+00	0	0.000	0.0
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.0	0	0.00	0.0E+00	0.0E+00	0	0.000	0.0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0.0	0.00	0.00	0.0E+00	0.0E+00	0	0.000	0.0
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0.0	0	0.00	0.0E+00	0.0E+00	0	0.000	0.0
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.0	0.00	0.00	0.0E+00	0.0E+00	0	0.000	0.0
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.0	0	0.00	0.0E+00	0.0E+00	0	0.000	0.0
Total					0.0E+00	0.0E+00			0.0E+00

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

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

	PM	PM10	PM2.5	
where k =	0.082	0.016	0.0024	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	0.0	0.0	0.0	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	0.00036	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)
sL =	0.6	0.6	0.6	g/m^2 = Ubiquitous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months)

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

Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
 where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
 N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.00	0.00	0.00	lb/mile
Mitigated Emission Factor, Eext =	0.00	0.00	0.00	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.000	0.000	0.0E+00	0.000	0.000	0.0E+00	0.000	0.0E+00	0.0E+00
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.000	0.000	0.0E+00	0.000	0.000	0.0E+00	0.000	0.0E+00	0.0E+00
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Methodology

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

Abbreviations

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

**Appendix A.1: Unlimited Emissions Calculations
Cold Mix Asphalt Production and Stockpiles**

Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

The following calculations determine the amount of VOC and HAP emissions created from volatilization of solvent used as diluent in the liquid binder for cold mix asphalt production

Maximum Annual Asphalt Production =	876,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	0.0%	
Maximum Asphalt Cement/Binder Throughput =	0	tons/yr

Volatile Organic Compounds

	Maximum weight % of VOC solvent in binder*	Weight % VOC solvent in binder that evaporates	Maximum VOC Solvent Usage (tons/yr)	PTE of VOC (tons/yr)
Cut back asphalt rapid cure (assuming gasoline or naphtha solvent)	25.3%	95.0%	0.0	0.0
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	0.0	0.0
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	0.0	0.0
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	0.0	0.0
Other asphalt with solvent binder	25.9%	2.5%	0.0	0.0
Worst Case PTE of VOC =				0.0

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0% Xylenes
PTE of Total HAPs (tons/yr) =	0.00
PTE of Single HAP (tons/yr) =	0.00 Xylenes

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

Volatile Organic HAP	CAS#	Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents				
		Gasoline	Kerosene	Diesel (#2) Fuel Oil	No. 2 Fuel Oil	No. 6 Fuel Oil
1,3-Butadiene	106-99-0	3.70E-5%				
2,2,4-Trimethylpentane	540-84-1	2.40%				
Acenaphthene	83-32-9		4.70E-5%		1.80E-4%	
Acenaphthylene	208-96-8		4.50E-5%		6.00E-5%	
Anthracene	120-12-7		1.20E-6%	5.80E-5%	2.80E-5%	5.00E-5%
Benzene	71-43-2	1.90%		2.90E-4%		
Benzo(a)anthracene	56-55-3			9.60E-7%	4.50E-7%	5.50E-4%
Benzo(a)pyrene	50-32-8			2.20E-6%	2.10E-7%	4.40E-5%
Benzo(g,h,i)perylene	191-24-2			1.20E-7%	5.70E-8%	
Biphenyl	92-52-4			6.30E-4%	7.20E-5%	
Chrysene	218-01-9			4.50E-7%	1.40E-6%	6.90E-4%
Ethylbenzene	100-41-4	1.70%		0.07%	3.40E-4%	
Fluoranthene	206-44-0		7.10E-6%	5.90E-5%	1.40E-5%	2.40E-4%
Fluorene	86-73-7		4.20E-5%	8.60E-4%	1.90E-4%	
Indeno(1,2,3-cd)pyrene	193-39-5			1.60E-7%		1.00E-4%
Methyl-tert-butylether	1634-04-4	0.33%				
Naphthalene	91-20-3	0.25%	0.31%	0.26%	0.22%	4.20E-5%
n-Hexane	110-54-3	2.40%				
Phenanthrene	85-01-8		8.60E-6%	8.80E-4%	7.90E-4%	2.10E-4%
Pyrene	129-00-0		2.40E-6%	4.60E-5%	2.90E-5%	2.30E-5%
Toluene	108-88-3	8.10%		0.18%	6.20E-4%	
Total Xylenes	1330-20-7	9.00%		0.50%	0.23%	
Total Organic HAPs		26.08%	0.33%	1.29%	0.68%	0.19%
Worst Single HAP		9.00%	0.31%	0.50%	0.23%	0.07%
		Xylenes	Naphthalene	Xylenes	Xylenes	Chrysene

Methodology

Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]
 Maximum VOC Solvent Usage (tons/yr) = [Maximum Asphalt Cement/Binder Throughput (tons/yr)] * [Maximum Weight % of VOC Solvent in Binder]
 PTE of VOC (tons/yr) = [Weight % VOC solvent in binder that evaporates] * [Maximum VOC Solvent Usage (tons/yr)]
 PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]
 PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]
 *Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Composition of Petroleum Mixtures. The Association for Environmental Health and Science. Available on the Internet at:
<http://www.aehs.com/publications/catalog/contents/tpH.htm>

Abbreviations

VOC = Volatile Organic Compounds
 PTE = Potential to Emit

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

**Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram**

To calculate evaporative emissions from the gasoline dispensing fuel transfer and dispensing operation handling emission factors from AP-42 Table 5.2-7 were used. The total potential emission of VOC is as follows:

$$\begin{aligned} \text{Gasoline Throughput} &= \boxed{0} \text{ gallons/day} \\ &= \boxed{0.0} \text{ kgal/yr} \end{aligned}$$

Volatile Organic Compounds

Emission Source	Emission Factor (lb/kgal of throughput)	PTE of VOC (tons/yr)*
Filling storage tank (balanced submerged filling)	0.3	0.00
Tank breathing and emptying	1.0	0.00
Vehicle refueling (displaced losses - controlled)	1.1	0.00
Spillage	0.7	0.00
Total		0.00

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0% Xylenes
Limited PTE of Total HAPs (tons/yr) =	0.00
Limited PTE of Single HAP (tons/yr) =	0.00 Xylenes

Methodology

The gasoline throughput was provided by the source.

Gasoline Throughput (kgal/yr) = [Gasoline Throughput (lbs/day)] * [365 days/yr] * [kgal/1000 gal]

PTE of VOC (tons/yr) = [Gasoline Throughput (kgal/yr)] * [Emission Factor (lb/kgal)] * [ton/2000 lb]

PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]

PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]

*Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Composition of Petroleum Mixtures. The Association for Environmental Health and Science. Available on the Internet at: <http://www.aehs.com/publications/catalog/contents/tp.htm>

Abbreviations

VOC = Volatile Organic Compounds

PTE = Potential to Emit

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

Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

Asphalt Plant Limitations

Maximum Hourly Asphalt Production =	100	ton/hr								
Annual Asphalt Production Limitation =	492,241	ton/yr								
Slag Usage Limitation =	0	ton/yr	0.00	% sulfur						
Natural Gas Limitation =	350	MMCF/yr								
No. 2 Fuel Oil Limitation =	0	gal/yr, and	0.00	% sulfur						
No. 4 Fuel Oil Limitation =	0	gal/yr, and	0.00	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and	0.00	% sulfur						
Propane Limitation =	0	gal/yr, and	0.00	gr/100 ft3 sulfur						
Butane Limitation =	0	gal/yr, and	0.00	gr/100 ft3 sulfur						
Used/Waste Oil Limitation =	0	gal/yr, and	0.00	% sulfur	0.00	% ash	0.000	% chlorine,	0.000	% lead
PM Dryer/Mixer Limitation =	0.965	lb/ton of asphalt production								
PM10 Dryer/Mixer Limitation =	0.385	lb/ton of asphalt production								
PM2.5 Dryer/Mixer Limitation =	0.389	lb/ton of asphalt production								
CO Dryer/Mixer Limitation =	0.4	lb/ton of asphalt production								
VOC Dryer/Mixer Limitation =	0.036	lb/ton of asphalt production								
Slag SO2 Dryer/Mixer Limitation =	0.000	lb/ton of slag processed								
Cold Mix Asphalt VOC Usage Limitation =		tons/yr								
HCl Limitation =	0	lb/kgal								

Limited/Controlled Emissions

Process Description	Limited/Controlled Potential Emissions (tons/year)									
	Criteria Pollutants							Hazardous Air Pollutants		
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Case HAP	
Ducted Emissions										
Dryer Fuel Combustion (worst case)	0.33	1.33	1.33	0.11	17.50	0.96	14.70	0.33	0.32	(hydrogen chloride)
Dryer/Mixer and Batch Tower (Process)	237.56	94.71	95.76	21.66	29.53	8.86	98.45	2.62	0.76	(formaldehyde)
Dryer/Mixer Slag Processing	0	0	0	0.00	0	0	0	0	0	
Hot Oil Heater Fuel Combustion (worst case)	0.01	0.05	0.05	0.00	0.66	0.04	0.55	0.01	0.012	(hexane)
Worst Case Emissions*	237.57	94.76	95.81	21.66	30.19	8.90	99.00	2.64	0.76	(hydrogen chloride)
Fugitive Emissions										
Asphalt Load-Out, Silo Filling, On-Site Yard	0.14	0.14	0.14	0	0	3.00	0.29	0.05	0.00	(formaldehyde)
Material Storage Piles	0.10	0.03	0.03	0	0	0	0	0	0	
Material Processing and Handling	1.59	0.75	0.11	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	7.81	2.85	2.85	0	0	0	0	0	0	
Unpaved and Paved Roads (worst case)	1.79	0.46	0.05	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	0	0.00	0	0.00	0.00	(xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0.00	0	0.00	0.00	(xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	negl	negl	
Total Fugitive Emissions	11.43	4.24	3.19	0	0	3.00	0.29	0.05	0.00	(xylenes)
Totals Limited/Controlled Emissions	249.00	99.00	99.00	21.66	30.19	11.90	99.29	2.68	0.76	(xylenes)

negl = negligible

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

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

Fuel component percentages provided by the source.

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

Company Name: Onyx Paving Company
 Source Address: 6201 E 525 N Seymour, IN 47274
 Permit Number: 071-28331-03180
 Reviewer: Jillian Bertram

The following calculations determine the limited emissions created from the combustion of natural gas, fuel oil, propane, butane, or used/waste oil in the dryer/mixer and all other fuel combustion sources at the source.

Production and Fuel Limitations

Maximum Hourly Asphalt Production =	100	ton/hr
Annual Asphalt Production Limitation =	492,241	ton/yr
Natural Gas Limitation =	350	MMCF/yr
No. 2 Fuel Oil Limitation =	0	gal/yr, and
No. 4 Fuel Oil Limitation =	0	gal/yr, and
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and
Propane Limitation =	0	gal/yr, and
Butane Limitation =	0	gal/yr, and
Used/Waste Oil Limitation =	0	gal/yr, and

0.00	% sulfur
0.00	% sulfur
0.00	% sulfur
0.00	gr/100 ft3 sulfur
0.00	gr/100 ft3 sulfur
0.00	% sulfur
0.00	% ash
0.000	% chlorine
0.000	% lead

Limited Emissions

Criteria Pollutant	Emission Factor (units)								Limited Potential to Emit (tons/yr)							
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Residual Fuel Oil (No. 5 or No. 6) (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/Waste Oil (lb/kgal)	Diesel Engine (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual Fuel Oil (No. 5 or No. 6) (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/Waste Oil (tons/yr)	Worst Case Fuel (tons/yr)
PM	1.9	2.0	7.0	3.22	0.5	0.6	0.0	43.4	0.33	0.00	0.00	0.00	0.000	0.000	0.00	0.33
PM10	7.6	3.3	8.3	4.72	0.5	0.6	0	43.4	1.33	0.00	0.00	0.00	0.000	0.000	0.00	1.33
SO2	0.6	0.0	0.0	0.0	0.00	0.00	0.0	40.6	0.11	0.00	0.00	0.00	0.000	0.000	0.00	0.11
NOx	100	20.0	20.0	55.0	13.0	15.0	19.0	617.4	17.50	0.00	0.00	0.00	0.00	0.00	0.00	17.50
VOC	5.5	0.20	0.20	0.28	1.0	1.10	1.0	49.0	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.96
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	133.0	14.70	0.00	0.00	0.00	0.00	0.00	0.00	14.70
Hazardous Air Pollutant																
HCl							0.0								0.00	0.00
Antimony			5.25E-03	5.25E-03			negl				0.00E+00	0.00E+00			negl	0.0E+00
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03			1.1E-01		3.5E-05	0.00E+00	0.00E+00	0.00E+00			0.00E+00	3.5E-05
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05			negl		2.1E-06	0.00E+00	0.00E+00	0.00E+00			negl	2.1E-06
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04			9.3E-03		1.9E-04	0.00E+00	0.00E+00	0.00E+00			0.00E+00	1.9E-04
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02		2.5E-04	0.00E+00	0.00E+00	0.00E+00			0.00E+00	2.5E-04
Cobalt	8.4E-05		6.02E-03	6.02E-03			2.1E-04		1.5E-05		0.00E+00	0.00E+00			0.00E+00	1.5E-05
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03			0		8.8E-05	0.00E+00	0.00E+00	0.00E+00			0.0E+00	0.00
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03			6.8E-02		6.7E-05	0.00E+00	0.00E+00	0.00E+00			0.00E+00	0.00
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04					4.6E-05	0.00E+00	0.00E+00	0.00E+00			0.00E+00	4.6E-05
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02		3.7E-04	0.00E+00	0.00E+00	0.00E+00			0.00E+00	0.00
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl		4.2E-06	0.00E+00	0.00E+00	0.00E+00			negl	4.2E-06
1,1,1-Trichloroethane			2.36E-04	2.36E-04							0.00E+00	0.00E+00				0.0E+00
1,3-Butadiene								5.47E-03								0.0E+00
Acetaldehyde								1.07E-01								0.0E+00
Acrolein								1.30E-02								0.0E+00
Benzene	2.1E-03		2.14E-04	2.14E-04				1.31E-01	3.7E-04		0.00E+00	0.00E+00				3.7E-04
Bis(2-ethylhexyl)phthalate								2.2E-03								0.00E+00
Dichlorobenzene	1.2E-03							8.0E-07	2.1E-04						0.00E+00	2.1E-04
Ethylbenzene			6.36E-05	6.36E-05							0.00E+00	0.00E+00				0.0E+00
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				1.65E-01	1.3E-02	0.00E+00	0.00E+00	0.00E+00				0.013
Hexane	1.8E+00								0.32							0.315
Phenol							2.4E-03								0.00E+00	0.0E+00
Toluene	3.4E-03		6.20E-03	6.20E-03				5.73E-02	6.0E-04		0.00E+00	0.00E+00				6.0E-04
Total PAH Haps	negl		1.13E-03	1.13E-03				3.9E-02	2.35E-02	negl					0.00E+00	0.0E+00
Polycyclic Organic Matter		3.30E-03								0.00E+00						0.0E+00
Xylene			1.09E-04	1.09E-04					3.99E-02		0.00E+00	0.00E+00				0.0E+00
Total HAPs									0.33	0.00	0.00	0.00	0	0	0.00	0.33

Methodology

Natural Gas: Limited Potential to Emit (tons/yr) = (Natural Gas Limitation (MMCF/yr)) * (Emission Factor (lb/MMCF)) * (ton/2000 lbs)
 All Other Fuels: Limited Potential to Emit (tons/yr) = (Fuel Limitation (gals/yr)) * (Emission Factor (lb/kgal)) * (kgal/1000 gal) * (ton/2000 lbs)
 Sources of AP-42 Emission Factors for fuel combustion:
 Natural Gas: AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
 No. 2, No. 4, and No. 6 Fuel Oil: AP-42 Chapter 1.3 (dated 9/98), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11
 Propane and Butane: AP-42 Chapter 1.5 (dated 7/08), Tables 1.5-1 (assuming PM = PM10)
 Waste Oil: AP-42 Chapter 1.11 (dated 10/96), Tables 1.11-1, 1.11-2, 1.11-3, 1.11-4, and 1.11-5

Abbreviations
 PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 SO2 = Sulfur Dioxide
 NOx = Nitrous Oxides
 VOC = Volatile Organic Compounds
 CO = Carbon Monoxide

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

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

Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

The following calculations determine the limited emissions from the aggregate drying/mixing and the batch tower.

Maximum Hourly Asphalt Production =	100	ton/hr
Annual Asphalt Production Limitation =	492,241	ton/yr
PM Dryer/Mixer Limitation =	0.965	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation =	0.385	lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation =	0.389	lb/ton of asphalt production
CO Dryer/Mixer Limitation =	0.400	lb/ton of asphalt production
VOC Dryer/Mixer Limitation =	0.036	lb/ton of asphalt production

Criteria Pollutant	Emission Factor or Limitation (lb/ton)			Limited/Controlled Potential to Emit (tons/yr)			Worst Case PTE
	Batch-Mix Plant (dryer, hot screens, and mixer)			Batch-Mix Plant (dryer, hot screens, and mixer)			
	Natural Gas	No. 2 Fuel Oil	Waste Oil	Natural Gas	No. 2 Fuel Oil	Waste Oil	
PM	0.965	0.965	0.965	237.6	237.6	237.6	237.6
PM10	0.385	0.385	0.385	94.7	94.7	94.7	94.7
PM2.5	0.389	0.389	0.389	95.8	95.8	95.8	95.8
SO2*	0.0046	0.088	0.088	1.1	21.7	21.7	21.7
NOx*	0.025	0.12	0.12	6.2	29.5	29.5	29.5
VOC	0.036	0.036	0.036	8.9	8.9	8.9	8.9
CO**	0.400	0.400	0.400	98.4	98.4	98.4	98.4
Hazardous Air Pollutant							
HCl			2.10E-04			0.05	0.05
Antimony	1.80E-07	1.80E-07	1.80E-07	4.43E-05	4.43E-05	4.43E-05	4.43E-05
Arsenic	5.60E-07	5.60E-07	5.60E-07	1.38E-04	1.38E-04	1.38E-04	1.38E-04
Beryllium	negl	negl	negl	negl	negl	negl	0.00E+00
Cadmium	4.10E-07	4.10E-07	4.10E-07	1.01E-04	1.01E-04	1.01E-04	1.01E-04
Chromium	5.50E-06	5.50E-06	5.50E-06	1.35E-03	1.35E-03	1.35E-03	1.35E-03
Cobalt	2.60E-08	2.60E-08	2.60E-08	6.40E-06	6.40E-06	6.40E-06	6.40E-06
Lead	6.20E-07	1.50E-05	1.50E-05	1.53E-04	3.69E-03	3.69E-03	3.69E-03
Manganese	7.70E-06	7.70E-06	7.70E-06	1.90E-03	1.90E-03	1.90E-03	1.90E-03
Mercury	2.40E-07	2.60E-06	2.60E-06	5.91E-05	6.40E-04	6.40E-04	6.40E-04
Nickel	6.30E-05	6.30E-05	6.30E-05	1.55E-02	1.55E-02	1.55E-02	1.55E-02
Selenium	3.50E-07	3.50E-07	3.50E-07	8.61E-05	8.61E-05	8.61E-05	8.61E-05
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	9.84E-03	9.84E-03	9.84E-03	9.84E-03
Acetaldehyde			1.30E-03			0.32	0.32
Acrolein			2.60E-05			6.40E-03	6.40E-03
Benzene	3.90E-04	3.90E-04	3.90E-04	0.10	0.10	0.10	0.10
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0.06	0.06	0.06	0.06
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	0.76	0.76	0.76	0.76
Hexane	9.20E-04	9.20E-04	9.20E-04	0.23	0.23	0.23	0.23
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0.01	0.01	0.01	0.01
MEK			2.00E-05			0.00	0.00
Propionaldehyde			1.30E-04			0.03	0.03
Quinone			1.60E-04			0.04	0.04
Toluene	1.50E-04	2.90E-03	2.90E-03	0.04	0.71	0.71	0.71
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0.05	0.22	0.22	0.22
Xylene	2.00E-04	2.00E-04	2.00E-04	0.05	0.05	0.05	0.05
Total HAPs							2.62
Worst Single HAP							0.76297293 (formaldehyde)

Methodology

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

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-1, 11.1-2, 11.1-5, 11.1-6, 11.1-19, and 11.1-11

Natural gas, No. 2 fuel oil, and waste oil represent the worst possible emissions scenario. AP-42 did not provide emission factors for any other fuels.

* SO2 and NOx AP-42 emission factors are for natural gas, No. 2 fuel oil, and waste oil only.

** CO AP-42 emission factor determined by combining data from batch mix dryer fired with natural gas, No. 6 fuel oil, and No. 2 fuel oil to develop single CO emission factor.

Abbreviations

VOC = Volatile Organic Compounds

HAP = Hazardous Air Pollutant

HCl = Hydrogen Chloride

PAH = Polyaromatic Hydrocarbon

SO2 = Sulfur Dioxide

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

Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

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

Slag Usage Limitation = ton/yr
 SO2 Slag Limitation = lb/ton of slag processed % sulfur

	Emission Factor or Limitation (lb/ton)*	Limited Potential to Emit (tons/yr)
Criteria Pollutant	Slag Processing	Slag Processing
SO2	0.000	0.0

Methodology

The source does not use slag.

Abbreviations

SO2 = Sulfur Dioxide

Appendix A.2: Limited Emissions Summary
Hot Oil Heater
Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Onyx Paving Company
Source Location: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

Maximum Hot Oil Heater Fuel Input Rate = 1.50 MMBtu/hr
 Natural Gas Usage = 13 MMCF/yr
 No. 2 Fuel Oil Usage = 0 gal/yr, and 0.00 % sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		Worse Case Fuel (tons/yr)
	Hot Oil Heater		Hot Oil Heater		
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	
PM	1.9	2.0	0.012	0.000	0.01
PM10/PM2.5	7.6	3.3	0.050	0.000	0.05
SO2	0.6	71.0	0.004	0.000	0.00
NOx	100	20.0	0.657	0.000	0.66
VOC	5.5	0.20	0.036	0.000	0.04
CO	84	5.0	0.552	0.000	0.55
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	1.3E-06	0.00E+00	1.3E-06
Beryllium	1.2E-05	4.2E-04	7.9E-08	0.00E+00	7.9E-08
Cadmium	1.1E-03	4.2E-04	7.2E-06	0.00E+00	7.2E-06
Chromium	1.4E-03	4.2E-04	9.2E-06	0.00E+00	9.2E-06
Cobalt	8.4E-05		5.5E-07		5.5E-07
Lead	5.0E-04	1.3E-03	3.3E-06	0.00E+00	3.3E-06
Manganese	3.8E-04	8.4E-04	2.5E-06	0.00E+00	2.5E-06
Mercury	2.6E-04	4.2E-04	1.7E-06	0.00E+00	1.7E-06
Nickel	2.1E-03	4.2E-04	1.4E-05	0.00E+00	1.4E-05
Selenium	2.4E-05	2.1E-03	1.6E-07	0.00E+00	1.6E-07
Benzene	2.1E-03		1.4E-05		1.4E-05
Dichlorobenzene	1.2E-03		7.9E-06		7.9E-06
Ethylbenzene					0
Formaldehyde	7.5E-02	6.10E-02	4.9E-04	0.00E+00	0.000
Hexane	1.8E+00		0.01		0.012
Phenol					0
Toluene	3.4E-03		2.2E-05		2.2E-05
Total PAH Haps	negl		negl		0
Polycyclic Organic Matter		3.30E-03		0.00E+00	0.0E+00
Total HAPs =			1.2E-02	0.0E+00	0.012

Methodology

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

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

Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]

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

Sources of AP-42 Emission Factors for fuel combustion:

Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4

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

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 SO2 = Sulfur Dioxide
 NOx = Nitrous Oxides
 VOC - Volatile Organic Compounds

CO = Carbon Monoxide
 HAP = Hazardous Air Pollutant
 HCl = Hydrogen Chloride
 PAH = Polyaromatic Hydrocarbon

**Appendix A.2: Limited Emissions Summary
Asphalt Load-Out, Silo Filling, and Yard Emissions**

Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

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

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.5	
Annual Asphalt Production Limitation =	492,241	tons/yr

Pollutant	Emission Factor (lb/ton asphalt)			Limited Potential to Emit (tons/yr)			
	Load-Out	Silo Filling	On-Site Yard	Load-Out	Silo Filling	On-Site Yard	Total
Total PM*	5.2E-04	5.9E-04	NA	0.13	0.14	NA	0.27
Organic PM	3.4E-04	2.5E-04	NA	0.08	0.062	NA	0.15
TOC	0.004	0.012	0.001	1.02	3.00	0.271	4.3
CO	0.001	0.001	3.5E-04	0.33	0.290	0.087	0.71

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

PM/HAPs	0.006	0.007	0	0.013
VOC/HAPs	0.015	0.038	0.004	0.057
non-VOC/HAPs	7.9E-05	8.1E-06	2.1E-05	1.1E-04
non-VOC/non-HAPs	0.07	0.04	0.02	0.14

Total VOCs	0.96	3.00	0.3	4.2
Total HAPs	0.02	0.05	0.004	0.07
Worst Single HAP				0.022
				(formaldehyde)

Methodology

The asphalt temperature and volatility factor were provided by the source.

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

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-14, 11.1-15, and 11.1-16

Plant Load-Out Emission Factor Equations (AP-42 Table 11.1-14)::

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

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

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

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

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

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

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

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

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

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

*No emission factors available for PM10 or PM2.5, therefore IDEM assumes PM10 and PM2.5 are equivalent to Total PM.

Abbreviations

TOC = Total Organic Compounds

CO = Carbon Monoxide

PM = Particulate

Matter

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

**Appendix A.2: Limited Emissions Summary
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)**

Company Name: Onyx Paving Company
 Source Address: 6201 E 525 N Seymour, IN 47274
 Permit Number: 071-28331-03180
 Reviewer: Jillian Bertram

Organic Particulate-Based Compounds (Table 11.1-15)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Limited Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of Total Organic PM)	Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)	Load-out	Silo Filling	Onsite Yard	Total
PAH HAPs										
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	0.47%	2.2E-04	2.9E-04	NA	5.1E-04
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	2.3E-05	8.7E-06	NA	3.2E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	5.9E-05	8.1E-05	NA	1.4E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	1.6E-05	3.5E-05	NA	5.1E-05
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	6.4E-06	0	NA	6.4E-06
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	1.8E-06	0	NA	1.8E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	1.6E-06	0	NA	1.6E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	1.9E-06	0	NA	1.9E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	6.5E-06	5.9E-06	NA	1.2E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	8.6E-05	1.3E-04	NA	2.2E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	3.1E-07	0	NA	3.1E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	4.2E-05	9.4E-05	NA	1.4E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	6.5E-04	6.3E-04	NA	1.3E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	3.9E-07	0	NA	3.9E-07
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	2.0E-03	3.3E-03	NA	0.005
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	1.0E-03	1.1E-03	NA	2.2E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	1.8E-05	1.9E-05	NA	3.7E-05
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	6.8E-04	1.1E-03	NA	1.8E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	1.3E-04	2.7E-04	NA	4.0E-04
Total PAH HAPs							0.005	0.007	NA	0.012
Other semi-volatile HAPs										
Phenol		PM/HAP	---	Organic PM	1.18%	0	9.9E-04	0	0	9.9E-04

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

Methodology

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

Abbreviations

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

**Appendix A.2: Limited Emissions Summary
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)**

Organic Volatile-Based Compounds (Table 11.1-16)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Limited Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of TOC)	Silo Filling and Asphalt Storage Tank (% by weight of TOC)	Load-out	Silo Filling	Onsite Yard	Total
VOC		VOC	---	TOC	94%	100%	0.96	3.00	0.25	4.22
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	6.7E-02	7.8E-03	1.8E-02	0.092
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	4.7E-04	1.6E-03	1.2E-04	0.002
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	7.3E-03	3.3E-02	1.9E-03	0.042
Total non-VOC/non-HAPS					7.30%	1.40%	0.075	0.042	0.020	0.14
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	5.3E-04	9.6E-04	1.4E-04	1.6E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	9.8E-05	1.5E-04	2.6E-05	2.7E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	5.0E-04	1.2E-03	1.3E-04	1.8E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	1.3E-04	4.8E-04	3.5E-05	6.5E-04
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	2.1E-06	1.2E-04	5.7E-07	1.2E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	1.5E-04	6.9E-04	4.1E-05	8.8E-04
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	1.1E-03	0	3.0E-04	1.4E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	2.9E-03	1.1E-03	7.6E-04	0.005
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	9.0E-04	2.1E-02	2.4E-04	0.022
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	1.5E-03	3.0E-03	4.1E-04	0.005
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	1.8E-05	9.3E-06	4.9E-06	3.3E-05
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	8.1E-06	0	8.1E-06
MTBE	1634-04-4	VOC/HAP	---	TOC	0	0	0	0	0	0
Styrene	100-42-5	VOC/HAP	---	TOC	0.0073%	0.0054%	7.5E-05	1.6E-04	2.0E-05	2.6E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	7.9E-05	0	2.1E-05	1.0E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	2.1E-03	1.9E-03	5.7E-04	0.005
1,1,1-Trichloroethane	71-55-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichloroethene	79-01-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichlorofluoromethane	75-69-4	VOC/HAP	---	TOC	0.0013%	0	1.3E-05	0	3.5E-06	1.7E-05
m/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	4.2E-03	6.0E-03	1.1E-03	0.011
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	8.2E-04	1.7E-03	2.2E-04	2.7E-03
Total volatile organic HAPs					1.50%	1.30%	0.015	0.039	0.004	0.058

Methodology

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

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

Abbreviations

TOC = Total Organic Compounds

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

MTBE = Methyl tert butyl ether

**Appendix A.2: Limited Emissions Summary
Material Storage Piles**

Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

Note: Since the emissions from the storage piles are minimal, the limited emissions are equal to the unlimited emissions.

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8,760 hours of use and USEPA's AP-42 (Pre 1983 Edition), Section 11.2.3.

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

where E_f = emission factor (lb/acre/day)
 s = silt content (wt %)
 p = 125 days of rain greater than or equal to 0.01 inches
 f = 15 % of wind greater than or equal to 12 mph

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10/PM2.5 (tons/yr)
Sand	2.6	3.01	0.10	0.055	0.019
Limestone	1.6	1.85	0.12	0.041	0.014
RAP	0.5	0.58	0.00	0.000	0.000
Gravel	1.6	1.85	0.00	0.000	0.000
Slag	3.8	4.40	0.00	0.000	0.000
Totals				0.10	0.03

Methodology

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

PTE of PM10/PM2.5 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%

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

**Maximum anticipated pile size (acres) provided by the source.

RAP = recycled asphalt pavement

Abbreviations

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

PM2.5 = PM10

PTE = Potential to Emit

Appendix A.2: Limited Emissions Summary
Material Processing, Handling, Crushing, Screening, and Conveying

Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

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

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

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

where: E_f = Emission factor (lb/ton)

k (PM) =	0.74	= particle size multiplier (0.74 assumed for aerodynamic diameter <=100 um)
k (PM10) =	0.35	= particle size multiplier (0.35 assumed for aerodynamic diameter <=10 um)
k (PM2.5) =	0.053	= particle size multiplier (0.053 assumed for aerodynamic diameter <=2.5 um)
U =	10.2	= worst case annual mean wind speed (Source: NOAA, 2006*)
M =	4.0	= material % moisture content of aggregate (Source: AP-42 Section 11.1.1.1)
E_f (PM) =	2.27E-03	lb PM/ton of material handled
E_f (PM10) =	1.07E-03	lb PM10/ton of material handled
E_f (PM2.5) =	1.62E-04	lb PM2.5/ton of material handled

Annual Asphalt Production Limitation =	492,241	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	467,629	tons/yr

Type of Activity	Limited PTE of PM (tons/yr)	Limited PTE of PM10 (tons/yr)	Limited PTE of PM2.5 (tons/yr)
Truck unloading of materials into storage piles	0.53	0.25	0.04
Front-end loader dumping of materials into feeder bins	0.53	0.25	0.04
Conveyor dropping material into dryer/mixer or batch tower	0.53	0.25	0.04
Total (tons/yr)	1.59	0.75	0.11

Methodology

The percent asphalt cement/binder provided by the source.

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

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

Raw materials may include limestone, sand, recycled asphalt pavement (RAP), gravel, slag, and other additives

*Worst case annual mean wind speed (Indianapolis, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2006

Material Screening and Conveying (AP-42 Section 19.2.2)

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

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM10 (lbs/ton)*	Limited PTE of PM (tons/yr)	Limited PTE of PM10/PM2.5 (tons/yr)**
Crushing	0.0054	0.0024	1.26	0.56
Screening	0.025	0.0087	5.85	2.03
Conveying	0.003	0.0011	0.70	0.26
Limited Potential to Emit (tons/yr) =			7.81	2.85

Methodology

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

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

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

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

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

**Assumes PM10 = PM2.5

Abbreviations

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

PTE = Potential to Emit

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

Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

Unpaved Roads at Industrial Site

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

Annual Asphalt Production Limitation	492.241	tons/yr
Percent Asphalt Cement/Binder (weight %)	5.0%	
Maximum Material Handling Throughput	467.629	tons/yr
Maximum Asphalt Cement/Binder Throughput	24.612	tons/yr
No. 2 Fuel Oil Limitation	0	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	28.0	22.4	50.4	2.1E+04	1.1E+06	168	0.032	664.2
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	28.0	0	28.0	2.1E+04	5.8E+05	168	0.032	664.2
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.0	0.0	0.0	0.0E+00	0.0E+00	0	0.000	0.0
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.0	0	0.0	0.0E+00	0.0E+00	0	0.000	0.0
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.0	0.0	0.0	0.0E+00	0.0E+00	0	0.000	0.0
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.0	0	0.0	0.0E+00	0.0E+00	0	0.000	0.0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0.0	0.0	0.0	0.0E+00	0.0E+00	0	0.000	0.0
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0.0	0	0.0	0.0E+00	0.0E+00	0	0.000	0.0
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.0	0.0	0.0	0.0E+00	0.0E+00	0	0.000	0.0
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.0	0	0.0	0.0E+00	0.0E+00	0	0.000	0.0
Total						4.2E+04	1.6E+06		1.3E+03

Average Vehicle Weight Per Trip	39.2	tons/trip
Average Miles Per Trip	0.032	miles/trip

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

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
W =	39.2	39.2	39.2	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

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

Mitigated Emission Factor, E_{ext}	$E \cdot [(365 - P)/365]$
where P =	125
	days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, E_f	8.20	2.09	0.21	lb/mile
Mitigated Emission Factor, E_{ext}	5.39	1.37	0.14	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	2.72	0.69	0.07	1.79	0.46	0.05	0.90	0.23	0.02
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	2.72	0.69	0.07	1.79	0.46	0.05	0.90	0.23	0.02
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.000	0.000	0.00	0.000	0.000	0.0E+00	0.000	0.000	0.0E+00
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.000	0.000	0.00	0.000	0.000	0.0E+00	0.000	0.000	0.0E+00
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.000	0.000	0.0E+00	0.000	0.000	0.0E+00	0.000	0.000	0.0E+00
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.000	0.000	0.0E+00	0.000	0.000	0.0E+00	0.000	0.000	0.0E+00
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals		5.45	1.39	0.14	3.58	0.91	0.09	1.79	0.46	0.05

Methodology

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

Abbreviations

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

Appendix A.2: Limited Emissions Summary
Paved Roads

Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

Paved Roads at Industrial Site

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

Annual Asphalt Production Limitation	492,241	tons/yr
Percent Asphalt Cement/Binder (weight %)	5.0%	
Maximum Material Handling Throughput	467,629	tons/yr
Maximum Asphalt Cement/Binder Throughput	24,612	tons/yr
No. 2 Fuel Oil Limitation	0	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per day (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	0.0	0.0	0.00	0.0E+00	0.0E+00	0	0.000	0.0
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.0	0.0	0.00	0.0E+00	0.0E+00	0	0.000	0.0
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.0	0.0	0.00	0.0E+00	0.0E+00	0	0.000	0.0
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.0	0.0	0.00	0.0E+00	0.0E+00	0	0.000	0.0
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.0	0.0	0.00	0.0E+00	0.0E+00	0	0.000	0.0
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.0	0.0	0.00	0.0E+00	0.0E+00	0	0.000	0.0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0.0	0.0	0.00	0.0E+00	0.0E+00	0	0.000	0.0
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0.0	0.0	0.00	0.0E+00	0.0E+00	0	0.000	0.0
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.0	0.0	0.00	0.0E+00	0.0E+00	0	0.000	0.0
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.0	0.0	0.00	0.0E+00	0.0E+00	0	0.000	0.0
Total					0.0E+00	0.0E+00	0	0.000	0.0E+00

Average Vehicle Weight Per Trip = #DIV/0! tons/trip
Average Miles Per Trip = #DIV/0! miles/trip

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

	PM	PM10	PM2.5	
where k =	0.082	0.016	0.0024	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	#DIV/0!	#DIV/0!	#DIV/0!	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	0.00038	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)
sL =	0.6	0.6	0.6	g/m ² = Ubiquitous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months)

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

Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	#DIV/0!	#DIV/0!	#DIV/0!	lb/mile
Mitigated Emission Factor, Eext =	#DIV/0!	#DIV/0!	#DIV/0!	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Aggregate/RAP Loader Full	Front-end loader (3 CY)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Totals		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Methodology

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

Abbreviations

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

**Appendix A.2: Limited Emissions Summary
Cold Mix Asphalt Production and Stockpiles**

Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

The following calculations determine the amount of VOC and HAP emissions created from volatilization of solvent used as diluent in the liquid binder for cold mix asphalt production

Cold Mix Asphalt VOC Usage Limitation = tons/yr

Volatile Organic Compounds

	Maximum weight % of VOC solvent in binder	Weight % VOC solvent in binder that evaporates	VOC Solvent Usage Limitation (tons/yr)	Limited PTE of VOC (tons/yr)	Liquid Binder Adjustment Ratio
Cut back asphalt rapid cure (assuming gasoline or naphtha solvent)	25.3%	95.0%	0.0	0.0	0.000
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	0.0	0.0	0.000
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	0.0	0.0	0.000
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	0.0	0.0	0.000
Other asphalt with solvent binder	25.9%	2.5%	0.0	0.0	0.0
Worst Case Limited PTE of VOC =					0.0
					0.000
					0.000

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0% Xylenes
Limited PTE of Total HAPs (tons/yr) =	0.00
Limited PTE of Single HAP (tons/yr) =	0.00 Xylenes

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

Volatile Organic HAP	CAS#	Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents				
		Gasoline	Kerosene	Diesel (#2) Fuel Oil	No. 2 Fuel Oil	No. 6 Fuel Oil
1,3-Butadiene	106-99-0	3.70E-5%				
2,2,4-Trimethylpentane	540-84-1	2.40%				
Acenaphthene	83-32-9		4.70E-5%		1.80E-4%	
Acenaphthylene	208-96-8		4.50E-5%		6.00E-5%	
Anthracene	120-12-7		1.20E-6%	5.80E-5%	2.80E-5%	5.00E-5%
Benzene	71-43-2	1.90%		2.90E-4%		
Benzo(a)anthracene	56-55-3			9.60E-7%	4.50E-7%	5.50E-4%
Benzo(a)pyrene	50-32-8			2.20E-6%	2.10E-7%	4.40E-5%
Benzo(g,h,i)perylene	191-24-2			1.20E-7%	5.70E-8%	
Biphenyl	92-52-4			6.30E-4%	7.20E-5%	
Chrysene	218-01-9			4.50E-7%	1.40E-6%	6.90E-4%
Ethylbenzene	100-41-4	1.70%		0.07%	3.40E-4%	
Fluoranthene	206-44-0		7.10E-6%	5.90E-5%	1.40E-5%	2.40E-4%
Fluorene	86-73-7		4.20E-5%	8.60E-4%	1.90E-4%	
Indeno(1,2,3-cd)pyrene	193-39-5			1.60E-7%		1.00E-4%
Methyl-tert-butylether	1634-04-4	0.33%				
Naphthalene	91-20-3	0.25%	0.31%	0.26%	0.22%	4.20E-5%
n-Hexane	110-54-3	2.40%				
Phenanthrene	85-01-8		8.60E-6%	8.80E-4%	7.90E-4%	2.10E-4%
Pyrene	129-00-0		2.40E-6%	4.60E-5%	2.90E-5%	2.30E-5%
Toluene	108-88-3	8.10%		0.18%	6.20E-4%	
Total Xylenes	1330-20-7	9.00%		0.50%	0.23%	
Total Organic HAPs		26.08%	0.33%	1.29%	0.68%	0.19%
Worst Single HAP		9.00%	0.31%	0.50%	0.23%	0.07%
		Xylenes	Naphthalene	Xylenes	Xylenes	Chrysene

Methodology

Limited PTE of VOC (tons/yr) = [Weight % VOC solvent in binder that evaporates] * [VOC Solvent Usage Limitation (tons/yr)]
 Limited PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]
 Limited PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]
 *Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Composition of Petroleum Mixtures. The Association for Environmental Health and Science. Available on the Internet at: <http://www.aehs.com/publications/catalog/contents/tph.htm>

Abbreviations

VOC = Volatile Organic Compounds
 PTE = Potential to Emit

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

Company Name: Onyx Paving Company
Source Address: 6201 E 525 N Seymour, IN 47274
Permit Number: 071-28331-03180
Reviewer: Jillian Bertram

Note: Since the emissions from the gasoline fuel transfer and dispensing operation are minimal, the limited emissions are equal to the unlimited emissions.

To calculate evaporative emissions from the gasoline dispensing fuel transfer and dispensing operation handling emission factors from AP-42 Table 5.2-7 were used. The total potential emission of VOC is as follows:

$$\begin{aligned} \text{Gasoline Throughput} &= \frac{0}{0.0} \text{ gallons/day} \\ &= 0.0 \text{ kgal/yr} \end{aligned}$$

Volatile Organic Compounds

Emission Source	Emission Factor (lb/kgal of throughput)	PTE of VOC (tons/yr)*
Filling storage tank (balanced submerged filling)	0.3	0.00
Tank breathing and emptying	1.0	0.00
Vehicle refueling (displaced losses - controlled)	1.1	0.00
Spillage	0.7	0.00
Total		0.00

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%	
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0%	Xylenes
Limited PTE of Total HAPs (tons/yr) =	0.00	
Limited PTE of Single HAP (tons/yr) =	0.00	Xylenes

Methodology

The gasoline throughput was provided by the source.

Gasoline Throughput (kgal/yr) = [Gasoline Throughput (lbs/day)] * [365 days/yr] * [kgal/1000 gal]

PTE of VOC (tons/yr) = [Gasoline Throughput (kgal/yr)] * [Emission Factor (lb/kgal)] * [ton/2000 lb]

PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]

PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]

*Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2.

Composition of Petroleum Mixtures. The Association for Environmental Health and Science. Available on the Internet at:

<http://www.aehs.com/publications/catalog/contents/tph.htm>

Abbreviations

VOC = Volatile Organic Compounds

PTE = Potential to Emit



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

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

TO: Gregory Pardieck
Onyx Paving Company
101 North Poplar Street
Seymour, Indiana 47274

DATE: December 30, 2009

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

SUBJECT: Final Decision
FESOP
071-28331-03180

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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Toll Free (800) 451-6027
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December 30, 2009

TO: Jackson County Public Library

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

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

Applicant Name: Onyx Paving, Inc.
Permit Number: 071-28331-03180

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	CDENNY 12/30/2009 Onyx Paving Company 071-28331-03180 (final)		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Gregory Pardieck Onyx Paving Company 101 N Poplar St Seymour IN 47274 (Source CAATS)										
2		Jackson County Commissioner Jackson County Courthouse Brownstown IN 47220 (Local Official)										
3		Mr. Randy Brown Plumbers & Steam Fitters Union, Local 136 2300 St. Joe Industrial Park Dr Evansville IN 47720 (Affected Party)										
4		Mr. Tome Earnhart 3960 N. CR 300 W. North Vernon IN 47265 (Affected Party)										
5		Seymour City Council and Mayors Office 301 North Chestnut Street Seymour IN 47274 (Local Official)										
6		Jackson County Health Department 801 West 2nd Street Seymour IN 47274-2711 (Health Department)										
7		Jackson Co Public Library 303 W 2nd Street Seymour IN 47274-2184 (Library)										
8												
9												
10												
11												
12												
13												
14												
15												

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on inured and COD mail. See International Mail Manual for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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