



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: October 6, 2010

RE: Jerry David Enterprises / 163-28873-00082

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

Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures
FNPER.dot12/03/07



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

**Jerry David Enterprises, Inc.
4301 Hogue Road
Evansville, Indiana 47712**

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

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-8-11.1, applicable to those conditions

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

Operation Permit No.: F163-28873-00082	
Issued by:  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: October 6, 2010 Expiration Date: October 6, 2020

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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 batch-mix, hot-mix asphalt plant and a stationary ready-mix concrete batch plant. This source does not perform any crushing activities, does not use any slag or shingles in the asphalt aggregate mix, and does not manufacture and/or produce cold-mix asphalt.

Source Address:	4301 Hogue Road, Evansville, Indiana 47712
General Source Phone Number:	(812) 422-1827
SIC Code:	2951, 3273
County Location:	Vanderburgh
Source Location Status:	Nonattainment for PM2.5 standard Attainment for all other 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) batch hot-mix asphalt plant, consisting of the following:
 - (1) One (1) aggregate rotary dryer, identified as Heater 1, constructed in 1976, with a maximum burner heat input capacity of twenty-two (22) million British thermal units per hour (mmBtu/hr), firing natural gas, No. 2 fuel oil, and No. 4 fuel oil, and exhausting to the outside atmosphere;
 - (2) One (1) batch mixer (pugmill), constructed in 1976, with a maximum throughput capacity of sixty (60) tons of aggregate per hour, equipped with one (1) jetpulse baghouse for particulate control, and exhausting to the outside atmosphere;
 - (3) Material handling, screening, and conveying operations, constructed in 1976, uncontrolled and exhausting to the outside atmosphere, and consisting of the following:
 - (A) Aggregate storage piles consisting of limestone, sand, pre-sized recycled asphalt pavement (RAP), and gravel, as follows:
 - (i) Limestone storage piles, having a maximum height of thirteen (13) feet and a maximum storage capacity of fifteen hundred (1500) tons;
 - (ii) Sand storage piles, having a maximum height of thirteen (13) feet and a maximum storage capacity of one thousand (1000) tons;

- (iii) Pre-sized RAP storage piles, having a maximum height of thirteen (13) feet and a maximum storage capacity of five hundred (500) tons.
- (iv) Gravel storage piles, having a maximum height of thirteen (13) feet and a maximum storage capacity of four hundred fifteen (415) tons;
- (B) Four (4) aggregate hoppers;
- (C) One (1) screen deck;
- (D) Two (2) belt conveyors;
- (E) One (1) bucket elevator; and
- (F) One (1) sixty (60) ton storage silo;

Under 40 CFR 60.90, Subpart I - New Source Performance Standards for Hot Mix Asphalt Facilities, this is considered an affected facility.

- (b) One (1) ready-mix concrete batch plant, constructed in 1996, with a maximum throughput capacity of sixty (60) yards of dry concrete mix per hour, a maximum of seven (7) yards per dry batch, and consisting of the following:
 - (1) Aggregate storage piles consisting of limestone, sand, and gravel, shared with the hot-mix asphalt plant and listed above;
 - (2) One (1) cement storage silo, with a maximum storage capacity of sixty-five (65) tons, equipped with a baghouse for particulate control, and exhausting to the atmosphere;
 - (3) One (1) cement supplement storage silo, with a maximum storage capacity of sixty-five (65) tons and equipped with one (1) baghouse for particulate control, and exhausting to the atmosphere.
 - (4) One (1) enclosed aggregate handling operation, uncontrolled, and exhausting to the atmosphere including:
 - (A) One (1) aggregate hopper;
 - (B) Two (2) belt conveyors;
 - (C) Four (4) overhead aggregate bins;
 - (D) One (1) aggregate weighing scale, with a maximum throughput capacity of ninety-one (91) tons per hour;
 - (5) One (1) completely enclosed cement batch scale, with a maximum throughput capacity of sixty (60) yards per hour, and seven (7) yards per batch, equipped with one (1) baghouse for particulate control, and exhausting the atmosphere;

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) Cold-mix (stockpile mix) asphalt storage piles, with a maximum annual storage capacity of forty (40) tons; [326 IAC 8-5-2]
- (b) One (1) liquid asphalt cement hot oil heating system, constructed in 1997, including one (1) natural gas-fired hot oil heater, identified as Heater 2, with a maximum heat input capacity of one (1.00) million British thermal units per hour, uncontrolled and exhausting to the outside atmosphere; [326 IAC 6.5]
- (c) One (1) natural gas-fired hot water heater for the ready-mix concrete batch plant, constructed in 2006, with a maximum heat input capacity of three and five tenths (3.5) million British thermal units per hour, uncontrolled and exhausting to the outside atmosphere; [326 IAC 6.5]
- (d) Paved roads and parking lots with public access. [326 IAC 6-4]
- (e) One (1) 5,000 gallon No. 2 Fuel Oil storage tank, identified as Tank 1, constructed in 1990, uncontrolled and exhausting to the outside atmosphere;
- (f) One (1) 1,000 gallon No. 2 Fuel Oil storage tank, identified as Tank 2, constructed in 1990, uncontrolled and exhausting to the outside atmosphere;
- (g) One (1) 500 gallon No. 2 Fuel Oil storage tank, identified as Tank 3, constructed in 1990, uncontrolled and exhausting to the outside atmosphere;
- (h) One (1) 8,000 gallon No. 4 Fuel Oil storage tank, identified as Tank 6, constructed in 1990, uncontrolled and exhausting to the outside atmosphere; and
- (i) One (1) 15,000 gallon liquid asphalt storage tank, identified as Tank 7, constructed in 1990, uncontrolled and exhausting to the atmosphere.
- (j) One (1) gasoline fuel transfer and dispensing operation, handling less than or equal to 1,300 gallons per day, having a maximum storage capacity less than or equal to 10,500 gallons, and including one (1) five hundred (500) gallon gasoline storage tank, identified as Tank 4, constructed in 1990, uncontrolled and exhausting to the outside atmosphere.

Under 40 CFR 63, Subpart CCCCCC: National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities, the gasoline fuel transfer and dispensing operation, including the five hundred (500) gallon gasoline storage tank, is considered an affected facility.
- (k) Miscellaneous VOC and HAP Storage tanks, each with capacities less than or equal to 1,000 gallons, and annual throughputs of less than 12,000 gallons, including but not limited to;
 - (1) One (1) 250 gallon kerosene storage tank, identified as Tank 5, constructed in 1990, uncontrolled and exhausting to the outside atmosphere;
- (l) Vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids;
- (m) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;

- (n) Natural gas pressure regulator vents, excluding venting at oil and gas production facilities; and

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, F163-28873-00082, 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. 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) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:
- (i) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and
 - (ii) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent, 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 April 15 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

- (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.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

The Permittee shall implement the PMPs.

(c) 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.

The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (d) 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, or Southwest Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Southwest Regional Office phone: (812) 380-2305; fax: (812) 380-2304.

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

Indiana Department of Environmental Management
Compliance 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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.

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

- (a) All terms and conditions of permits established prior to F163-28873-00082 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 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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.16 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 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 does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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.18 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.19 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.20 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.21 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

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

B.22 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 no later than 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.23 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 Overall Source Limit [326 IAC 2-8]

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

- (a) Pursuant to 326 IAC 2-8:
 - (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
 - (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
 - (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.
- (c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.
- (d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 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 thirty percent (30%) 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.3 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.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.5 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.6 Stack Height [326 IAC 1-7]

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

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 demolitions 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 that meets the requirements of 326 IAC 2-8-5(a)(1) 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) For performance testing required by this permit, 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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 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.12 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.13 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.14 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

- (a) The Permittee shall take reasonable response steps to 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 excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning 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 normal or usual manner of operation.
- (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 record the reasonable response steps taken.

C.15 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 submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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.16 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, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.17 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 except that 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. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.
- (b) The address for report submittal is:

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) 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.18 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 applicable standards for recycling and emissions reduction.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Batch-mix, Hot-mix Asphalt Plant

- (a) One (1) batch hot-mix asphalt plant, consisting of the following:
 - (1) One (1) aggregate rotary dryer, identified as Heater 1, constructed in 1976, with a maximum burner heat input capacity of twenty-two (22) million British thermal units per hour (mmBtu/hr), firing natural gas, No. 2 fuel oil, and No. 4 fuel oil, and exhausting to the outside atmosphere;
 - (2) One (1) batch mixer (pugmill), constructed in 1976, with a maximum throughput capacity of sixty (60) tons of aggregate per hour, equipped with one (1) jetpulse baghouse for particulate control, and exhausting to the outside atmosphere;
 - (3) Material handling, screening, and conveying operations, constructed in 1976, uncontrolled and exhausting to the outside atmosphere, and consisting of the following:
 - (A) Aggregate storage piles consisting of limestone, sand, pre-sized recycled asphalt pavement (RAP), and gravel, as follows:
 - (i) Limestone storage piles, having a maximum height of thirteen (13) feet and a maximum storage capacity of fifteen hundred (1500) tons;
 - (ii) Sand storage piles, having a maximum height of thirteen (13) feet and a maximum storage capacity of one thousand (1000) tons;
 - (iii) Pre-sized RAP storage piles, having a maximum height of thirteen (13) feet and a maximum storage capacity of five hundred (500) tons.
 - (iv) Gravel storage piles, having a maximum height of thirteen (13) feet and a maximum storage capacity of four hundred fifteen (415) tons;
 - (B) Four (4) aggregate hoppers;
 - (C) One (1) screen deck;
 - (D) Two (2) belt conveyors;
 - (E) One (1) bucket elevator; and
 - (F) One (1) sixty (60) ton storage silo;

Under 40 CFR 60.90, Subpart I - New Source Performance Standards for Hot Mix Asphalt Facilities, this is considered an affected facility.

Emissions Unit Description: Insignificant Activities

- (a) Cold-mix (stockpile mix) asphalt storage piles, with a maximum annual storage capacity of forty (40) tons; [326 IAC 8-5-2]

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

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

D.1.1 PSD Minor Limit [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable, the Permittee shall comply with the following:

- (a) The asphalt production rate shall not exceed 200,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) PM emissions from the dryer/mixer shall not exceed five hundred thousandths (0.500) pounds of PM per ton of asphalt produced.

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

D.1.2 FESOP and PSD Minor Limits [326 IAC 2-8-4] [326 IAC 2-2]

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall not use slag as an aggregate additive in its hot-mix asphalt operations.

Compliance with this requirement, combined with the potential SO₂ emissions from all other emission units at this source, shall limit the source-wide total potential to emit SO₂ to less than one hundred (100) tons per twelve (12) consecutive month period, and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

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

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

- (a) The asphalt production rate shall not exceed 200,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) PM₁₀ emissions from the dryer/mixer shall not exceed three hundred eighty-seven thousandths (0.387) pounds of PM₁₀ per ton of asphalt produced.
- (c) CO emissions from the dryer/mixer shall not exceed forty hundredths (0.40) pounds of CO per ton of asphalt produced.

Compliance with these limits, combined with the limited potential to emit PM₁₀ and CO from all other emission units at this source, shall limit the source-wide total potential to emit of PM₁₀ and CO to less than one hundred (100) tons per twelve (12) consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permit Program), 326 IAC 2-1.1-5 (Nonattainment New Source Review), and 326 IAC 2-2 (PSD) not applicable.

D.1.4 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2 (Particulate Matter Limitations except Lake County), particulate matter (PM) emissions from the dryer/mixer, material handling, screening, and conveying operations, shall each not exceed three-hundredths (0.03) grains per dry standard cubic foot of exhaust air.

D.1.5 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-1][326 IAC 7-2-1]

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

- (a) The sulfur dioxide (SO₂) emissions from the dryer/mixer burner shall not exceed five tenths (0.5) pounds per MMBtu when using distillate oil.

- (b) The sulfur dioxide (SO₂) emissions from the dryer/mixer burner shall not exceed one and six tenths (1.6) pounds per MMBtu heat input when using residual oil.
- (c) Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

D.1.6 Volatile Organic Compound Rules for Asphalt Pavers [326 IAC 8-5-2]

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

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

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

A Preventive Maintenance Plan is required for this facility and any control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.1.8 Particulate Matter (PM, and PM10) Control

- (a) In order to comply with Conditions D.1.1, D.1.3, and D.1.4, the baghouse for particulate control shall be in operation and control emissions from the dryer/mixer at all times when the dryer/mixer is in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

- (a) In order to demonstrate compliance with Condition D.1.1(b), the Permittee shall perform PM testing of the dryer/mixer, utilizing methods approved by the Commissioner, at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.
- (b) In order to demonstrate compliance with Condition D.1.3(b), the Permittee shall perform PM10 testing on the dryer/mixer not later than one hundred eighty (180) days after publication of the new or revised condensable PM test method(s) referenced in the U.S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}) signed on May 8th, 2008, or not later than five (5) years from the most recent valid compliance demonstration, whichever is later. This testing shall be conducted utilizing methods approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance

with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM10 includes filterable and condensable PM.

D.1.10 Sulfur Dioxide Emissions and Sulfur Content

Compliance with the fuel limitations established in Conditions D.1.5(a) and D.1.5(b) - Sulfur Dioxide (SO₂) shall be determined utilizing one of the following options:

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five tenths (0.5) pounds per million British thermal units heat input when combusting No. 2 distillate fuel oil, or one and six tenths (1.6) pounds per million British thermal units heat input when combusting No. 4 residual fuel oil, by:
 - (1) Providing vendor analysis of heat content and sulfur content of the fuel delivered, if accompanied by a vendor certification; or
 - (2) Analyzing the fuel sample to determine the sulfur content of the fuel via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (A) Fuel samples may be collected from the fuel tank immediately after the fuel tank is filled and before any fuel is combusted; and
 - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 72 MMBtu per hour burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified above shall not be refuted by evidence of compliance pursuant to the other method.

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

D.1.11 Visible Emissions Notations

- (a) Visible emission notations of the dryer/mixer stack (SV1) 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. An abnormal visible emission notation is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.1.12 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouse used in conjunction with the dryer/mixer, at least once per day when the dryer/mixer is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of five tenths (0.5) and six and five tenths (6.5) inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

D.1.13 Broken or Failed Bag Detection

In the event that bag failure has been observed:

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

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

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

D.1.14 Record Keeping Requirements

- (a) To document the compliance status with Conditions D.1.1(a), and D.1.3(a), the Permittee shall keep monthly records of the amount of asphalt processed through the dryer/mixer.
- (b) To document the compliance status with Conditions D.1.5 and D.1.10, the Permittee shall maintain records in accordance with (1) through (8) below. Records maintained for (1) through (8) below shall be taken monthly and shall be complete and sufficient to establish compliance with the limits established in Condition D.1.5.
 - (1) Calendar dates covered in the compliance determination period;
 - (2) Actual fuel usage, sulfur content, and heat content, for each fuel used at the source since the last compliance determination period;
 - (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

- (4) If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:
- (i) Fuel supplier certifications;
 - (ii) The name of the fuel supplier; and
 - (iii) A statement from the fuel supplier that certifies the sulfur content of the No. 2 and No. 4 fuel oils.

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

- (e) To document the compliance status with Condition D.1.11, the Permittee shall maintain records of visible emission notations of the dryer/mixer stack (SV1) exhaust once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).
- (f) To document the compliance status with Condition D.1.12, the Permittee shall maintain records once per day of the pressure drop during normal operation. The Permittee shall include in its daily record when the pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g., the process did not operate that day).
- (g) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

D.1.15 Reporting Requirements

- (a) A quarterly summary of the information to document compliance status with Conditions D.1.1(a), and D.1.3(a) shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Ready-mix Concrete Batch Plant

- (b) One (1) ready-mix concrete batch plant, constructed in 1996, with a maximum throughput capacity of sixty (60) yards of dry concrete mix per hour, a maximum of seven (7) yards per dry batch, and consisting of the following:
- (1) Aggregate storage piles consisting of limestone, sand, and gravel, shared with the hot-mix asphalt plant and listed above;
 - (2) One (1) cement storage silo, with a maximum storage capacity of sixty-five (65) tons, equipped with a baghouse for particulate control, and exhausting to the atmosphere;
 - (3) One (1) cement supplement storage silo, with a maximum storage capacity of sixty-five (65) tons and equipped with one (1) baghouse for particulate control, and exhausting to the atmosphere.
 - (4) One (1) enclosed aggregate handling operation, uncontrolled, and exhausting to the atmosphere including:
 - (A) One (1) aggregate hopper;
 - (B) Two (2) belt conveyors;
 - (C) Four (4) overhead aggregate bins;
 - (D) One (1) aggregate weighing scale, with a maximum throughput capacity of ninety-one (91) tons per hour;
 - (5) One (1) completely enclosed cement batch scale, with a maximum throughput capacity of sixty (60) yards per hour, and seven (7) yards per batch, equipped with one (1) baghouse for particulate control, and exhausting the atmosphere;

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

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

D.2.1 PSD Minor Limit [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable, the Permittee shall comply with the following:

- (a) The ready-mix concrete production shall not exceed 150,000 tons (equivalent to 75,000 cubic yards), per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) PM emissions from the truck loading operation shall not exceed nine hundred ninety-five thousandths (0.995) pounds of PM per ton of ready-mix concrete produced.
- (c) The amount cement used in the production of ready-mix concrete shall not exceed 24,273 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (d) PM emissions from the cement handling operations shall not exceed seventy-two hundredths (0.72) pounds of PM per ton of cement used in the production of ready-mix concrete.

- (e) The amount cement supplement used in the production of ready-mix concrete shall not exceed 20,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (f) PM emissions from the cement supplement handling operations shall not exceed three and fourteen hundredths (3.14) pounds of PM per ton of cement supplement used in the production of ready-mix concrete.

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 two hundred fifty (250) tons per twelve (12) consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.2.2 FESOP Limits [326 IAC 2-8-4] [326 IAC 2-1.1-5] [326 IAC 2-2]

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

- (a) The ready-mix concrete production rate shall not exceed 150,000 tons (equivalent to 75,000 cubic yards), per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) PM10 emissions from the truck loading operation shall not exceed two hundred seventy-eight thousandths (0.278) pounds of PM10 per ton of ready-mix concrete produced.
- (c) PM2.5 emissions from the truck loading operation shall not exceed two hundred seventy-eight thousandths (0.278) pounds of PM2.5 per ton of ready-mix concrete produced.
- (d) The amount cement used in the production of ready-mix concrete shall not exceed 24,273 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (e) PM10 emissions from the cement handling operation shall not exceed forty-six hundredths (0.46) pounds of PM10 per ton of cement used in the production of ready-mix concrete.
- (f) PM2.5 emissions from the cement handling operation shall not exceed forty-six hundredths (0.46) pounds of PM2.5 per ton of cement used in the production of ready-mix concrete.
- (g) The amount cement supplement used in the production of ready-mix concrete shall not exceed 20,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (h) PM10 emissions from the cement supplement handling operation shall not exceed one and ten hundredths (1.10) pounds of PM10 per ton of cement supplement used in the production of ready-mix concrete.
- (i) PM2.5 emissions from the cement supplement handling operation shall not exceed one and ten hundredths (1.10) pounds of PM2.5 per ton of cement supplement used in the production of ready-mix concrete.

Compliance with these limits, combined with the potential to emit PM10 and PM2.5 from all other emission units at this source, shall limit the source-wide total potential to emit of PM10 and PM2.5 to less than one hundred (100) tons per twelve (12) consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permit Program), 326 IAC 2-1.1-5 (Nonattainment New Source Review), and 326 IAC 2-2 (PSD) not applicable.

D.2.3 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2 (Particulate Matter Limitations except Lake County), particulate matter (PM) emissions from the material conveying, bulk powder (cement and cement supplement) handling, including the silo loading and weigh hopper loading, and the truck loading operations, each, shall not exceed three-hundredths (0.03) grains per dry standard cubic foot of exhaust air.

D.2.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for this facility and any control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements

D.2.5 Particulate Matter (PM, and PM10) Control

- (a) In order to comply with Condition D.2.3, the three (3) baghouses for particulate control shall be in operation and control emissions from the bulk powder (cement and cement supplement) handling operations, including the silo loading and weigh hopper loading, at all times when the ready-mix concrete batch plant is in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

D.2.6 Visible Emissions Notations

- (a) Visible emission notations of each of the three (3) ready-mix concrete batch plant baghouse stack exhausts 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. An abnormal visible emission notation is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.2.7 Broken or Failed Bag Detection

In the event that bag failure has been observed:

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

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

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

D.2.8 Record Keeping Requirements

- (a) To document the compliance status with Conditions D.2.1(a), and D.2.2(a), the Permittee shall keep monthly records of the amount of ready-mix concrete produced.
- (b) To document the compliance status with Conditions D.2.1(c) and D.2.2(c), the Permittee shall keep monthly records of the amount of the amount of cement used in the production of ready-mix concrete.
- (c) To document the compliance status with Conditions D.2.1(e) and D.2.2(e), the Permittee shall keep monthly records of the amount of the amount of cement supplement(s) used in the production of ready-mix concrete.
- (d) To document the compliance status with Condition D.2.6, the Permittee shall maintain records of visible emission notations of each of the ready-mix concrete batch plant baghouse stack exhausts once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).
- (e) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

D.2.9 Reporting Requirements

- (a) A quarterly summary of the information to document compliance status with Conditions D.2.1(a), D.2.1(c), D.2.1(e), D.2.2(a), D.2.2(c), and D.2.2(e), shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Insignificant Activities

- (b) One (1) liquid asphalt cement hot oil heating system, constructed in 1997, including one (1) natural gas-fired hot oil heater, identified as Heater 2, with a maximum heat input capacity of one (1.00) million British thermal units per hour, uncontrolled and exhausting to the outside atmosphere; [326 IAC 6.5]
- (c) One (1) natural gas-fired hot water heater for the ready-mix concrete batch plant, constructed in 2006, with a maximum heat input capacity of three and five tenths (3.5) million British thermal units per hour, uncontrolled and exhausting to the outside atmosphere; [326 IAC 6.5]

(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.3.1 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2 (Particulate Matter Limitations except Lake County), particulate matter (PM) emissions from the natural gas-fired hot oil heater, and natural gas-fired hot water heater, each, shall not exceed three-hundredths (0.03) grains per dry standard cubic foot.

SECTION E.1

NSPS REQUIREMENTS

Emissions Unit Description: Batch-mix, Hot-mix Asphalt Plant

- (a) One (1) batch hot-mix asphalt plant, consisting of the following:
- (1) One (1) aggregate rotary dryer, identified as Heater 1, constructed in 1976, with a maximum burner heat input capacity of twenty-two (22) million British thermal units per hour (mmBtu/hr), firing natural gas, No. 2 fuel oil, and No. 4 fuel oil, and exhausting to the outside atmosphere;
 - (2) One (1) batch mixer (pugmill), constructed in 1976, with a maximum throughput capacity of sixty (60) tons of aggregate per hour, equipped with one (1) jetpulse baghouse for particulate control, and exhausting to the outside atmosphere;
 - (3) Material handling, screening, and conveying operations, constructed in 1976, uncontrolled and exhausting to the outside atmosphere, and consisting of the following:
 - (A) Aggregate storage piles consisting of limestone, sand, pre-sized recycled asphalt pavement (RAP), and gravel, as follows:
 - (i) Limestone storage piles, having a maximum height of thirteen (13) feet and a maximum storage capacity of fifteen hundred (1500) tons;
 - (ii) Sand storage piles, having a maximum height of thirteen (13) feet and a maximum storage capacity of one thousand (1000) tons;
 - (iii) Pre-sized RAP storage piles, having a maximum height of thirteen (13) feet and a maximum storage capacity of five hundred (500) tons.
 - (iv) Gravel storage piles, having a maximum height of thirteen (13) feet and a maximum storage capacity of four hundred fifteen (415) tons;
 - (B) Four (4) aggregate hoppers;
 - (C) One (1) screen deck;
 - (D) Two (2) belt conveyors;
 - (E) One (1) bucket elevator; and
 - (F) One (1) sixty (60) ton storage silo;

Under 40 CFR 60.90, Subpart I - New Source Performance Standards for Hot Mix Asphalt Facilities, this is considered an affected facility.

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

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

E.1.1 NSPS Subpart I Requirements - Standards of Performance for Hot Mix Asphalt Facilities [40 CFR Part 60, Subpart I] [326 IAC 12-1]

Pursuant to CFR Part 60, Subpart I, the affected facility to which the provisions of this subpart apply is each hot mix asphalt facility, as defined in § 60.91(a), that commences construction or modification after June 11, 1973. 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.

The hot mix asphalt facility is subject to the following portions of 40 CFR 60, Subpart I (included as Attachment A of this permit):

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

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

SECTION E.2

NESHAP REQUIREMENTS

Emissions Unit Description: Gasoline Dispensing Facilities

- (h) One (1) gasoline fuel transfer and dispensing operation, handling less than or equal to 1,300 gallons per day, having a maximum storage capacity less than or equal to 10,500 gallons, and including one (1) five hundred (500) gallon gasoline storage tank, identified as Tank 4, constructed in 1990, uncontrolled and exhausting to the outside atmosphere.

Under 40 CFR 63, Subpart CCCCCC: National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities, the gasoline fuel transfer and dispensing operation, including the five hundred (500) gallon gasoline storage tank, is considered an affected facility.

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

National Emission Standards for Hazardous Air Pollutants (NESHAPs) Requirements [326 IAC 2-8-4(1)]

E.2.1 National Emission Standards for Hazardous Air Pollutants (NESHAPs): Area Source Standards for Source Category: Gasoline Dispensing Facilities [40 CFR 63, Subpart CCCCCC] [326 IAC 20]

Pursuant to 40 CFR § 63.11112(a), the emission sources to which this subpart applies are gasoline storage tanks and associated equipment components in vapor or liquid gasoline service at new, reconstructed, or existing gasoline dispensing facilities (GDF), located at an area source. The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank. Pressure/Vacuum vents on gasoline storage tanks and the equipment necessary to unload product from cargo tanks into the storage tanks at GDF are covered emission sources. The equipment used for the refueling of motor vehicles is not covered by this subpart.

The gasoline fuel transfer and dispensing operation is therefore subject to the following portions of Subpart CCCCCC (6C) (included as Attachment B of this permit):

- (1) 40 CFR 63.11110
- (2) 40 CFR 63.11111(a)(b)(e)(f)
- (3) 40 CFR 63.11112(a)(d)
- (4) 40 CFR 63.11113(b)
- (5) 40 CFR 63.11116
- (6) 40 CFR 63.11130
- (7) 40 CFR 63.11131
- (8) 40 CFR 63.11132

The requirements of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63, Subpart 6C.

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

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

Source Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, Indiana 47712
FESOP Permit No.: F163-28873-00082

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: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, Indiana 47712
FESOP Permit No.: F163-28873-00082

This form consists of 2 pages

Page 1 of 2

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

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

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

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

Page 2 of 2

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

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

FESOP Quarterly Report

Source Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, Indiana 47712
FESOP Permit No.: F163-28873-00082
Facility: Hot-Mix Asphalt Plant - Dryer/Mixer
Parameter: Hot-Mix Asphalt Production Rate
Limit: The maximum annual asphalt production rate shall not exceed 200,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

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

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

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

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

FESOP Quarterly Report

Source Name: Jerry David Enterprises, Inc.
 Source Address: 4301 Hogue Road, Evansville, Indiana 47712
 FESOP Permit No.: F163-28873-00082
 Facility: Ready-mix Concrete Plant - truck loading operation
Parameter: Ready-mix Concrete Production Rate
 Limit: The maximum ready-mix concrete production rate shall not exceed 150,000 tons (equivalent to 75,000 cubic yards), per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

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

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

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

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

FESOP Quarterly Report

Source Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, Indiana 47712
FESOP Permit No.: F163-28873-00082
Facility: Ready-mix Concrete Plant - cement handling operations
Parameter: Cement Usage
Limit: Maximum cement usage shall not exceed 24,273 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

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

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

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

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

FESOP Quarterly Report

Source Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, Indiana 47712
FESOP Permit No.: F163-28873-00082
Facility: Ready-mix Concrete Plant - cement supplement handling operations
Parameter: Cement Supplement Usage
Limit: Maximum cement supplement usage shall not exceed 20,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

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

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

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

**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: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, Indiana 47712
FESOP Permit No.: F163-28873-00082

Months: _____ to _____ Year: _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements of this permit, 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".

NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

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: _____

**FEDERALLY ENFORCEABLE
STATE OPERATING PERMIT
(FESOP) Renewal
OFFICE OF AIR QUALITY**

**Jerry David Enterprises, Inc.
4301 Hogue Road
Evansville IN 47712**

Attachment A

Title 40: Protection of Environment

[PART 60—NEW SOURCE PERFORMANCE STANDARDS](#)

**SUBPART I - STANDARDS OF PERFORMANCE
FOR HOT MIX ASPHALT FACILITIES**

F163-28873-00082

40 CFR 60, 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 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 (four hundredths (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]

Reference

The US EPA Electronic Code of Federal Regulations - 40 CFR 60, Subpart I: Standards of Performance for Hot Mix Asphalt Facilities weblink:

<http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=875648a88dd2168ac2096fe26e3e4c98&rqn=div6&view=text&node=40:6.0.1.1.1.20&idno=40>

**FEDERALLY ENFORCEABLE
STATE OPERATING PERMIT
(FESOP) Renewal
OFFICE OF AIR QUALITY**

**Jerry David Enterprises, Inc.
4301 Hogue Road
Evansville IN 47712**

Attachment B

Title 40: Protection of Environment

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

**Subpart CCCCC - NESHAPs for Source Category:
Gasoline Dispensing Facilities**

F163-28873-00082

40 CFR 63, Subpart CCCCC - National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

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

What This Subpart Covers

§ 63.11110 What is the purpose of this subpart?

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

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

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

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

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

(c) An affected source is reconstructed if you meet the criteria for reconstruction as defined in §63.2.

(d) An affected source is an existing affected source if it is not new or reconstructed.

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

(a) If you have a new or reconstructed affected source, you must comply with this subpart according to paragraphs (a)(1) and (2) of this section, except as specified in paragraph (d) of this section.

(1) If you start up your affected source before January 10, 2008, you must comply with the standards in this subpart no later than January 10, 2008.

(2) If you start up your affected source after January 10, 2008, you must comply with the standards in this subpart upon startup of your affected source.

(b) If you have an existing affected source, you must comply with the standards in this subpart no later than January 10, 2011.

(c) If you have an existing affected source that becomes subject to the control requirements in this subpart because of an increase in the average monthly throughput, as specified in §63.11111(c) or §63.11111(d), you must comply with the standards in this subpart no later than 3 years after the affected source becomes subject to the control requirements in this subpart.

(d) If you have a new or reconstructed affected source and you are complying with Table 1 to this subpart, you must comply according to paragraphs (d)(1) and (2) of this section.

(1) If you start up your affected source from November 9, 2006 to September 23, 2008, you must comply no later than September 23, 2008.

(2) If you start up your affected source after September 23, 2008, you must comply upon startup of your affected source.

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

Emission Limitations and Management Practices

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

(a) You must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

(1) Minimize gasoline spills;

(2) Clean up spills as expeditiously as practicable;

(3) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;

(4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

(b) You are not required to submit notifications or reports, but you must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

(c) You must comply with the requirements of this subpart by the applicable dates specified in §63.11113.

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

(a) You must comply with the requirements in section §63.11116(a).

(b) Except as specified in paragraph (c), you must only load gasoline into storage tanks at your facility by utilizing submerged filling, as defined in §63.11132, and as specified in paragraph (b)(1) or paragraph (b)(2) of this section.

(1) Submerged fill pipes installed on or before November 9, 2006, must be no more than 12 inches from the bottom of the storage tank.

(2) Submerged fill pipes installed after November 9, 2006, must be no more than 6 inches from the bottom of the storage tank.

(c) Gasoline storage tanks with a capacity of less than 250 gallons are not required to comply with the submerged fill requirements in paragraph (b) of this section, but must comply only with all of the requirements in §63.11116.

(d) You must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

(e) You must submit the applicable notifications as required under §63.11124(a).

(f) You must comply with the requirements of this subpart by the applicable dates contained in §63.11113.

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

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

(a) You must comply with the requirements in §§63.11116(a) and 63.11117(b).

(b) Except as provided in paragraph (c) of this section, you must meet the requirements in either paragraph (b)(1) or paragraph (b)(2) of this section.

(1) Each management practice in Table 1 to this subpart that applies to your GDF.

(2) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(2)(i) and (ii) of this section, you will be deemed in compliance with this subsection.

(i) You operate a vapor balance system at your GDF that meets the requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 1 to this subpart.

(ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.

(c) The emission sources listed in paragraphs (c)(1) through (3) of this section are not required to comply with the control requirements in paragraph (b) of this section, but must comply with the requirements in §63.11117.

(1) Gasoline storage tanks with a capacity of less than 250 gallons that are constructed after January 10, 2008.

(2) Gasoline storage tanks with a capacity of less than 2,000 gallons that were constructed before January 10, 2008.

(3) Gasoline storage tanks equipped with floating roofs, or the equivalent.

(d) Cargo tanks unloading at GDF must comply with the management practices in Table 2 to this subpart.

(e) You must comply with the applicable testing requirements contained in §63.11120.

(f) You must submit the applicable notifications as required under §63.11124.

(g) You must keep records and submit reports as specified in §§63.11125 and 63.11126.

(h) You must comply with the requirements of this subpart by the applicable dates contained in §63.11113.

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

Testing and Monitoring Requirements

§ 63.11120 What testing and monitoring requirements must I meet?

(a) Each owner or operator, at the time of installation of a vapor balance system required under §63.11118(b)(1), and every 3 years thereafter, must comply with the requirements in paragraphs (a)(1) and (2) of this section.

(1) You must demonstrate compliance with the leak rate and cracking pressure requirements, specified in item 1(g) of Table 1 to this subpart, for pressure-vacuum vent valves installed on your gasoline storage tanks using the test methods identified in paragraph (a)(1)(i) or paragraph (a)(1)(ii) of this section.

(i) California Air Resources Board Vapor Recovery Test Procedure TP-201.1E,—Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves, adopted October 8, 2003 (incorporated by reference, see §63.14).

(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in §63.7(f).

(2) You must demonstrate compliance with the static pressure performance requirement, specified in item 1(h) of Table 1 to this subpart, for your vapor balance system by conducting a static pressure test on your gasoline storage tanks using the test methods identified in paragraph (a)(2)(i) or paragraph (a)(2)(ii) of this section.

(i) California Air Resources Board Vapor Recovery Test Procedure TP-201.3,—Determination of 2-Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities, adopted April 12, 1996, and amended March 17, 1999 (incorporated by reference, see §63.14).

(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in §63.7(f).

(b) Each owner or operator choosing, under the provisions of §63.6(g), to use a vapor balance system other than that described in Table 1 to this subpart must demonstrate to the Administrator or delegated authority under paragraph §63.11131(a) of this subpart, the equivalency of their vapor balance system to that described in Table 1 to this subpart using the procedures specified in paragraphs (b)(1) through (3) of this section.

(1) You must demonstrate initial compliance by conducting an initial performance test on the vapor balance system to demonstrate that the vapor balance system achieves 95 percent reduction using the California Air Resources Board Vapor Recovery Test Procedure TP-201.1,—Volumetric Efficiency for Phase I Vapor Recovery Systems, adopted April 12, 1996, and amended February 1, 2001, and October 8, 2003, (incorporated by reference, see §63.14).

(2) You must, during the initial performance test required under paragraph (b)(1) of this section, determine and document alternative acceptable values for the leak rate and cracking pressure requirements specified in item 1(g) of Table 1 to this subpart and for the static pressure performance requirement in item 1(h) of Table 1 to this subpart.

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

Notifications, Records, and Reports

§ 63.11124 What notifications must I submit and when?

(a) Each owner or operator subject to the control requirements in §63.11117 must comply with paragraphs (a)(1) through (3) of this section.

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in §63.11117, unless you meet the requirements in paragraph (a)(3) of this section. The Initial Notification must contain the information specified in paragraphs (a)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in §63.13.

(i) The name and address of the owner and the operator.

(ii) The address (i.e., physical location) of the GDF.

(iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of §63.11117 that apply to you.

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in §63.13, by the compliance date specified in §63.11113 unless you meet the requirements in paragraph (a)(3) of this section. The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy and must indicate whether the source has complied with the requirements of this subpart. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (a)(1) of this section is due, the

Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (a)(1) of this section.

(3) If, prior to January 10, 2008, you are operating in compliance with an enforceable State, local, or tribal rule or permit that requires submerged fill as specified in §63.11117(b), you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (a)(1) or paragraph (a)(2) of this section.

(b) Each owner or operator subject to the control requirements in §63.11118 must comply with paragraphs (b)(1) through (5) of this section.

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in §63.11118. The Initial Notification must contain the information specified in paragraphs (b)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and the delegated State authority as specified in §63.13.

(i) The name and address of the owner and the operator.

(ii) The address (i.e., physical location) of the GDF.

(iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of §63.11118 that apply to you.

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in §63.13, by the compliance date specified in §63.11113. The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy and must indicate whether the source has complied with the requirements of this subpart. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (b)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (b)(1) of this section.

(3) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(3)(i) and (ii) of this section, you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (b)(1) or paragraph (b)(2) of this subsection.

(i) You operate a vapor balance system at your gasoline dispensing facility that meets the requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 1 to this subpart.

(ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(4) You must submit a Notification of Performance Test, as specified in §63.9(e), prior to initiating testing required by §63.11120(a) and (b).

(5) You must submit additional notifications specified in §63.9, as applicable.

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

§ 63.11125 What are my recordkeeping requirements?

(a) Each owner or operator subject to the management practices in §63.11118 must keep records of all tests performed under §63.11120(a) and (b).

(b) Records required under paragraph (a) of this section shall be kept for a period of 5 years and shall be made available for inspection by the Administrator's delegated representatives during the course of a site visit.

§ 63.11126 What are my reporting requirements?

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

Other Requirements and Information

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

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

§ 63.11131 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority such as the applicable State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or tribal agency.

(c) The authorities that cannot be delegated to State, local, or tribal agencies are as specified in paragraphs (c)(1) through (3) of this section.

(1) Approval of alternatives to the requirements in §§63.11116 through 63.11118 and 63.11120.

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.

(3) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.

§ 63.11132 What definitions apply to this subpart?

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

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

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

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

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

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

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

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

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

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

If you own or operate	Then you must
	$Pf = 2e^{-500.887/v}$
	Where:
	Pf = Minimum allowable final pressure, inches of water.
	v = Total ullage affected by the test, gallons.
	e = Dimensionless constant equal to approximately 2.718.
	2 = The initial pressure, inches water.
2. For new or reconstructed GDF, or new storage tank(s) at an existing affected facility subject to §63.11118	Equip your gasoline storage tanks with a dual-point vapor balance system, as defined in §63.11132, and comply with the requirements of item 1 in this Table.

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

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

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

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

Citation	Subject	Brief description	Applies to subpart CCCCC
§63.1	Applicability	Initial applicability determination; applicability after standard established; permit requirements; extensions, notifications	Yes, specific requirements given in §63.11111.
§63.1(c)(2)	Title V Permit	Requirements for obtaining a title V permit from the applicable permitting authority	Yes, §63.11111(f) of subpart CCCCC exempts identified area sources from the obligation to obtain title V operating permits.
§63.2	Definitions	Definitions for part 63 standards	Yes, additional definitions in §63.11132.
§63.3	Units and Abbreviations	Units and abbreviations for part 63 standards	Yes.
§63.4	Prohibited Activities and Circumvention	Prohibited activities; Circumvention, severability	Yes.
§63.5	Construction/Reconstruction	Applicability; applications; approvals	Yes.
§63.6(a)	Compliance with Standards/Operation & Maintenance—Applicability	General Provisions apply unless compliance extension; General Provisions apply to area sources that become major	Yes.
§63.6(b)(1)–(4)	Compliance Dates for New and Reconstructed Sources	Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for CAA section 112(f)	Yes.
§63.6(b)(5)	Notification	Must notify if commenced construction or reconstruction after proposal	Yes.
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major	Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source	No.
§63.6(c)(1)–(2)	Compliance Dates for Existing Sources	Comply according to date in this subpart, which must be no later than 3 years after effective date; for CAA section 112(f) standards, comply within 90 days of effective date unless compliance extension	No, §63.11113 specifies the compliance dates.
§63.6(c)(3)–(4)	[Reserved]		
§63.6(c)(5)	Compliance Dates for Existing Area Sources That Become Major	Area sources That become major must comply with major source standards by date indicated in this subpart or by equivalent time period (e.g., 3 years)	No.
§63.6(d)	[Reserved]		
§63.6(e)(1)	Operation & Maintenance	Operate to minimize emissions at	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCC
		all times; correct malfunctions as soon as practicable; and operation and maintenance requirements independently enforceable; information Administrator will use to determine if operation and maintenance requirements were met	
§63.6(e)(2)	[Reserved]		
§63.6(e)(3)	Startup, Shutdown, and Malfunction (SSM) Plan	Requirement for SSM plan; content of SSM plan; actions during SSM	No.
§63.6(f)(1)	Compliance Except During SSM	You must comply with emission standards at all times except during SSM	No.
§63.6(f)(2)–(3)	Methods for Determining Compliance	Compliance based on performance test, operation and maintenance plans, records, inspection	Yes.
§63.6(g)(1)–(3)	Alternative Standard	Procedures for getting an alternative standard	Yes.
§63.6(h)(1)	Compliance with Opacity/Visible Emission (VE) Standards	You must comply with opacity/VE standards at all times except during SSM	No.
§63.6(h)(2)(i)	Determining Compliance with Opacity/VE Standards	If standard does not State test method, use EPA Method 9 for opacity in appendix A of part 60 of this chapter and EPA Method 22 for VE in appendix A of part 60 of this chapter	No.
§63.6(h)(2)(ii)	[Reserved]		
§63.6(h)(2)(iii)	Using Previous Tests To Demonstrate Compliance With Opacity/VE Standards	Criteria for when previous opacity/VE testing can be used to show compliance with this subpart	No.
§63.6(h)(3)	[Reserved]		
§63.6(h)(4)	Notification of Opacity/VE Observation Date	Must notify Administrator of anticipated date of observation	No.
§63.6(h)(5)(i), (iii)–(v)	Conducting Opacity/VE Observations	Dates and schedule for conducting opacity/VE observations	No.
§63.6(h)(5)(ii)	Opacity Test Duration and Averaging Times	Must have at least 3 hours of observation with 30 6-minute averages	No.
§63.6(h)(6)	Records of Conditions During Opacity/VE Observations	Must keep records available and allow Administrator to inspect	No.
§63.6(h)(7)(i)	Report Continuous Opacity Monitoring System (COMS) Monitoring Data From Performance Test	Must submit COMS data with other performance test data	No.
§63.6(h)(7)(ii)	Using COMS Instead of EPA Method 9	Can submit COMS data instead of EPA Method 9 results even if rule requires EPA Method 9 in appendix A of part 60 of this chapter, but must notify Administrator before performance test	No.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.6(h)(7)(iii)	Averaging Time for COMS During Performance Test	To determine compliance, must reduce COMS data to 6-minute averages	No.
§63.6(h)(7)(iv)	COMS Requirements	Owner/operator must demonstrate that COMS performance evaluations are conducted according to §63.8(e); COMS are properly maintained and operated according to §63.8(c) and data quality as §63.8(d)	No.
§63.6(h)(7)(v)	Determining Compliance with Opacity/VE Standards	COMS is probable but not conclusive evidence of compliance with opacity standard, even if EPA Method 9 observation shows otherwise. Requirements for COMS to be probable evidence-proper maintenance, meeting Performance Specification 1 in appendix B of part 60 of this chapter, and data have not been altered	No.
§63.6(h)(8)	Determining Compliance with Opacity/VE Standards	Administrator will use all COMS, EPA Method 9 (in appendix A of part 60 of this chapter), and EPA Method 22 (in appendix A of part 60 of this chapter) results, as well as information about operation and maintenance to determine compliance	No.
§63.6(h)(9)	Adjusted Opacity Standard	Procedures for Administrator to adjust an opacity standard	No.
§63.6(i)(1)–(14)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension	Yes.
§63.6(j)	Presidential Compliance Exemption	President may exempt any source from requirement to comply with this subpart	Yes.
§63.7(a)(2)	Performance Test Dates	Dates for conducting initial performance testing; must conduct 180 days after compliance date	Yes.
§63.7(a)(3)	CAA Section 114 Authority	Administrator may require a performance test under CAA section 114 at any time	Yes.
§63.7(b)(1)	Notification of Performance Test	Must notify Administrator 60 days before the test	Yes.
§63.7(b)(2)	Notification of Re-scheduling	If have to reschedule performance test, must notify Administrator of rescheduled date as soon as practicable and without delay	Yes.
§63.7(c)	Quality Assurance (QA)/Test Plan	Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with; test plan approval procedures; performance audit requirements; internal and external QA procedures for testing	Yes.
§63.7(d)	Testing Facilities	Requirements for testing facilities	Yes.
§63.7(e)(1)	Conditions for Conducting Performance Tests	Performance tests must be conducted under representative conditions; cannot conduct performance tests during SSM	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.7(e)(2)	Conditions for Conducting Performance Tests	Must conduct according to this subpart and EPA test methods unless Administrator approves alternative	Yes.
§63.7(e)(3)	Test Run Duration	Must have three test runs of at least 1 hour each; compliance is based on arithmetic mean of three runs; conditions when data from an additional test run can be used	Yes.
§63.7(f)	Alternative Test Method	Procedures by which Administrator can grant approval to use an intermediate or major change, or alternative to a test method	Yes.
§63.7(g)	Performance Test Data Analysis	Must include raw data in performance test report; must submit performance test data 60 days after end of test with the Notification of Compliance Status; keep data for 5 years	Yes.
§63.7(h)	Waiver of Tests	Procedures for Administrator to waive performance test	Yes.
§63.8(a)(1)	Applicability of Monitoring Requirements	Subject to all monitoring requirements in standard	Yes.
§63.8(a)(2)	Performance Specifications	Performance Specifications in appendix B of 40 CFR part 60 apply	Yes.
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring of Flares	Monitoring requirements for flares in §63.11 apply	Yes.
§63.8(b)(1)	Monitoring	Must conduct monitoring according to standard unless Administrator approves alternative	Yes.
§63.8(b)(2)–(3)	Multiple Effluents and Multiple Monitoring Systems	Specific requirements for installing monitoring systems; must install on each affected source or after combined with another affected source before it is released to the atmosphere provided the monitoring is sufficient to demonstrate compliance with the standard; if more than one monitoring system on an emission point, must report all monitoring system results, unless one monitoring system is a backup	No.
§63.8(c)(1)	Monitoring System Operation and Maintenance	Maintain monitoring system in a manner consistent with good air pollution control practices	No.
§63.8(c)(1)(i)–(iii)	Routine and Predictable SSM	Follow the SSM plan for routine repairs; keep parts for routine repairs readily available; reporting requirements for SSM when action is described in SSM plan	No.
§63.8(c)(2)–(8)	Continuous Monitoring System (CMS) Requirements	Must install to get representative emission or parameter measurements; must verify operational status before or at performance test	No.
§63.8(d)	CMS Quality Control	Requirements for CMS quality control,	No.

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

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

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.10(e)(3)(vi)–(viii)	Excess Emissions Report and Summary Report	Requirements for reporting excess emissions for CMS; requires all of the information in §§63.10(c)(5)–(13) and 63.8(c)(7)–(8)	No.
§63.10(e)(4)	Reporting COMS Data	Must submit COMS data with performance test data	No.
§63.10(f)	Waiver for Recordkeeping/Reporting	Procedures for Administrator to waive	Yes.
§63.11(b)	Flares	Requirements for flares	No.
§63.12	Delegation	State authority to enforce standards	Yes.
§63.13	Addresses	Addresses where reports, notifications, and requests are sent	Yes.
§63.14	Incorporations by Reference	Test methods incorporated by reference	Yes.
§63.15	Availability of Information	Public and confidential information	Yes.

Resource

EPA Summary of Regulations Controlling Air Emissions from Gasoline Dispensing Facilities (GDF) Fact Sheet
<http://www.epa.gov/ttn/atw/area/gdfb.pdf>

Reference

The US EPA Electronic Code of Federal Regulations - 40 CFR 63, Subpart CCCCCC National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities weblink:
<http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=ec747058ccd5763d83153eaa83fe7220&rqn=div6&view=text&node=40:14.0.1.1.1.15&idno=40>

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document (ATSD) for a
General Asphalt Federally Enforceable State Operating Permit (FESOP)
and a Source Specific Operating Agreement (SSOA) Transitioning to a FESOP

Source Background and Description

Source Name: Jerry David Enterprises, Inc.
Source Location: 4301 Hogue Road, Evansville, IN 47712
County: Vanderburgh
SIC Code: 2951, 3273
Permit Renewal No.: 163-28873-00082
Permit Reviewer: Hannah L. Desrosiers

On August 29, 2010, the Office of Air Quality (OAQ) had a notice published in the Evansville Courier, Evansville, Indiana, stating that Jerry David Enterprises, Inc. had applied for a renewal of their General Asphalt Federally Enforceable State Operating Permit (FESOP). IDEM, OAQ is no longer issuing the General FESOP permits until the standard permit language can be updated to coincide with current environmental standards and regulations. Additionally, since the existing batch-mix, hot-mix asphalt plant, and existing ready-mix concrete batch plant are each a stationary source and have been determined as one source, the Ready-mix Concrete SSOA will be revoked and a single permit issued for the combined operations. Therefore, the notice also stated that OAQ proposed to issue a Federally Enforceable State Operating Permit (FESOP) Renewal for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments and Responses

On Friday, August 27, 2010, Derrick J. Ohning, Director of the Evansville Environmental Protection Agency, submitted comments to IDEM, OAQ on the draft FESOP Renewal.

The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but the Permit will have the updated changes. The comments and revised permit language are provided below with deleted language as ~~strikeouts~~ and new language **bolded**.

Comment 1:

In Section E.2.1, the listed applicable portions of 40 CFR 63 Subpart CCCCCC [Gasoline Dispensing Facilities] do not correspond with that subpart, but refer instead to requirements in Subpart WWWWWW [Plating and Polishing Operations].

Response to Comment 1:

IDEM agrees with the recommended changes, since the listed applicable portions of the rule do not correspond with that subpart. The permit has been revised as follows:

E.2.1 National Emission Standards for Hazardous Air Pollutants (NESHAPs): Area Source Standards for Source Category: Gasoline Dispensing Facilities [40 CFR 63, Subpart CCCCCC] [326 IAC 20]

The gasoline fuel transfer and dispensing operation is therefore subject to the following portions of Subpart CCCCCC (6C) (included as Attachment C of this permit):

- (1) **40 CFR 63.11110**~~40 CFR 63.11504(a)(1)(iii), (a)(2), (a)(3);~~
- (2) **40 CFR 63.11111(a)(b)(e)(f)**~~40 CFR 63.11505(a)(1), (b), (e);~~
- (3) **40 CFR 63.11112(a)(d)**~~40 CFR 63.11506(a);~~
- (4) **40 CFR 63.11113(b)**~~40 CFR 63.11507(g);~~
- (5) **40 CFR 63.11116**~~40 CFR 63.11508(a), (b), (d)(1), (d)(2), (d)(8);~~
- (6) **40 CFR 63.11130**~~40 CFR 63.11509(a), (b), (c)(6), (c)(7), (d), (e), (f);~~
- (7) **40 CFR 63.11131**~~40 CFR 63.11510;~~
- (8) **40 CFR 63.11132**~~40 CFR 63.11511; and~~
- (9) ~~40 CFR 63.11512.~~

Comment 2:

The language in Section D.2.5 does not appear to take in to account that the cement silo baghouses are integral; they should not be "required" to operate at all times when the batch plant is operating, or when the silos are being filled for that matter, since they must. They are not for general handling, but for filling only, and are not control devices, primarily.

Response to Comment 2:

IDEM does not agree with the recommended change. Jerry David Enterprises, Inc. was offered the opportunity and encouraged to have the cement silo baghouses determined integral to the silo loading/unloading process. Jerry David Enterprises, Inc. declined to do so and stated that the baghouses were in-fact not an integral part of the silo loading/unloading process. In addition, as noted in the TSD, pages 17 and 18 of 22, Jerry David Enterprises, Inc. is subject to 326 IAC 6.5. Therefore, PM emissions from each of the ducted/ductable emission units at this source, including the concrete batch plant silo loading operation, shall not exceed seven hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)) of exhaust air. This requirement exists independent of whether the cement silo baghouses are an integral part of the silo loading/unloading process.

Therefore, particulate emissions from the silo loading equipment shall be controlled by the cement silo baghouses, at all times that any of the silo loading equipment is in operation in order to comply with 326 IAC 6.5.

No changes were made as a result of this comment.

Additional Changes

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

- (a) Section A.1 - General Information, page 5 of 48 of the permit, has been revised to include the SIC code of the ready-mix concrete batching operation, as follows:

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

The Permittee owns and operates a stationary batch-mix, hot-mix asphalt plant and a stationary ready-mix concrete batch plant. This source does not perform any crushing activities, does not use any slag or shingles in the asphalt aggregate mix, and does not manufacture and/or produce cold-mix asphalt.

Source Address: 4301 Hogue Road, Evansville, Indiana 47712
General Source Phone Number: (812) 422-1827
SIC Code: 2951, **3273**

- (b) Sections E.1.1 and E.2.1, pages 38 and 39 of 48 of the permit, and the title pages of the corresponding attachments to the permit, have been revised to correctly indicate, in accordance with the permit's TOC, that NSPS Subpart I should be labeled as Attachment A, not Attachment B, and NESHAP Subpart CCCCCC should be labeled as Attachment B, not Attachment C, as follows:

E.1.1 NSPS Subpart I Requirements - Standards of Performance for Hot Mix Asphalt Facilities
[40 CFR Part 60, Subpart I] [326 IAC 12-1]

The hot mix asphalt facility is subject to the following portions of 40 CFR 60, Subpart I (included as Attachment **AB** of this permit):

FEDERALLY ENFORCEABLE
STATE OPERATING PERMIT
(FESOP) Renewal
OFFICE OF AIR QUALITY

Jerry David Enterprises, Inc.
4301 Hogue Road
Evansville IN 47712

Attachment **AB**

and;

E.2.1 National Emission Standards for Hazardous Air Pollutants (NESHAPs): Area Source
Standards for Source Category: Gasoline Dispensing Facilities [40 CFR 63, Subpart
CCCCC] [326 IAC 20]

The gasoline fuel transfer and dispensing operation is therefore subject to the following portions of Subpart CCCCC (6C) (included as Attachment **BC** of this permit):

FEDERALLY ENFORCEABLE
STATE OPERATING PERMIT
(FESOP) Renewal
OFFICE OF AIR QUALITY

Jerry David Enterprises, Inc.
4301 Hogue Road
Evansville IN 47712

Attachment **BC**

No other changes have been made to the permit

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Ms. Hannah Desrosiers at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5374 or toll free at 1-800-451-6027 extension 4-5374.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a General Asphalt Federally Enforceable State Operating Permit (FESOP) and a Source Specific Operating Agreement (SSOA) Transitioning to a FESOP

Source Description and Location

Source Name:	Jerry David Enterprises, Inc.
Source Location:	4301 Hogue Road, Evansville, IN 47712
County:	Vanderburgh
SIC Code:	2951
Permit Renewal No.:	163-28873-00082
Permit Reviewer:	Hannah L. Desrosiers

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Jerry David Enterprises, Inc. relating to the continued operation of an existing stationary batch-mix, hot-mix asphalt plant and an existing stationary ready-mix concrete batch plant.

Source Definition

Jerry David Enterprises, Inc. (source number 163-00082) operates an asphalt plant and a concrete batch plant at 4301 Hogue Road, Evansville, IN 47712. The asphalt plant operates pursuant to FESOP 163-22519-00082 which it seeks to renew under FESOP application number 163-28873-00082. The concrete plant is operated under SSOA 163-6159-00082. Evansville EPA has previously determined that the two plants are separate sources. IDEM, OAQ has examined whether these two plants are part of the same major source. The term "major source" is defined at 326 IAC 2-7-1(22). In order for the two plants to be considered one major source, they must meet all three of the following criteria:

- (a) the plants must be under common ownership or common control;
- (b) the plants must have the same two-digit Standard Industrial Classification (SIC) Code or one must serve as a support facility for the other; and,
- (c) the plants must be located on contiguous or adjacent properties.

Jerry David Enterprises, Inc. owns both plants. Since the plants are under common ownership, and therefore also under common control, the first element of the definition is met.

The SIC Code Manual of 1987 sets out how to determine the proper SIC Code for each type of industry. The principal product of each plant determines its SIC Code. The asphalt plant has the two digit SIC Code of 29 for the major group Petroleum Refining and Related Industries. The concrete plant has the two digit SIC Code of 32 for the major group Stone, Clay, Glass, and Concrete Products.

A plant is considered a support facility if at least 50% of its output is dedicated to the other plant. Each plant has one employee, the batch operator. A third employee operates the loading equipment for each plant. In slower production months, typically November to March, each plant operator loads for the other plant. The two plants use the same material bins. Both plants stay open year round. Also located at the same property are the offices for Jerry David Enterprises, Inc. The company also employs drivers who operate the concrete trucks and dump trucks that carry the concrete and asphalt to customer sites. The same drivers operate both types of trucks, switching between them as needed to meet customer orders. The trucks and drivers all operate out of the same location as the asphalt and concrete plants.

Webster’s Dictionary defines output as “(1.) The act of producing: production. (2.) An amount produced esp. during a given time. (3.a.) The power, energy, or work produced by a system.” There is a great deal of production that is shared between the two plants. The two plants share a loading equipment operator during the 7 busiest months of the year. During the five slower months, each plant operator also works as the loader for the other plant. Each plant shares the vehicle drivers necessary to get the asphalt and concrete to their customers in a timely manner while it is still usable. In addition, the two plants share some common material bins and loading equipment. Although much of the concrete production equipment and the asphalt production equipment is distinct, the shared employees and shared equipment indicate that the two plants operate as a single plant with two lines producing two distinct products. The two plant operators, the shared loader operator and the truck drivers are dedicated to doing work of each plant, based on the amount of concrete and asphalt that need to be produced on any given day. Since the plants provide mutual support in order to produce their products and since the company equally dedicates its employees to produce both products, each plant serves as a support facility to the other. The second element of the definition is met.

The two plants are located on the same property, meeting the third element of the definition. Since the two plants meet all three of the elements of the major source definition, IDEM, OAQ finds that the two plants are one major source.

Existing Approvals

The source has been operating under General Asphalt FESOP No: 163-22519-00082, issued on February 17, 2006, and SSOA No: 163-6159-00082, issued on September 09, 1996.

Due to this application, the source is transitioning from the General Asphalt FESOP, and Ready-mix Concrete Batch Plant SSOA, to a FESOP.

County Attainment Status

The source is located in Vanderburgh County. The following attainment status designations are applicable to Vanderburgh County:

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective January 30, 2006, for the Evansville area, including Vanderburgh County, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
PM _{2.5}	Basic nonattainment designation effective federally April 5, 2005
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ Attainment effective October 18, 2000, for the 1-hour ozone standard for the Evansville area, including Vanderburgh County, and is a maintenance area for the 1-hour ozone National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour designation was revoked effective June 15, 2005.	

- (a) Ozone Standards
 Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Vanderburgh 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

U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Vanderburgh County as nonattainment for PM2.5. On March 7, 2005, the Indiana Attorney General's Office, on behalf of IDEM, filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's New Source Review Rule for PM2.5 promulgated on May 8th, 2008, and effective on July 15th 2008. Therefore, direct PM2.5 and SO2 emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the "State Rule Applicability – Entire Source" section.

(c) Other Criteria Pollutants

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

Fugitive Emissions

The batch-mix, hot-mix asphalt plant and ready-mix concrete batch plant are each not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, however, the batch-mix, hot-mix asphalt plant is subject to an applicable New Source Performance Standard that was in effect on August 7, 1980, therefore fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Background and Description of Permitted Emission Units

On January 13, 2010, Jerry David Enterprises, Inc. submitted an application to the OAQ requesting to renew its General FESOP operating permit. IDEM, OAQ is no longer issuing the General FESOP permits until the standard permit language can be updated to coincide with current environmental standards and regulations. Additionally, since the existing batch-mix, hot-mix asphalt plant, and existing ready-mix concrete batch plant are each a stationary source and have been determined as one source, the SSOA will be revoked and a single permit issued for the combined operations. Therefore, Jerry David Enterprises, Inc. will be issued a Federally Enforceable State Operating Permit (FESOP) Renewal. Jerry David Enterprises, Inc. has confirmed that they do not perform any crushing, use slag or shingles in their asphalt aggregate mix, and do not manufacture and/or produce cold-mix asphalt.

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

(a) One (1) batch-mix, hot-mix asphalt plant, consisting of the following:

- (1) One (1) aggregate rotary dryer, identified as Heater 1, constructed in 1976, with a maximum burner heat input capacity of twenty-two (22) million British thermal units per hour (mmBtu/hr), firing natural gas, No. 2 fuel oil, and No. 4 fuel oil, and exhausting to the outside atmosphere;
- (2) One (1) batch mixer (pugmill), constructed in 1976, with a maximum throughput capacity of sixty (60) tons of aggregate per hour, equipped with one (1) jetpulse baghouse for particulate control, and exhausting to the outside atmosphere;
- (3) Material handling, screening, and conveying operations, constructed in 1976, uncontrolled and exhausting to the outside atmosphere, and consisting of the following:
 - (A) Aggregate storage piles consisting of limestone, sand, pre-sized recycled asphalt pavement (RAP), and gravel, as follows;

- (i) Limestone storage piles, having a maximum height of thirteen (13) feet and a maximum storage capacity of fifteen hundred (1500) tons;
- (ii) Sand storage piles, having a maximum height of thirteen (13) feet and a maximum storage capacity of one thousand (1000) tons;
- (iii) Pre-sized RAP storage piles, having a maximum height of thirteen (13) feet and a maximum storage capacity of five hundred (500) tons.
- (iv) Gravel storage piles, having a maximum height of thirteen (13) feet and a maximum storage capacity of four hundred fifteen (415) tons;

Note: The above-listed limestone, sand, and gravel storage piles are shared with the ready-mix concrete batching operation.

- (B) Four (4) aggregate hoppers;
- (C) One (1) screen deck;
- (D) Two (2) belt conveyors;
- (E) One (1) bucket elevator; and
- (F) One (1) sixty (60) ton storage silo;

Under 40 CFR 60.90, Subpart I - New Source Performance Standards for Hot Mix Asphalt Facilities, this batch-mix, hot-mix asphalt operation is considered an affected facility.

- (b) One (1) ready-mix concrete batch plant, constructed in 1996, with a maximum throughput capacity of sixty (60) yards of dry concrete mix per hour, a maximum of seven (7) yards per dry batch, and consisting of the following:
 - (1) Aggregate storage piles consisting of limestone, sand, and gravel, shared with the hot-mix asphalt plant, and listed above;
 - (2) One (1) cement storage silo, with a maximum storage capacity of sixty-five (65) tons, equipped with a baghouse for particulate control, and exhausting to the atmosphere;
 - (3) One (1) cement supplement storage silo, with a maximum storage capacity of sixty-five (65) tons and equipped with one (1) baghouse for particulate control, and exhausting to the atmosphere;
 - (4) One (1) enclosed aggregate handling operation, uncontrolled, and exhausting to the atmosphere including:
 - (A) One (1) aggregate hopper;
 - (B) Two (2) belt conveyors;
 - (C) Four (4) overhead aggregate bins;
 - (D) One (1) aggregate weighing scale, with a maximum throughput capacity of ninety-one (91) tons per hour;
 - (5) One (1) completely enclosed cement batch scale, with a maximum throughput capacity of sixty (60) yards per hour, and seven (7) yards per batch, equipped with one (1) baghouse for particulate control, and exhausting the atmosphere;

(c) Insignificant activities consisting of the following:

- (1) Cold-mix (stockpile mix) asphalt storage stockpiles, with a maximum annual storage capacity of forty (40) tons; [326 IAC 8-5-2]
- (2) One (1) liquid asphalt cement hot oil heating system, constructed in 1997, including one (1) natural gas-fired hot oil heater, identified as Heater 2, with a maximum heat input capacity of one (1.00) million British thermal units per hour, uncontrolled and exhausting to the outside atmosphere; [326 IAC 6.5]
- (3) One (1) natural gas-fired hot water heater for the ready-mix concrete batch plant, constructed in 2006, with a maximum heat input capacity of three and five tenths (3.5) million British thermal units per hour, uncontrolled and exhausting to the outside atmosphere; [326 IAC 6.5]
- (4) Paved roads and parking lots with public access. [326 IAC 6-5]
- (5) One (1) 5,000 gallon No. 2 Fuel Oil storage tank, identified as Tank 1, constructed in 1990, uncontrolled and exhausting to the outside atmosphere;
- (6) One (1) 1,000 gallon No. 2 Fuel Oil storage tank, identified as Tank 2, constructed in 1990, uncontrolled and exhausting to the outside atmosphere;
- (7) One (1) five hundred (500) gallon No. 2 Fuel Oil storage tank, identified as Tank 3, constructed in 1990, uncontrolled and exhausting to the outside atmosphere;
- (8) One (1) 8,000 gallon No. 4 Fuel Oil storage tank, identified as Tank 6, constructed in 1990, uncontrolled and exhausting to the outside atmosphere; and
- (9) One (1) 15,000 gallon liquid asphalt storage tank, identified as Tank 7, constructed in 1990, uncontrolled and exhausting to the atmosphere.
- (10) One (1) gasoline fuel transfer and dispensing operation, handling less than or equal to 1,300 gallons per day, having a maximum storage capacity less than or equal to 10,500 gallons, and including;
 - (A) One (1) five hundred (500) gallon gasoline storage tank, identified as Tank 4, constructed in 1990, uncontrolled and exhausting to the outside atmosphere.

Under 40 CFR 63, Subpart CCCCCC: National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities, the gasoline fuel transfer and dispensing operation, including the five hundred (500) gallon gasoline storage tank, is considered an affected facility.
- (11) Miscellaneous VOC and HAP Storage tanks, each with capacities less than or equal to 1,000 gallons, and annual throughputs of less than 12,000 gallons, including but not limited to;
 - (A) One (1) two hundred fifty (250) gallon kerosene storage tank, identified as Tank 5, constructed in 1990, uncontrolled and exhausting to the outside atmosphere;
- (12) Vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids;
- (13) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;

- (14) Natural gas pressure regulator vents, excluding venting at oil and gas production facilities; and

Unpermitted Emission Units and Pollution Control Equipment

No unpermitted emission units were discovered operating at this existing source during this review process.

Emission Units and Pollution Control Equipment Removed From the Source

No emission units have been removed from this existing source during this review process.

Enforcement Issues

There are no pending enforcement actions related to this existing source.

Emission Calculations

See Appendices A.1, A.1(a), A.1(b), A.2, A.2(a), and A.2(b), of this TSD for detailed emission calculations.

Permit Level Determination – FESOP Renewal

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

Pollutant	tons/year
PM	9,081.78
PM10 ⁽¹⁾	1,401.01
PM2.5	287.53
SO2	51.63
NOx	33.51
VOC	7.48
CO	107.53
Total HAPs ⁽²⁾	2.55
Maximum (Worst Case) HAP	0.77 (xylene)

NOTES

- (1) Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.
- (2) HAPs include 2-butanone, 2-methylnaphthalene, acetaldehyde, benzene, ethylbenzene, formaldehyde, hexane, hydrogen chloride, naphthalene, phenanthrene, polycyclic organic matter, quinone, toluene, total PAH Haps, xylenes, and antimony, arsenic, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium compounds.
- (3) Appendices A.1, A.1(a) and A.1(b), of this TSD, reflects the unrestricted, uncontrolled, potential emissions of the source.

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of PM10, PM2.5, and CO, each, is greater than one hundred (100) tons per year. The PTE of all other regulated criteria pollutants are less than one hundred (100) tons per year. The source would have been subject to the provisions of 326 IAC 2-7. However, the source will be issued a Federally Enforceable State Operating Permit (FESOP) Renewal (326 IAC 2-8), because the source will continue to limit emissions to less than the Title V major source threshold levels.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is still an area source under Section 112 of the Clean Air Act (CAA).

PTE of the Entire Source after Issuance of the FESOP Renewal

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

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of the FESOP Renewal (tons/year)								
	PM	PM10*	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Ducted Emissions - Batch-mix, Hot-mix Asphalt Plant									
Dryer Fuel Combustion (worst case) ⁽¹⁾	4.82	5.71	5.71	51.62	13.77	0.53	8.09	0.30	0.17 (hexane)
Dryer/mixer and batch tower (Process) ⁽²⁾	50.00	38.70	27.00	8.80	12.00	0.82	40.00	0.88	0.31 (formaldehyde)
Dryer/Mixer Slag Processing	0	0	0	0	0	0	0	0	0
Hot Oil Heater Fuel Combustion	0.01	0.03	0.03	0.003	0.44	0.02	0.37	0.01	0.008
Worst Case Emissions ^α	50.01	38.73	27.03	51.62	14.20	0.84	40.37	0.89	0.31 (formaldehyde)
Ducted Emissions - Ready-mix Concrete Batch Plant									
Hot Water Heater Fuel Combustion	0.03	0.12	0.12	0.01	1.53	0.08	1.29	0.029	0.028 (hexane)
Material Conveying	2.02	0.74	0.74	0	0	0	0	0	0
Silo Loading ⁽²⁾	41.22	17.27	17.27	0	0	0	0	0.01	0.005 (manganese)
Weigh Hopper Loading ⁽²⁾	0.38	0.18	0.18	0	0	0	0	0.02	0.008 (manganese)
Truck Loading ⁽²⁾	74.63	20.85	20.85	0	0	0	0	0.01	7.23E-04 (manganese)
Total Ducted/ Ductable Emissions	118.27	39.16	39.16	0.01	1.53	0.08	1.29	0.07	0.028 (hexane)
Fugitive Emissions									
Asphalt Load-Out, Silo Filling, On-Site Yard ⁽¹⁾	0.11	0.11	0.11	0	0	1.71	0.29	0.03	0.009 (formaldehyde)
Material Storage Piles	0.07	0.03	0.03	0	0	0	0	0	0
Material Processing and Handling ⁽¹⁾	3.69	1.75	1.49	0	0	0	0	0	0
Material Crushing, Screening, and Conveying ⁽¹⁾	2.66	0.93	0.93	0	0	0	0	0	0
Unpaved and Paved Roads (worst case) ⁽¹⁾	4.45	0.86	0.13	0	0	0	0	0	0
Cold-Mix Asphalt Production	0	0	0	0	0	0	0	0	0
Cold-Mix Asphalt Stockpile Storage	0	0	0	0	0	0.67	0	0.18	0.06 (xylene)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0.010	0	0.011	0.004 (xylenes)
Volatile Organic Liquid Storage Vessels ^β	0	0	0	0	0	negl	0	negl	negl
Total Fugitive Emissions	10.99	3.68	2.69	0	0	2.40	0.29	0.22	0.064 (xylenes)
Total Limited/ Controlled Emissions	179.27	81.57	68.87	51.63	15.74	3.32	41.94	1.17	0.31 (formaldehyde)
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	NA	250	250	250	250	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	100	NA	NA	NA	NA	NA	NA
negl = negligible NA = Not applicable * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". Additionally, US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. α 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 β Fugitive emissions from each of the volatile organic liquid storage tanks were calculated using the EPA Tanks 4.0.9d program and were determined to be negligible. (1) Limited PTE based upon annual production limit to comply with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP). (2) Limited PTE based upon annual production limit and lb/ton emission limits to comply with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).									

(a) FESOP Status

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

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

- (1) Pursuant to 326 IAC 2-8-4, the PM10 and CO emissions from the batch-mix, hot-mix asphalt plant dryer/mixer burner, and all other associated emission units at this source, shall be limited as follows:
 - (A) The asphalt production rate shall not exceed 200,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (B) PM10 emissions from the dryer/mixer shall not exceed three hundred eighty-seven thousandths (0.387) pounds of PM10 per ton of asphalt produced.
 - (C) CO emissions from the dryer/mixer shall not exceed forty hundredths (0.40) pounds of CO per ton of asphalt produced.

Compliance with these limits, combined with the potential to emit PM10 and CO from all other emission units at this source, shall limit the source-wide total potential to emit of PM10 and CO to less than one hundred (100) tons per twelve (12) consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permit Program), 326 IAC 2-1.1-5 (Nonattainment New Source Review), and 326 IAC 2-2 (PSD) not applicable.

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

- (i) During this review, the emissions calculations were updated to reflect the source's most current "worst-case" operating conditions for all units, and includes emissions not previously counted. Additionally, since OAQ relies on the most up-to-date emission factors recommended by U.S. EPA, facility emissions have been characterized using the most recent version of U.S. EPA's AP-42. As a result, the following changes have been made to the permit:
 - (α) The existing FESOP limit for the maximum annual hot-mix asphalt production (ton/yr) has been reduced from 600,000 to 200,000, to allow for the inclusion of the ready-mix concrete batch plant emissions, and to ensure compliance with the one hundred (100) ton per year FESOP threshold for Carbon Monoxide (CO), and make the requirements of 326 IAC 2-7 Title V (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable;
 - (β) The existing pound per ton (lb/ton) PM10 emission limit has been increased from thirteen hundredths (0.13) lbs/ton to three hundred eighty-seven thousandths (0.387) lbs/ton. This was possible because the decrease in the annual asphalt production limit is such that the existing pound per ton (#/ton) limit for PM10 can be increased to allow the source added operational flexibility and still ensure compliance with the one hundred (100) ton per year FESOP threshold for PM10, and make the requirements of 326 IAC 2-7 Title V (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.
 - (γ) A new FESOP pound per ton (#/ton) limit for CO has been added to the permit, in order to ensure compliance with the one hundred (100) ton per year FESOP threshold for CO, and to render the requirements of 326 IAC 2-7 Title V (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.
 - (δ) All fuel usage limits have been removed from the permit. The source has indicated that only natural gas, and No. 2 and No. 4 fuel oils will be used. Appendix A.1(a): emissions calculations demonstrates that when the asphalt plant operates at maximum capacity, the unlimited usage of these fuels will not cause the source to exceed any of the one hundred (100) ton per year FESOP thresholds, thereby allowing the source to maintain its FESOP status, and make the requirements of 326 IAC 2-7 Title V (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable;

- (ii) The cold-mix asphalt limits have been removed from the permit because the source has indicated that it does not manufacture and/or produce cold-mix asphalt, but purchases what is needed, and then stores/stockpiles the remaining for future use. The cold-mix asphalt storage stockpiles will not exceed forty (40.0) tons of material, maximum, per year, and are subject to 326 IAC 8-5-2.

See Appendix A for detailed calculations.

- (2) Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall not use slag as an aggregate additive in its hot mix asphalt operations. This is a new requirement for this source.

Compliance with this requirement, combined with the potential SO₂ emissions from all other emission units at this source, shall limit the source-wide total potential to emit SO₂ to less than one hundred (100) tons per twelve (12) consecutive month period, and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

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

- (i) A new condition prohibiting the use of slag in the aggregate mix has been added to the permit in order to ensure compliance with the one hundred (100) ton per year FESOP threshold for SO₂, and making the requirements of 326 IAC 2-7 Title V (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable;
- (3) Pursuant to 326 IAC 2-8-4, the PM₁₀ and PM_{2.5} emissions from the ready-mix concrete batch plant shall be limited as follows:
 - (A) The ready-mix concrete production shall not exceed 150,000 tons (equivalent to 75,000 cubic yards), per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (B) PM₁₀ emissions from the truck loading operation shall not exceed two hundred seventy-eight thousandths (0.278) pounds of PM₁₀ per ton of ready-mix concrete produced. This is a new limit for this source.
 - (C) PM_{2.5} emissions from the truck loading operation shall not exceed two hundred seventy-eight thousandths (0.278) pounds of PM_{2.5} per ton of ready-mix concrete produced. This is a new limit for this source.
 - (D) The amount cement used in the production of ready-mix concrete shall not exceed 24,273 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This is a new limit for this source.
 - (E) PM₁₀ emissions from the cement handling operation shall not exceed forty-six hundredths (0.46) pounds of PM₁₀ per ton of cement used in the production of ready-mix concrete. This is a new limit for this source.
 - (F) PM_{2.5} emissions from the cement handling operation shall not exceed forty-six hundredths (0.46) pounds of PM_{2.5} per ton of cement used in the production of ready-mix concrete. This is a new limit for this source.
 - (G) The amount cement supplement used in the production of ready-mix concrete shall not exceed 20,000 tons per twelve (12) consecutive month period with compliance

- determined at the end of each month. This is a new limit for this source.
- (H) PM10 emissions from the cement supplement handling operation shall not exceed one and ten hundredths (1.10) pounds of PM10 per ton of cement supplement used in the production of ready-mix concrete. This is a new limit for this source.
 - (I) PM2.5 emissions from the cement supplement handling operation shall not exceed one and ten hundredths (1.10) pounds of PM2.5 per ton of cement supplement used in the production of ready-mix concrete. This is a new limit for this source.

Compliance with these limits, combined with the potential to emit PM10 and PM2.5 from all other emission units at this source, shall limit the source-wide total potential to emit of PM10 and PM2.5 to less than one hundred (100) tons per twelve (12) consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permit Program), 326 IAC 2-1.1-5 (Nonattainment New Source Review), and 326 IAC 2-2 (PSD) not applicable.

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

- (A) As noted above, the emissions calculations were updated to reflect the source's most current "worst-case" operating conditions for all units, and includes emissions not previously counted. Additionally, the most recent AP-42 emission factors have been used to characterize these emissions.
- (B) The existing annual ready-mix concrete production limit, contained in the original SSOA, has been reduced from 600,000 to 150,000 tons per year, to allow for the inclusion of the batch-mix, hot-mix asphalt plant emissions, and to make the requirements of 326 IAC 2-7 Title V (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable;
- (C) New pound per ton (lb/ton) PM10 and PM2.5 emission limits have been added to the permit, for the truck loading, cement handling, and cement supplement handling operations, to make the revised maximum annual ready-mix concrete production limit (ton/yr) more practicably enforceable, and to limit PM10 and PM2.5 emissions from the entire source to ensure compliance with the one hundred (100) ton per year FESOP thresholds for PM10 and PM2.5, to make the requirements of 326 IAC 2-7 Title V (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

(b) PSD Minor Source

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

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

- (1) PM emissions from the batch-mix, hot-mix asphalt plant dryer/mixer burner, and all other associated emission units at this source, shall be limited as follows:
 - (A) The asphalt production rate shall not exceed 200,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (B) PM emissions from the dryer/mixer shall not exceed five hundred thousandths (0.500) pounds of PM per ton of asphalt produced.

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

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

- (A) As noted above, the emissions calculations were updated to reflect the source's most current "worst-case" operating conditions for all units, and includes emissions not previously counted. Additionally, the most recent AP-42 emission factors have been used to characterize these emissions.
- (B) A new pound per ton (lb/ton) PM emission limit has been added to the permit to make the revised maximum annual hot-mix asphalt production limit (ton/yr) more practicably enforceable, to limit PM emissions from the entire source to less than two hundred fifty (250) tons per year, making 326 IAC 2-2 PSD not applicable;

See Appendix A for detailed calculations.

(2) PM emissions from the ready-mix concrete batch plant shall be limited as follows:

- (A) The ready-mix concrete production shall not exceed 150,000 tons (equivalent to 75,000 cubic yards), per twelve (12) consecutive month period with compliance determined at the end of each month. This is a revised limit for this source.
- (B) PM emissions from the truck loading operation shall not exceed nine hundred ninety-five thousandths (0.995) pounds of PM per ton of ready-mix concrete produced. This is a new limit for this source.
- (C) The amount cement used in the production of ready-mix concrete shall not exceed 24,273 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This is a new limit for this source.
- (D) PM emissions from the cement handling operation shall not exceed seventy-two hundredths (0.72) pounds of PM per ton of cement used in the production of ready-mix concrete. This is a new limit for this source.
- (E) The amount cement supplement used in the production of ready-mix concrete shall not exceed 20,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This is a new limit for this source.
- (F) PM emissions from the cement supplement handling operation shall not exceed three and fourteen hundredths (3.14) pounds of PM per ton of cement supplement used in the production of ready-mix concrete. This is a new limit for this source.

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 two hundred fifty (250) tons per twelve (12) consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

See Appendix A for detailed calculations.

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

- (A) As noted above, the emissions calculations were updated to reflect the source's most current "worst-case" operating conditions for all units, and includes emissions not previously counted. Additionally, the most recent AP-42 emission factors have been used to characterize these emissions.
 - (B) The existing annual ready-mix concrete production limit, contained in the original SSOA, has been reduced from 600,000 to 150,000 tons per year, to allow for the inclusion of the batch-mix, hot-mix asphalt plant emissions, and to make the requirements of 326 IAC 2-7 Title V (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable;
 - (C) New pound per ton (lb/ton) PM emission limits have been added to the permit, for the truck loading, cement handling, and cement supplement handling operations, to make the revised maximum annual ready-mix concrete production limit (ton/yr) more practicably enforceable, and to limit PM emissions from the entire source to less than two hundred fifty (250) tons per year. These limits complement the State Rule 326 IAC 6.5 limit of 0.03 gr/dscft, and makes 326 IAC 2-2 PSD not applicable;
- (d) Emission Offset Minor Source
This existing source is not a major stationary source, under Emission Offset (326 IAC 2-3), because the potential to emit PM_{2.5} is less than one hundred (100) tons per year and the potential to emit all other nonattainment regulated pollutants are less than one hundred (100) tons per year. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) 40 CFR 60, Subpart I - Standards for Hot Mix Asphalt Facilities
stationary batch-mix, hot-mix asphalt plant, approved for construction in 1996, is still subject to the New Source Performance Standard, 40 CFR 60, Subpart I (326 IAC 12), because it continues to meet the definition of a hot-mix asphalt facility, as described in §60.91, and was constructed after rule applicability date of June 11, 1973.

The units subject to this rule include the following:

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

Therefore, pursuant to 40 CFR 60.92(a), particulate matter emissions from the above listed units, shall not exceed four hundredths (0.04) grains per dry standard cubic foot (gr/dscf), and visible emissions shall not exceed twenty percent (20%) opacity.

The source will continue to comply with this rule by using a baghouse to limit particulate matter emissions to less than four hundredths (0.04) gr/dscf.

The hot mix asphalt facility continues to be subject to the following portions of 40 CFR 60, Subpart I (included as Attachment A of the permit):

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

(4) 40 CFR 60.93.

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

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

(b) 40 CFR 60, Subpart Dc - Standards for Small Industrial/Commercial/Institutional Steam Generating Units

The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc (326 IAC 12), are not included in this renewal, because the one (1) natural gas-fired hot oil heater, with a maximum rated heat input capacity of one (1) MMBtu/hr, still has a maximum design heat input capacity of less than the applicability threshold of ten (10) million British thermal units per hour.

(c) 40 CFR 60, Subpart F - Standards for Portland Cement Plants

The requirements of the New Source Performance Standard for Portland Cement Plants, 40 CFR 60, Subpart F (326 IAC 12), are not included in this renewal for the existing stationary ready-mix concrete batch plant, since it still does not meet the definition of a Portland cement plant, as defined in § 60.61, because the source still does not manufacture portland cement, by either the wet or dry process.

(d) 40 CFR 60, Subpart Kb - Standards for Volatile Organic Liquid Storage Vessels

(1) The requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels, 40 CFR 60, Subpart Kb (326 IAC 12), are not included in this renewal for the one (1) 5,000 gallon No. 2 Fuel Oil storage tank, identified as Tank 1, one (1) 1,000 gallon No. 2 Fuel Oil storage tank, identified as Tank 2, one (1) five hundred (500) gallon No. 2 Fuel Oil storage tank, identified as Tank 3, one (1) 8,000 gallon No. 4 Fuel Oil storage tank, identified as Tank 6, and the one (1) 15,000 gallon liquid asphalt storage tank, identified as Tank 7, because although each tank was constructed after the rule applicability date of July 23, 1984, each tank still has a maximum capacity of less than 75 m³ (19,813 gallons), and the liquid stored in each tank still has a maximum true vapor pressure of less than fifteen kiloPascals (15.0 kPa).

(2) The requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels, 40 CFR 60, Subpart Kb (326 IAC 12), are not included in this renewal for the one (1) 500 gallon gasoline storage tank, identified as Tank 4, and the one (1) two hundred fifty (250) gallon kerosene storage tank, identified as Tank 5, each, because although these tanks were constructed after the rule applicability date of July 23, 1984 and the liquid stored in each tank has a maximum true vapor pressure of greater than fifteen kiloPascals (15.0 kPa), each tank still has a maximum capacity of less than 75 m³ (19,813 gallons).

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

The requirements of the New Source Performance Standard for Asphalt Processing and Asphalt Roofing Manufacture, 40 CFR 60, Subpart UU (326 IAC 12), are not included in this renewal for the existing stationary batch-mix, hot-mix asphalt plant, since it still does not blow asphalt, or an asphalt roofing plant because it still does not produce asphalt roofing products, and pursuant to §60.101(a) the stationary batch-mix, hot-mix asphalt plant is still not a petroleum refinery because it is not engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of petroleum or through redistillation, cracking or reforming of unfinished petroleum derivatives.

(f) 40 CFR 60, Subpart XX - Standards for Bulk Gasoline Terminals

The requirements of the New Source Performance Standard for Bulk Gasoline Terminals (40 CFR 60, Subpart XX) (326 IAC 12), are not included in this renewal, since the source does not meet the definition of a bulk gasoline terminal, as defined in 40 CFR 60.500. The source has an insignificant gasoline fuel transfer and dispensing operation.

- (g) 40 CFR 60, Subpart OOO - Standards for Nonmetallic Mineral Processing Plants
The requirements of the New Source Performance Standard for Nonmetallic Mineral Processing Plants (40 CFR 60, Subpart OOO) (326 IAC 12), are not included in this renewal, since the source still does not crush or grind any Recycled Asphalt Pavement (RAP), or other nonmetallic minerals. Instead, the source will be receiving pre-crushed/pre-sized materials for use in its aggregate mixes. Therefore, pursuant to 40 CFR 60.670(a)(2) stand-alone screening operations at plants without crushers or grinding mills are exempt.
- (h) 40 CFR 60, Subpart UUU - Standards for Calciners and Dryers in Mineral Industries
The requirements of the New Source Performance Standard for Calciners and Dryers in Mineral Industries, 40 CFR 60, Subpart UUU (326 IAC 12), are not included in this renewal, since the existing stationary batch-mix, hot-mix asphalt plant and the existing stationary ready-mix concrete batch plant are each still not a mineral processing plant, meaning that each plant still does not process or produce any of the following minerals, their concentrates or any mixture of which the majority (>50 percent) is any of the following minerals or a combination of these minerals: alumina, ball clay, bentonite, diatomite, feldspar, fire clay, fuller's earth, gypsum, industrial sand, kaolin, lightweight aggregate, magnesium compounds, perlite, roofing granules, talc, titanium dioxide, and vermiculite.
- (i) There are no other New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) included in this renewal.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (a) 40 CFR 63, Subpart LLL - NESHAPs from the Portland Cement Manufacturing Industry
The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) From the Portland Cement Manufacturing Industry, 40 CFR 63, Subpart LLL (326 IAC 20-27), are not included in this renewal, since the existing stationary does not meet the definition of a Portland cement plant, as defined in § 63.1341, because this source does not manufacture portland cement.
- (b) 40 CFR 63, Subpart DDDDD - NESHAPs for Industrial, Commercial, and Institutional Boilers, and Process Heaters
The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD (326 IAC 20), are not included in this renewal, as follows:

On June 8, 2007, the United States Court of Appeals for the District of Columbia Circuit (in *National Resource Defense Council, Sierra Club, Environmental Integrity Project vs. EPA*, No. 04-1385), vacated 40 CFR 63, Subpart DDDDD in its entirety. Additionally, since State Rule 326 IAC 20-95 incorporated the requirements of the NESHAP 40 CFR 63, Subpart DDDDD by reference, the requirements of 326 IAC 20-95 are no longer effective. However, since NESHAP 40 CFR Part 63, Subpart DDDDD has been vacated, Section 112(j) of the Clean Air Act, major sources of Hazardous Air Pollutants (HAPs), in specified source categories, requires a case-by-case MACT determination when EPA fails to promulgate a scheduled MACT Standard by the regulatory deadline. Jerry David Enterprises, Inc. is still considered an area source under Section 112 of the Clean Air Act, MACT Standards. Therefore, the source is not subject to a case-by-case MACT determination.
- (c) 40 CFR 63, Subpart LLLLL - NESHAPs for Asphalt Processing and Asphalt Roofing Manufacturing
The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63, Subpart LLLLL (326 IAC 20-71), are not included in this renewal, since the existing stationary batch-mix, hot-mix asphalt plant is still not an asphalt processing plant or an asphalt roofing manufacturing facility because it does not engage in the preparation of asphalt flux or asphalt roofing materials. Additionally, it is not a major source of HAPs, and is not located at nor is it a part of a major source of HAP emissions.

(d) 40 CFR 63, Subpart CCCCCC - NESHAP for the Source Category Identified as Gasoline Dispensing Facilities (GDF)

This source is subject to the National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities, 40 CFR 63, Subpart CCCCCC (6C), which are incorporated by reference as 326 IAC 20, because the source has a gasoline fuel transfer and dispensing operation, capable of handling less than or equal to 1,300 gallons per day, with a maximum storage capacity equal to or less than 10,500 gallons.

The gasoline fuel transfer and dispensing operation is therefore subject to the following portions of Subpart CCCCCC (6C) (included as Attachment B of the permit):

- | | | | |
|-----|---|-----|----------------------|
| (1) | 40 CFR 63.11504(a)(1)(iii), (a)(2), (a)(3); | (7) | 40 CFR 63.11510; |
| (2) | 40 CFR 63.11505(a)(1), (b), (e); | (8) | 40 CFR 63.11511; and |
| (3) | 40 CFR 63.11506(a); | (9) | 40 CFR 63.11512. |
| (4) | 40 CFR 63.11507(g); | | |
| (5) | 40 CFR 63.11508(a), (b), (d)(1), (d)(2), (d)(8); | | |
| (6) | 40 CFR 63.11509(a), (b), (c)(6), (c)(7), (d), (e), (f); | | |

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

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

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

Compliance Assurance Monitoring (CAM)

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.

State Rule Applicability Determination

Entire Source

- (a) 326 IAC 1-6-3 (Preventive Maintenance Plan (PMP))
Any person responsible for operating any facility required to obtain a permit under the Federally Enforceable State Operating Permit Program, 326 IAC 2-8, shall prepare and maintain a preventive maintenance plan in accordance with 326 IAC 1-6-3(a), whenever a control device is required for compliance with any applicable emission limitations and/or air pollution control regulations. The hot-mix asphalt drying and mixing processes and combustion equipment, and the concrete batch plant material conveying, silo loading, weigh hopper loading and truck loading operations, still require the use of a control device to limit the particulate emissions of PM and PM10 to less than PSD and TV thresholds. Therefore a PMP is still required for these units and their associated control devices.
- (b) 326 IAC 1-7 (Stack Height)
The unlimited and uncontrolled PM10 and PM2.5 emissions from this existing source, each, are still greater than one hundred (100) tons per year. Therefore, this source continues to be subject to this rule and the requirements are included in Section C, of this renewal.
- (c) 326 IAC 2-1.1-5 (Nonattainment New Source Review)
This existing source is not a major stationary source, under 326 IAC 2-1.1-5 (Nonattainment New Source Review), because the potential to emit particulate matter with a diameter less than ten (10) micrometers (PM10) is still limited to less than one hundred (100) tons per year. Therefore, pursuant to 326 IAC 2-1.1-5, the Nonattainment New Source Review requirements still do not apply.

- (d) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
PSD applicability is discussed under the "PTE of the Entire Source after Issuance of the FESOP Renewal" section above.
- (e) 326 IAC 2-3 (Emission Offset)
Emission Offset applicability is discussed under the "PTE of the Entire Source after Issuance of the FESOP Renewal" section above.
- (f) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
This source is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the entire source is still less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.
- (g) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than five (5) tons per year. Therefore, pursuant to 326 IAC 2-6-1(b), the source is only subject to additional information requests as provided in 326 IAC 2-6-5.
- (h) 326 IAC 2-8-4 (FESOP)
FESOP applicability is discussed under the "PTE of the Entire Source after Issuance of the FESOP Renewal" section above.
- (i) 326 IAC 5-1 (Opacity Limitations)
This existing stationary source is located in Vanderburgh County, Perry Township. Therefore, pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
- (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) Opacity shall not exceed 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.
- Note: The following terms and conditions from previous approvals have been revised in this FESOP Renewal:
- (i) Previously, the General Asphalt FESOP limited opacity to an average of less than thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4. This permit action includes a transition to a standard FESOP, which evaluates applicability according to the rule.
 - (ii) Previously, the Ready-mix Concrete SSOA limited opacity to an average of less than twenty (20) percent in twenty-four (24) consecutive readings in a six (6) minute averaging period as determined in 40 CFR 60, Appendix A, Method 9. This permit action includes a transition to a standard FESOP, which evaluates applicability according to the rule.
- (j) 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)
- (1) The one (1) existing natural gas-fired hot oil heater, having a maximum rated heat input capacity of one (1.0) MMBtu/hr, is still exempt from the requirements of 326 IAC 6-2, because it is otherwise subject to the more stringent particulate limit established in 326 IAC 6.5.

- (2) The one (1) existing natural gas-fired hot water heater, having a maximum rated heat input capacity of three and five tenths (3.5) MMBtu/hr, is still exempt from the requirements of 326 IAC 6-2, because it is otherwise subject to the more stringent particulate limit established in 326 IAC 6.5.
- (k) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
- (1) The existing dryer/mixer and batch tower continues to be subject to 326 IAC 6.5, and 40 CFR 60, Subpart I (Standards of Performance for Hot-mix Asphalt Facilities), which is incorporated by reference through 326 IAC 12. Therefore, pursuant to 326 IAC 6-3-1(c)(5), the existing dryer/mixer and batch tower is still not subject to the requirements of 326 IAC 6-3 because it is subject to the more stringent particulate limits established in 326 IAC 6.5 and 326 IAC 12.
- (2) The existing natural gas-fired hot oil heater is still not subject to the requirements of 326 IAC 6-3 because it is already otherwise subject to the more stringent particulate limits established in 326 IAC 6.5.
- (3) The existing ready-mix concrete batch plant is still not subject to the requirements of 326 IAC 6-3 because it is already otherwise subject to the more stringent particulate limits established in 326 IAC 6.5.
- (4) The existing natural gas-fired hot water heater is still not subject to the requirements of 326 IAC 6-3 because it is already otherwise subject to the more stringent particulate limits established in 326 IAC 6.5.
- (l) 326 IAC 6-4 (Fugitive Dust Emissions)
The asphalt plant load-out and on-site yard, hot oil and asphalt heaters, material screening, and conveying, combined material processing and handling, the material storage piles, and the paved and unpaved roads each continue to have the potential to emit fugitive particulate emissions; therefore, this existing source continues to be subject to the requirements of 326 IAC 6-4. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the existing source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
- (m) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
This source is not subject to the requirements of 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), because although it was constructed after December 13, 1985, the potential to emit fugitive particulate matter from the entire source is less than twenty-five (25) tons per year.
- Note: The following terms and conditions from previous approvals have been revised in this FESOP Renewal:
- Previously, the General Asphalt FESOP required the source to have/maintain a fugitive dust plan, regardless of the potential to emit fugitive particulate matter. Additionally, the Ready-mix Concrete SSOA specifically outlined fugitive particulate matter emissions control requirements. This permit action includes a transition to a standard FESOP, which evaluates applicability according to the rule. Since the unlimited potential to emit fugitive particulate matter from the entire source is less than twenty-five (25) tons per year, the requirement for this source to maintain a fugitive dust plan has been removed from the permit.
- (n) 326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
This stationary batch-mix, hot-mix asphalt plant and stationary ready-mix concrete batch plant is located in Vanderburgh County, and is not specifically listed in 326 IAC 6.5-8. Additionally, the entire source has an unlimited potential to emit particulate matter greater than one hundred (100) tons per year, and actual particulate matter (PM) emissions greater than ten (10) tons per year. Therefore, pursuant to 326 IAC 6.5-1-2(a), PM emissions from each of the ducted/ductable emission units at this

source, including the hot-mix asphalt dryer/mixer and hot oil heater, and the concrete batch plant material conveying, bulk powder (cement and cement supplement) handling, including the silo loading and weigh hopper loading, truck loading, and, hot water heater, shall each not exceed seven hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)) of exhaust air.

(o) 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)

(1) The existing dryer burner is still subject to 326 IAC 7-1.1 because it has potential SO₂ emissions of greater than twenty-five (25) tons per year (unlimited potential emissions are fifty-one and sixty-two hundredths (51.62) tons per year). Therefore, pursuant to this rule, sulfur dioxide emissions from the dryer burner shall continue to be limited to:

(A) Five-tenths (0.5) pounds per million Btu heat input for distillate oil combustion. This equates to a maximum allowable sulfur content of approximately five tenths percent (0.5%) by weight for the distillate fuel oils.

(B) One and six tenths (1.6) pounds per million Btu heat input for residual oils. This equates to a maximum allowable sulfur content of approximately one percent (1.0%) by weight for the residual/waste oils.

(2) The natural gas-fired hot oil heater is still not subject to the requirements of 326 IAC 7-1.1 because it still has potential SO₂ emissions of less than twenty-five (25) tons per year. Therefore, the requirements of this rule are not included in the renewal for the hot oil heater.

(3) The natural gas-fired hot water heater is still not subject to the requirements of 326 IAC 7-1.1 because it still has potential SO₂ emissions of less than twenty-five (25) tons per year. Therefore, the requirements of this rule are not included in the renewal for the hot water heater.

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

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

(q) 326 IAC 8-1-6 (VOC rules: General Reduction Requirements for New Facilities)

(1) The unlimited potential VOC emissions from the existing dryer/mixer and batch tower are less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 do not apply and are not included in this renewal.

(2) The cold-mix asphalt storage piles, a source of potential VOC emissions, are still subject to the requirements of 326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving); therefore, the requirements of 326 IAC 8-1-6 still do not apply to the cold-mix asphalt storage stockpiles and are not included in this renewal.

(3) The unlimited potential VOC emissions from each liquid asphalt storage tank, fuel oil storage tank and kerosene storage tank is less than twenty-five (25) tons per year, therefore, each liquid asphalt storage tank, fuel oil storage tank and kerosene storage tank is not subject to 326 IAC 8-1-6, and the requirements are not included in the renewal for these facilities.

See Appendix A for the detailed calculations.

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

The existing one (1) 5,000 gallon No. 2 Fuel Oil storage tank, identified as Tank 1, one (1) 1,000 gallon No. 2 Fuel Oil storage tank, identified as Tank 2, one (1) five hundred (500) gallon No. 2 Fuel Oil storage tank, identified as Tank 3, one (1) 500 gallon gasoline storage tank, identified as Tank 4, one (1) two hundred fifty (250) gallon kerosene storage tank, identified as Tank 5, one (1) 8,000 gallon

No. 4 Fuel Oil storage tank, identified as Tank 6, and the one (1) 15,000 gallon liquid asphalt storage tank, identified as Tank 7, each, are not subject to the requirements of 326 IAC 8-4-3 because they are each, not petroleum liquid storage vessels with capacities greater than thirty-nine thousand (39,000) gallons.

- (s) 326 IAC 8-5-2 (Asphalt paving rules)
Any paving application made after January 1, 1980, is subject to the requirements of 326 IAC 8-5-2. Pursuant to this rule, no person shall cause or allow the use of cutback asphalt or asphalt emulsion containing more than seven percent (7%) oil distillate by volume of emulsion for any paving application except the following purposes:
 - (1) penetrating prime coating
 - (2) stockpile storage
 - (3) application during the months of November, December, January, February and March.
- (t) 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
This stationary source is located in Vanderburgh County. The requirements of 326 IAC 8-9 apply only to vessels used to store a volatile organic liquid that are located in Clark, Floyd, Lake or Porter Counties. Therefore, the requirements of 326 IAC 8-9 do not apply to any of the liquid asphalt storage tanks, fuel oil storage tanks, and/or waste oil storage tanks.
- (u) There are no other 326 IAC 8 Rules that are applicable to this existing source.
- (v) 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category)
The existing one (1) sixty (60) mmBtu aggregate rotary dryer burner still does not meet the definition of an affected facility, as defined in 326 IAC 10-3-1(a), because it still has a maximum a heat input of less than two hundred fifty million (250,000,000) British thermal units per hour (mmBtu); therefore, it is still not subject to this rule and the requirements are not included in this renewal.
- (w) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.
- (x) 326 IAC 13-8 (Used Oil Requirements)
Upon further review, IDEM has determined that the requirements of this rule do not need to be included in the renewal, since they are regulated by another agency.
- (y) 326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

Compliance Determination, Monitoring and Testing Requirements
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Compliance Determination Requirements

- (a) The existing dryer/mixer continues to have applicable compliance determination requirements as specified below:
 - (1) In order to comply with the PM and PM10 limitations in the permit, the baghouse for the dryer/mixer, shall continue to be in operation and control emissions from the dryer/mixer at all times that the dryer/mixer is in operation. (This is an existing requirement for this source)
 - (2) The annual hot-mix asphalt production rate will be used to verify compliance with the PSD PM emission limit, and the FESOP PM10 and CO emission limitations. (This is an existing requirement for this source)

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

Renewal:

- (A) The usage of liquid binder in the production of cold-mix cutback asphalt will no longer be used to verify compliance with the FESOP VOC emission limitation. The cold-mix asphalt VOC emission limit has been removed from the permit because the source has indicated that it does not manufacture and/or produce cold-mix asphalt. The source purchases what is needed, and then stores/stockpiles the remaining for future use. The cold-mix asphalt storage stockpiles will not exceed forty (40.0) tons of material, maximum, per year, and are subject to 326 IAC 8-5-2.
- (B) The used oil requirements are not included in this renewal, because they are regulated by another agency.

(b) The ready-mix concrete batch plant has applicable compliance monitoring conditions as specified below:

- (1) In order to comply with the PM, PM10 and PM2.5 emission limitations in the permit, the three (3) baghouses for the bulk powder (cement and cement supplement) handling and weighing operations, shall continue to be in operation and control emissions from the bulk powder handling and weighing operations at all times that the ready-mix concrete batch plant is in operation. (This is an existing requirement for this source)
- (2) The annual ready-mix [dry] concrete production rate will be used to verify compliance with the truck loading PSD PM emission limit, and FESOP PM10 and PM2.5 emission limitations. (This is an existing requirement for this source)
- (3) The annual cement usage will be used to verify compliance with the PSD PM emission limit, and the FESOP PM10 and PM2.5 emission limitations. (This is a new requirement for this source)
- (4) The annual cement supplement usage will be used to verify compliance with the PSD PM emission limit, and the FESOP PM10 and PM2.5 emission limitations. (This is a new requirement for this source)

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

The fugitive particulate matter control requirements for the storage piles and roadways have been removed from the permit because the potential to emit fugitive dust from the entire source is less than 25 tons per year.

(c) There continue to be no applicable compliance determination requirements for the existing natural gas-fired combustion units at this existing source.

Testing Requirements

(a) The existing dryer/mixer continues to have applicable testing requirements as specified below:

Emission Unit	Control Device	Pollutant	Timeframe for Testing	Frequency of Testing
Dryer/mixer	Baghouse	PM	No later than five (5) yrs from the last valid test*	Once every five (5) years
Dryer/mixer	Baghouse	PM10	No later than 180 days after publication of revised test method or no later than five (5) yrs from the last valid compliance demonstration, whichever is later.	Once every five (5) years

* The last valid stack test occurred on October 16, 2008. The source was in compliance at that time.

- (b) There continue to be no applicable testing requirements for the existing hot-mix asphalt conveying, screening, and material transfer points, and hot oil heating system, and the ready-mix concrete batch plant baghouse stack exhaust, bulk powder (cement and cement supplement) handling, including the silo loading and weigh hopper loading, and hot water heater, at this existing source:

Compliance Monitoring Requirements

- (a) The existing hot-mix asphalt batch mixer and aggregate dryer/burner, baghouse stack exhaust, and conveying, screening, and material transfer points continue to have applicable compliance monitoring conditions as specified below:

Emission Unit & Control Device	Parameter	Frequency	Range	Excursions and Exceedances
Baghouse, for the dryer/mixer, stack	Visible Emissions	Once per day	normal/abnormal	Response Steps
	Pressure Drop	Once per day	2.0 to 8.0 inches	Response Steps
	Bags in baghouse	As needed	normal/abnormal	Response Steps
Conveyors, screens, and material transfer points	Visible Emissions	Once per day	normal/abnormal	Response Steps

These monitoring conditions are necessary because the baghouse used in conjunction with the batch-mix, hot-mix dryer/mixer must operate properly to ensure continued compliance with 40 CFR 60, Subpart I, 326 IAC 2-8 (FESOP), and 326 IAC 6.5 (Particulate Matter Limitations Except Lake County), and the limits that render 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70 Permit Program) not applicable.

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

The source will no longer be required to monitor and maintain the inlet temperature to the baghouse within a range of 200-400 degrees Fahrenheit to prevent overheating of the bags and to prevent low temperatures from mudding up the bags.

IDEM has determined that there is no process at this facility where temperature has an appreciable impact on the emission control equipment. The inlet temperature of the baghouse unit would merely measure the ambient temperature of the facility (ambient outdoor temperature). The temperature could vary by 14-20 degrees from winter to summer. Therefore, temperature is not an acceptable or meaningful parameter to observe at this facility.

Conversely, pressure drop is an indicator of a variety of conditions within the baghouse. Monitoring pressure drop can alert the operator to relative changes (such as dust cake resistance) over a period of time. The operator can use this information to chart trends and determine if the unit is operating within the optimal range as determined by baseline testing of the unit and manufacturer's specifications. Any deviations from the normal operational range of the unit, whether gradual or sudden, should alert the operator that the unit needs maintenance. Both gradual and sudden changes in the pressure drop could result in damage to the bags in the baghouse if not properly addressed. Therefore, IDEM has determined that monitoring the baghouse pressure drop is a better indicator of baghouse health.

- (b) The three (3) existing ready-mix concrete batch plan baghouses used in conjunction with the bulk

powder (cement and cement supplement) handling operations, including the silo loading and weigh hopper loading, continue to have applicable compliance monitoring conditions as specified below:

Emission Unit & Control Device	Parameter	Frequency	Range	Excursions and Exceedances
Three (3) Baghouses, for the bulk powder (cement and cement supplement) handling operations	Visible Emissions	Once per day	normal/abnormal	Response Steps
	Bags in baghouse	As needed	normal/abnormal	Response Steps

These monitoring conditions are necessary because the three (3) ready-mix concrete batch plant baghouses used in conjunction with the bulk powder (cement and cement supplement) handling operations, including the silo loading and weigh hopper loading, must operate properly to ensure continued compliance with the requirements of 326 IAC 6.5 (Particulate Matter Limitations Except Lake County), and the limits that render 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70 Permit Program) not applicable.

- (c) There continue to be no applicable compliance monitoring requirements for the existing ready-mix concrete batch plant aggregate conveying, and material transfer points, and the natural gas-fired combustion units at this existing source:

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on January 13, 2010.

The operation of this source shall be subject to the conditions of the attached proposed FESOP Renewal No. 163-28873-00082. The staff recommends to the Commissioner that this FESOP Renewal be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Ms. Hannah Desrosiers at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5374 or toll free at 1-800-451-6027 extension 4-5374.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Appendix A.1(a): Unlimited Emissions Calculations
Asphalt Production Operation
Summary

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

Asphalt Plant Maximum Capacity

Maximum Hourly Asphalt Production =	60	ton/hr
Maximum Annual Asphalt Production =	525,600	ton/yr
Maximum Annual Slag Usage =	0	ton/yr
Maximum Dryer Fuel Input Rate =	22.0	MMBtu/hr
Natural Gas Usage =	193	MMCF/yr
No. 2 Fuel Oil Usage =	1,376,571	gal/yr, and
No. 4 Fuel Oil Usage =	1,376,571	gal/yr, and
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	% sulfur
Propane Usage =	0	% sulfur
Butane Usage =	0	gr/100 ft3 sulfur
Used/Waste Oil Usage =	0	gr/100 ft3 sulfur
	0	% ash
	0	% chlorine
	0	% lead

Unlimited PM Dryer/Mixer Emission Factor = 32.0 lb/ton of asphalt production
Unlimited PM10 Dryer/Mixer Emission Factor = 4.50 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 = 0.0082 lb/ton of asphalt production
Unlimited CO Dryer/Mixer Emission Factor = 0.40 lb/ton of asphalt production
Unlimited Slag SO2 Dryer/Mixer Emission Factor = 0 lb/ton of slag processed

Unlimited/Uncontrolled Emissions

Process Description	Unlimited/Uncontrolled Potential to Emit (tons/year)									
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Hazardous Air Pollutants	
Ducted Emissions										
Dryer Fuel Combustion (worst case)	4.82	5.71	5.71	51.62	13.77	0.53	8.09	0.30	0.17	(hexane)
Dryer/Mixer and Batch Tower (Process)	8,409.60	1,182.60	70.96	23.13	31.54	2.15	105.12	2.01	0.71	(xylene)
Dryer/Mixer Slag Processing	0	0	0	0	0	0	0	0	0	
Hot Oil Heater Fuel Combustion (worst case)	0.01	0.03	0.03	0.003	0.44	0.02	0.37	0.008	0.008	(hexane)
Worst Case Emissions*	8,409.61	1,182.63	70.99	51.62	31.97	2.18	105.49	2.01	0.71	(xylene)
Fugitive Emissions										
Asphalt Load-Out, Silo Filling, On-Site Yard	0.29	0.29	0.29	0	0	4.50	0.76	0.08	0.023	(formaldehyde)
Material Storage Piles	0.07	0.03	0.03	0	0	0	0	0	0	
Material Processing and Handling	1.70	0.80	0.12	0	0	0	0	0	0	
Material Screening and Conveying	6.99	2.45	2.45	0	0	0	0	0	0	
Unpaved and Paved Roads (worst case)	1.35	0.26	0.04	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	0	0	0	0	0	
Cold Mix Asphalt Storage Stockpiles	0	0	0	0	0	0.87	0	0.18	0.06	(xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0.04	0	0.01	0.004	(xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	0	0	
Total Fugitive Emissions	10.40	3.83	2.92	0	0	5.22	0.76	0.26	0.064	(xylene)
Totals Unlimited/Uncontrolled PTE	8,420.01	1,186.46	73.91	51.62	31.97	7.40	106.25	2.28	0.77	(xylene)

negl = negligible

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

*Worst Case Emissions (ton/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(a): Unlimited Emissions Calculations
Asphalt Production Operation
Dryer/Mixer and Batch Tower Process Emissions**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

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	8,409.60	8,409.60	0	8,409.60
PM10*	4.5	4.5	4.5	1,182.60	1,182.60	0	1,182.60
PM2.5*	0.27	0.27	0.27	70.96	70.96	0	70.96
SO2**	0.0046	0.088	0.088	1.21	23.13	0	23.13
NOx**	0.025	0.12	0.12	6.57	31.54	0	31.54
VOC**	0.0082	0.0082	0.036	2.15	2.15	0	2.15
CO***	0.4	0.4	0.4	105.12	105.12	0	105.12
Hazardous Air Pollutant							
Arsenic	4.60E-07	4.60E-07	4.60E-07	1.21E-04	1.21E-04	0	1.21E-04
Beryllium	1.50E-07	1.50E-07	1.50E-07	3.94E-05	3.94E-05	0	3.94E-05
Cadmium	6.10E-07	6.10E-07	6.10E-07	1.60E-04	1.60E-04	0	1.60E-04
Chromium	5.70E-07	5.70E-07	5.70E-07	1.50E-04	1.50E-04	0	1.50E-04
Lead	8.90E-07	8.90E-07	1.00E-05	2.34E-04	2.34E-04	0	2.34E-04
Manganese	6.90E-06	6.90E-06	6.90E-06	1.81E-03	1.81E-03	0	1.81E-03
Mercury	4.10E-07	4.10E-07	4.10E-07	1.08E-04	1.08E-04	0	1.08E-04
Nickel	3.00E-06	3.00E-06	3.00E-06	7.88E-04	7.88E-04	0	7.88E-04
Selenium	4.90E-07	4.90E-07	4.90E-07	1.29E-04	1.29E-04	0	1.29E-04
Acetaldehyde	3.20E-04	3.20E-04	3.20E-04	0.084	0.084	0	0.08
Benzene	2.80E-04	2.80E-04	2.80E-04	0.074	0.074	0	0.07
Ethylbenzene	2.20E-03	2.20E-03	2.20E-03	0.578	0.578	0	0.58
Formaldehyde	7.40E-04	7.40E-04	7.40E-04	0.194	0.194	0	0.19
Quinone	2.70E-04	2.70E-04	2.70E-04	0.071	0.071	0	0.07
Toluene	1.00E-03	1.00E-03	1.00E-03	0.263	0.263	0	0.26
Total PAH Haps	1.10E-04	1.10E-04	2.30E-04	0.029	0.029	0	0.03
Xylene	2.70E-03	2.70E-03	2.70E-03	0.710	0.710	0	0.71
Total HAPs							2.01
Worst Single HAP							0.71 (xylene)

Methodology

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

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-1, 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 batch-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 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

PAH = Polyaromatic Hydrocarbon

HCl = Hydrogen Chloride

SO2 = Sulfur Dioxide

Appendix A.1(a): Unlimited Emissions Calculations
Asphalt Production Operation
Dryer/Mixer Slag Processing

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

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

Maximum Annual Slag Usage* = ton/yr % sulfur

Criteria Pollutant	Emission Factor (lb/ton)**	Unlimited Potential to Emit (tons/yr)
	SO2	Slag Processing 0.74

Methodology

* The maximum annual slag usage was provided by the source.
 ** Testing results for Slag, obtained January 9, 2009 from similar operations at Rieth-Riley Construction Co., Inc. facility located in Valparaiso, IN (permit #127-27075-05241), produced an Emission Factor of 0.54 lb/ton from slag containing 1.10% sulfur content. The source has requested a safety factor of 0.20 lb/ton be added to the tested value for use at this location to allow for a sulfur content up to 1.5%.
 Unlimited Potential to Emit SO2 from Slag (tons/yr) = [(Maximum Annual Slag Usage (ton/yr)) * [Emission Factor (lb/ton)] * [ton/2000 lbs]

Abbreviations

SO2 = Sulfur Dioxide

Appendix A.1(a): Unlimited Emissions Calculations
Asphalt Production Operation
Hot Oil Heater: Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

Maximum Hot Oil Heater Fuel Input Rate = 1.00 MMBtu/hr
Natural Gas Usage = 9 MMCF/yr
No. 2 Fuel Oil Usage = 0 gal/yr, and 0.50 % sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		Worse Case Fuel (tons/yr)
	Hot Oil Heater		Hot Oil Heater		
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	
PM	1.9	2.0	0.008	0	0.01
PM10/PM2.5	7.6	3.3	0.033	0	0.03
SO2	0.6	71.0	0.003	0	0.003
NOx	100	20.0	0.438	0	0.44
VOC	5.5	0.20	0.024	0	0.02
CO	84	5.0	0.368	0	0.37
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	8.8E-07	0	8.8E-07
Beryllium	1.2E-05	4.2E-04	5.3E-08	0	5.3E-08
Cadmium	1.1E-03	4.2E-04	4.8E-06	0	4.8E-06
Chromium	1.4E-03	4.2E-04	6.1E-06	0	6.1E-06
Cobalt	8.4E-05		3.7E-07		3.7E-07
Lead	5.0E-04	1.3E-03	2.2E-06	0	2.2E-06
Manganese	3.8E-04	8.4E-04	1.7E-06	0	1.7E-06
Mercury	2.6E-04	4.2E-04	1.1E-06	0	1.1E-06
Nickel	2.1E-03	4.2E-04	9.2E-06	0	9.2E-06
Selenium	2.4E-05	2.1E-03	1.1E-07	0	1.1E-07
Benzene	2.1E-03		9.2E-06		9.2E-06
Dichlorobenzene	1.2E-03		5.3E-06		5.3E-06
Ethylbenzene					0
Formaldehyde	7.5E-02	6.10E-02	3.3E-04	0	3.3E-04
Hexane	1.8E+00		0.01		0.008
Phenol					0
Toluene	3.4E-03		1.5E-05		1.5E-05
Total PAH Haps	negl		negl		0
Polycyclic Organic Matter		3.30E-03		0	0
		Total HAPs =	8.3E-03	0	0.008

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(a): Unlimited Emissions Calculations
Asphalt Production Operation
Asphalt Load-Out, Silo Filling, and Yard Emissions**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

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

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	0.5	
Maximum Annual Asphalt Production =	525,600	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	0.14	0.15	NA	0.29
Organic PM	3.4E-04	2.5E-04	NA	0.09	0.067	NA	0.16
TOC	0.004	0.012	0.001	1.09	3.20	0.289	4.6
CO	0.001	0.001	3.5E-04	0.35	0.310	0.093	0.76

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

PM/HAPs	0.006	0.008	0	0.014
VOC/HAPs	0.016	0.041	0.004	0.061
non-VOC/HAPs	8.4E-05	8.6E-06	2.2E-05	1.2E-04
non-VOC/non-HAPs	0.08	0.05	0.02	0.15

Total VOCs	1.03	3.20	0.3	4.5
Total HAPs	0.02	0.05	0.004	0.08
Worst Single HAP				0.023 (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):

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

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

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

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

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

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

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

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

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

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

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

Company Name: Jerry David Enterprises, Inc.
 Source Address: 4301 Hogue Road, Evansville, IN 47712
 Permit Number: F-163-28873-00082
 Reviewer: Hannah L. Desrosiers
 Date Received: 01/13/2010

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%	2.3E-04	3.1E-04	NA	5.5E-04
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	2.5E-05	9.3E-06	NA	3.4E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	6.3E-05	8.7E-05	NA	1.5E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	1.7E-05	3.7E-05	NA	5.4E-05
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	6.8E-06	0	NA	6.8E-06
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	2.0E-06	0	NA	2.0E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	1.7E-06	0	NA	1.7E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	2.1E-06	0	NA	2.1E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	7.0E-06	6.3E-06	NA	1.3E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	9.2E-05	1.4E-04	NA	2.3E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	3.3E-07	0	NA	3.3E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	4.5E-05	1.0E-04	NA	1.4E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	6.9E-04	6.7E-04	NA	4.2E-07
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	4.2E-07	0	NA	0.006
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	2.1E-03	3.5E-03	NA	2.3E-03
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	1.1E-03	1.2E-03	NA	4.0E-05
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	2.0E-05	2.0E-05	NA	1.9E-03
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	7.3E-04	1.2E-03	NA	4.3E-04
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	1.3E-04	2.9E-04	NA	0.013
Total PAH HAPs							0.005	0.008	NA	0.013
Other semi-volatile HAPs										
Phenol		PM/HAP	--	Organic PM	1.18%	0	1.1E-03	0	0	1.1E-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(a): Unlimited Emissions Calculations
Asphalt Production Operation
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%	1.03	3.20	0.27	4.50
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	7.1E-02	8.3E-03	1.9E-02	0.098
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	5.0E-04	1.8E-03	1.3E-04	0.002
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	7.8E-03	3.5E-02	2.1E-03	0.045
Total non-VOC/non-HAPS					7.30%	1.40%	0.080	0.045	0.021	0.15
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	5.7E-04	1.0E-03	1.5E-04	1.7E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	1.0E-04	1.6E-04	2.8E-05	2.9E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	5.4E-04	1.2E-03	1.4E-04	1.9E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	1.4E-04	5.1E-04	3.8E-05	6.9E-04
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	2.9E-06	1.3E-04	6.1E-07	1.3E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	1.6E-04	7.4E-04	4.3E-05	9.4E-04
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	1.2E-03	0	3.2E-04	1.5E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.036%	3.1E-03	1.2E-03	8.1E-04	0.005
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	9.6E-04	2.2E-02	2.5E-04	0.023
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	1.6E-03	3.2E-03	4.3E-04	0.005
Isocetane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	2.0E-05	9.9E-06	5.2E-06	3.5E-05
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	8.6E-06	0	8.6E-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%	8.0E-05	1.7E-04	2.1E-05	2.7E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	8.4E-05	0	2.2E-05	1.1E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	2.3E-03	2.0E-03	6.1E-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	1.4E-05	0	3.8E-06	1.8E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	4.5E-03	6.4E-03	1.2E-03	0.012
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.037%	8.7E-04	1.8E-03	2.3E-04	2.9E-03
Total volatile organic HAPs					1.50%	1.30%	0.016	0.042	0.004	0.062

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(a): Unlimited Emissions Calculations
Asphalt Production Operation
Material Storage Piles**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

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

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

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

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10/PM2.5 (tons/yr)
Limestone	1.6	1.85	0.27	0.090	0.031
Sand	2.6	3.01	0.10	0.053	0.018
RAP	0.5	0.58	0.05	0.005	0.002
Gravel	1.60	1.85	0.04	0.014	0.005
Slag	0	0	0	0	0
Totals				0.07	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.

PM2.5 = PM10

Abbreviations

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

RAP - recycled asphalt pavement

PTE = Potential to Emit

**Appendix A.1(a): Unlimited Emissions Calculations
Asphalt Production Operation
Material Processing, Handling, Crushing, Screening, and Conveying**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

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

Maximum Annual Asphalt Production =	525,600	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	499,320	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	0.57	0.27	0.04
Front-end loader dumping of materials into feeder bins	0.57	0.27	0.04
Conveyor dropping material into dryer/mixer or batch tower	0.57	0.27	0.04
Total (tons/yr)	1.70	0.80	0.12

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)**
Screening	0.025	0.0087	6.24	2.17
Conveying	0.003	0.0011	0.75	0.27
Unlimited Potential to Emit (tons/yr) =			6.99	2.45

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

PM2.5 = Particulate matter (< 2.5 μm)

PM10 = Particulate Matter (<10 μm)

PTE = Potential to Emit

**Appendix A.1(a): Unlimited Emissions Calculations
Asphalt Production Operation
Unpaved Roads**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

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 =	525,600	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	499,320	tons/yr
Maximum Asphalt Cement/Binder Throughput =	26,280	tons/yr
Maximum No. 2 Fuel Oil Usage =	1,376,571	gallons/yr

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

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

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

where k =	PM	PM10	PM2.5	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.9	1.5	0.15	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)
a =	4.8	4.8	4.8	= constant (AP-42 Table 13.2.2-2)
W =	0.7	0.9	0.9	tons = average vehicle weight (provided by source)
b =	0.0	0.0	0.0	= constant (AP-42 Table 13.2.2-2)
	0.45	0.45	0.45	

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)

Unmitigated Emission Factor, E_f =	PM	PM10	PM2.5	lb/mile
Mitigated Emission Factor, E_{ext} =	0	0	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)	0	0	0	0	0	0	0	0	0
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0	0	0	0	0	0	0	0	0
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0	0	0	0	0	0	0	0	0
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0	0	0	0	0	0	0	0	0
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0	0	0	0	0	0	0	0	0
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0	0	0	0	0	0	0	0	0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0	0	0	0	0	0	0	0	0
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0	0	0	0	0	0	0	0	0
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0	0	0	0	0	0	0	0	0
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0	0	0	0	0	0	0	0	0
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)
 PM2.5 = PM10

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

**Appendix A.1(a): Unlimited Emissions Calculations
Asphalt Production Operation
Paved Roads**

Company Name: Jerry David Enterprises, Inc.
 Source Address: 4301 Hogue Road, Evansville, IN 47712
 Permit Number: F163-28873-00082
 Reviewer: Hannah L. Desrosiers
 Date Received: 01/13/2010

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 =	525,600	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	499,320	tons/yr
Maximum Asphalt Cement/Binder Throughput =	26,280	tons/yr
Maximum No. 2 Fuel Oil Usage =	1,376,571	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per day (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (14 CY)	14.5	20.0	34.5	2.5E+04	8.6E+05	330	0.063	1,560.4
Aggregate/RAP Truck Leave Empty	Dump truck (14 CY)	14.5	0	14.5	2.5E+04	3.6E+05	330	0.063	1,560.4
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	15.0	25.0	40.0	1.1E+03	4.2E+04	117	0.022	23.3
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	15.0	0	15.0	1.1E+03	1.6E+04	117	0.022	23.3
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	15.0	25.0	40.0	1.9E+02	7.4E+03	117	0.022	4.1
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	15.0	0	15.0	1.9E+02	2.8E+03	117	0.022	4.1
Aggregate/RAP Loader Full	Front-end loader (3 CY)	11.0	3.0	14.0	1.7E+05	2.3E+06	145	0.027	4,570.8
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	11.0	0	11.0	1.7E+05	1.8E+06	145	0.027	4,570.8
Asphalt Concrete Truck Leave Full	Dump truck (14 CY)	14.5	20.0	34.5	2.6E+04	9.1E+05	125	0.024	622.2
Asphalt Concrete Truck Enter Empty	Dump truck (14 CY)	14.5	0	14.5	2.6E+04	3.6E+05	125	0.024	622.2
Total					4.4E+05	6.7E+06			1.4E+04

Average Vehicle Weight Per Trip =	15.4	tons/trip
Average Miles Per Trip =	0.031	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 =	15.4	15.4	15.4	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 =	0.44	0.08	0.01	lb/mile
Mitigated Emission Factor, Eext =	0.40	0.08	0.01	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 (14 CY)	0.34	0.07	0.01	0.31	0.06	0.01	0.16	0.03	0.00
Aggregate/RAP Truck Leave Empty	Dump truck (14 CY)	0.34	0.07	0.01	0.31	0.06	0.01	0.16	0.03	0.00
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.005	0.001	1.4E-04	0.005	0.001	1.3E-04	0.002	4.5E-04	6.6E-05
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.005	0.001	1.4E-04	0.005	0.001	1.3E-04	0.002	4.5E-04	6.6E-05
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	9.0E-04	1.7E-04	2.6E-05	8.2E-04	1.6E-04	2.3E-05	4.1E-04	8.0E-05	1.2E-05
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	9.0E-04	1.7E-04	2.6E-05	8.2E-04	1.6E-04	2.3E-05	4.1E-04	8.0E-05	1.2E-05
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0.99	0.19	0.03	0.91	0.18	0.03	0.45	0.09	0.01
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0.99	0.19	0.03	0.91	0.18	0.03	0.45	0.09	0.01
Asphalt Concrete Truck Leave Full	Dump truck (14 CY)	0.14	0.03	0.004	0.12	0.02	0.004	0.06	0.01	0.002
Asphalt Concrete Truck Enter Empty	Dump truck (14 CY)	0.14	0.03	0.004	0.12	0.02	0.004	0.06	0.01	0.002
Totals		2.95	0.57	0.08	2.70	0.52	0.08	1.35	0.26	0.04

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)
 PM2.5 = PM10

Abbreviations

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

**Appendix A.1(a): Unlimited Emissions Calculations
Asphalt Production Operation
Cold Mix Asphalt Production**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

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 Cold-mix Asphalt Production Throughput =

0

 tons
Percent Asphalt Cement/Binder (weight %) =

0%

Maximum Asphalt Cement/Binder Throughput =

0.00

 tons/yr

Volatle 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
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	0	0
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	0	0
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	0	0
Other asphalt with solvent binder	25.9%	2.5%	0	0
Worst Case PTE of VOC =				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
PTE of Total HAPs (tons/yr) =		0
PTE of Single HAP (tons/yr) =		0 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 = [Maximum Cold-mix Asphalt Production Throughput (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]
Maximum VOC Solvent Usage (tons/yr) = [Maximum Asphalt Cement/Binder Usage (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/tpb.htm>

Abbreviations

VOC = Volatile Organic Compounds

PTE = Potential to Emit

**Appendix A.1(a): Unlimited Emissions Calculations
Asphalt Production Operation
Cold Mix Asphalt Storage Stockpiles**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

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 storage stockpiles.

Maximum Annual Cold-mix Asphalt Storage Stockpile Throughput =	40.0	tons/yr
Percent Asphalt Cement/Binder (weight %) Content =	7%	
Maximum Annual Asphalt Cement/Binder Throughput =	2.80	tons/yr

Volatile Organic Compounds

	Maximum weight % of VOC solvent in binder*	Weight % VOC solvent in binder that evaporates	Maximum VOC Solvent Content (tons/yr)	PTE of VOC (tons/yr)
Cut back asphalt rapid cure (assuming gasoline or naphtha solvent)	25.3%	95.0%	0.71	0.67
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	0.80	0.56
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	0.56	0.14
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	0.42	0.19
Other asphalt with solvent binder	25.9%	2.5%	0.73	0.02
Worst Case PTE of VOC =				0.67

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) =	0.18
PTE of Single HAP (tons/yr) =	0.06 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 Annual Asphalt Cement/Binder Throughput = [Maximum Cold-mix Asphalt Storage Stockpile Throughput (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]

Maximum Annual VOC Solvent Content (tons/yr) = [Maximum Annual Asphalt Cement/Binder Content (tons/yr)] * [Maximum Weight % of VOC Solvent in Binder]

PTE of VOC (tons/yr) = [Weight % VOC solvent in binder that evaporates] * [Maximum VOC Solvent Content (tons/yr)]

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

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

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

Abbreviations

VOC = Volatile Organic Compounds

PTE = Potential to Emit

**Appendix A.1(a): Unlimited Emissions Calculations
Asphalt Production Operation
Gasoline Fuel Transfer and Dispensing Operation**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

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:

$$\begin{aligned} \text{Gasoline Throughput} &= \frac{75}{27.4} \text{ gallons/day} \\ &= \text{kgal/yr} \end{aligned}$$

Volatile Organic Compounds

Emission Source	Emission Factor (lb/kgal of throughput)	PTE of VOC (tons/yr)*
Filling storage tank (balanced submerged filling)	0.3	0.004
Tank breathing and emptying	1.0	0.014
Vehicle refueling (displaced losses - controlled)	1.1	0.015
Spillage	0.7	0.010
Total		0.04

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) =	1.11E-02
Limited PTE of Single HAP (tons/yr) =	3.82E-03 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

**Appendix A.1(b): Unlimited Emissions Calculations
Concrete Dry Batching Operations
Hot Water Heater: Fuel Combustion with Maximum Capacity < 100 MMBtu/hr**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

Maximum Hot Water Heater Fuel Input Rate = 3.50 MMBtu/hr
 Natural Gas Usage = 30.66 MMCF/yr

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units)	Unlimited/Uncontrolled Potential to Emit (tons/yr)	
	Hot Water Heater	Hot Water Heater	
	Natural Gas (lb/MMCF)	Natural Gas (tons/yr)	Total Emissions (tons/yr)
PM	1.9	0.029	0.03
PM10/PM2.5	7.6	0.117	0.12
SO2	0.6	0.009	0.01
NOx	100	1.533	1.53
VOC	5.5	0.084	0.08
CO	84	1.288	1.29
Hazardous Air Pollutant			
Arsenic	2.0E-04	3.1E-06	3.1E-06
Beryllium	1.2E-05	1.8E-07	1.8E-07
Cadmium	1.1E-03	1.7E-05	1.7E-05
Chromium	1.4E-03	2.1E-05	2.1E-05
Cobalt	8.4E-05	1.3E-06	1.3E-06
Lead	5.0E-04	7.7E-06	7.7E-06
Manganese	3.8E-04	5.8E-06	5.8E-06
Mercury	2.6E-04	4.0E-06	4.0E-06
Nickel	2.1E-03	3.2E-05	3.2E-05
Selenium	2.4E-05	3.7E-07	3.7E-07
Benzene	2.1E-03	3.2E-05	3.2E-05
Dichlorobenzene	1.2E-03	1.8E-05	1.8E-05
Ethylbenzene			0
Formaldehyde	7.5E-02	1.1E-03	1.1E-03
Hexane	1.8E+00	0.03	0.028
Phenol			0
Toluene	3.4E-03	5.2E-05	5.2E-05
Total PAH Haps	negl	negl	0
Polycyclic Organic Matter			0
Total HAPs			0.029

Methodology

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

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

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(b): Unlimited Emissions Calculations
Concrete Dry Batching Operations
Particulate Emissions from Material Processing, Handling, and Conveying**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

Material Processing and Handling (AP 42 Section 11.12)

Maximum Annual Concrete Production =	1,051,200	tons/yr
Maximum Annual Aggregate Usage =	497,937	tons/yr
Maximum Annual Sand Usage =	846,800	tons/yr
Maximum Annual Cement Usage =	191,127	tons/yr
Maximum Annual Cement supplement Usage =	36,041	tons/yr

Type of Activity	Uncontrolled Emission Factor for PM (lbs/ton)	Uncontrolled Emission Factor for PM10/PM2.5 (lbs/ton)	Unlimited PTE of PM (tons/yr)	Unlimited PTE of PM10* (tons/yr)
Fugitive Emissions				
Aggregate delivery to ground storage (3-05-011-21) ^{1, α}	0.0023	0.0011	0.56	0.27
Aggregate transfer to conveyor (3-05-011-23) ^{1, α}	0.0023	0.0011	0.56	0.27
Sand delivery to ground storage (3-05-011-22) ^{1, β}	0.0023	0.0011	0.96	0.45
Sand transfer to conveyor (3-05-011-24) ^{1, β}	0.0023	0.0011	0.96	0.45
Subtotal			3.05	1.44
Ducted/Ductable Emissions				
Aggregate transfer to elevated storage (3-05-011-04) ^{1, α}	0.0023	0.0011	0.56	0.27
Sand transfer to elevated storage (3-05-011-05) ^{1, β}	0.0023	0.0011	0.96	0.45
Cement delivery to silo (pneumatic) (3-05-011-07) ^{2, γ}	0.72	0.4600	68.81	43.96
Cement supplement delivery to silo (pneumatic) (3-05-011-17) ²	3.14	1.1000	56.58	19.82
Weigh hopper loading (3-05-011-08) ^{2, ε}	0.0051	0.0024	2.68	1.26
Truck Loading (truck-mix) (3-05-011-10) ^{2, ε}	0.995	0.2780	522.97	146.12
Subtotal			652.57	211.88
Total Potential to Emit (tons/yr) =			655.62	213.32

Methodology

Maximum Material Usage (tons/yr) provided by the source.

* In the absence of valid AP 42 emission factors, it is assumed that PM2.5 emissions = PM10 emissions

¹ Emission factors for Aggregate and Sand Handling, calculated using AP-42 Section 13.2.4 (fifth edition, updated 11/06) equation #1, page 13.2.4-4.

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

where: particle size multiplier (0.74 assumed for aerodynamic diameter <=100 um and 0.35 assumed for aerodynamic diameter <=10 um)

U = worst case annual mean wind speed (Source: NOAA, 2006*)

M = material % moisture content of aggregate (Source: AP-42 Section 11.1.1.1)

² To estimate potential fugitive dust emissions from material processing and handling, AP-42 emission factors for Concrete Batching Truck-Mix Operations, Section 11.12 (dated 6/06), Table 11.12-5 are utilized.

α Unlimited Potential to Emit (tons/yr) = (Maximum Aggregate Usage (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)

β Unlimited Potential to Emit (tons/yr) = (Maximum Sand Usage (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)

γ Unlimited Potential to Emit (tons/yr) = (Maximum Cement Usage (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)

δ Unlimited Potential to Emit (tons/yr) = (Maximum Cement Supplement Usage (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)

ε Unlimited Potential to Emit (tons/yr) = (Maximum Hourly Concrete Production rate (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)

Raw materials used in the production of ready-mix concrete may include limestone, sand, cement, and cement supplements.

> Cement supplements may include both mineral and chemical admixtures.

Mineral admixtures, may include fly ash, silica fume, natural pozzolans, and ground granulated blast-furnace slag.

Chemical admixtures are added to the mix, in very small amounts, immediately before or during mixing, and may include air-entrainers, water-reducers, set retarders, set accelerators, and plasticizers (superplasticizers). All other varieties of admixtures fall into the specialty category whose functions include corrosion inhibition, shrinkage reduction, alkali-silica reactivity reduction, workability enhancement, bonding, damp proofing, and coloring.

Material Conveying (AP-42 Section 11.19.2)

Maximum Material Usage = 1,344,737 tons/yr

Operation	Uncontrolled Emission Factor for PM (lbs/ton)	Uncontrolled Emission Factor for PM10 (lbs/ton)*	Unlimited PTE of PM (tons/yr)	Unlimited PTE of PM10/PM2.5 α (tons/yr)
Ducted/Ductable Emissions				
Conveying ¹	0.003	0.0011	2.02	0.74
Limited Potential to Emit (tons/yr) =			2.02	0.74

Methodology

Maximum Material Usage (tons/yr) provided by the source.

α In the absence of valid AP 42 emission factors, it is assumed that PM2.5 emissions = PM10 emissions

¹ To estimate potential fugitive dust emissions from raw material conveying, AP-42 emission factors for Crushed Stone Processing Operations, Chapter 11.19.2 (dated 8/04), Table 11.19.2-2 are utilized.

Maximum Material Usage (tons/yr) = [Maximum Aggregate Usage (tons/yr) + Maximum Sand Usage (tons/yr)]

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

Raw materials being conveyed include aggregates and sand.

Abbreviations

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

PTE = Potential to Emit

**Appendix A.1(b): Unlimited Emissions Calculations
Concrete Dry Batching Operations
HAPs Emissions from Material Processing and Handling**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

Material Processing and Handling (AP 42 Section 11.12)

Maximum Annual Concrete Production =

1,051,200

 tons/yr
Maximum Annual Cement/Cement Supplement Usage * =

227,168

 tons/yr

	Worst Case HAP Emission Factor ¹ (Manganese)	Total HAPs ² Emission Factor (lb/ton)	PTE Worst Case HAP (Manganese)	PTE Total HAPs ³ (tons/yr)
Ducted/Ductable Emissions				
Cement delivery to Silo (3-05-011-07) ^{a, b}	1.01E-04	2.34E-04	0.011	0.027
Cement supplement delivery to Silo (3-05-011-17 controlled) ^{a, b}	1.01E-04	2.34E-04	0.011	0.027
Weigh hopper loading ^{x, s}	1.01E-04	2.34E-04	0.053	0.123
Truck Loading (truck-mix) (3-05-011-10) ^{x, s}	3.06E-05	1.32E-04	0.016	0.070
Total Potential to Emit HAPs (tons/yr) =			0.09	0.25

Methodology

* Cement supplements may include both mineral and chemical admixtures.

Mineral admixtures, may include fly ash, silica fume, natural pozzolans, and ground granulated blast-furnace slag.

Chemical admixtures are added to the mix, in very small amounts, immediately before or during mixing, and may include air-entrainers, water-reducers, set retarders, set accelerators, and plasticizers (superplasticizers). All other varieties of admixtures fall into the specialty category whose functions include corrosion inhibition, shrinkage reduction, alkali-silica reactivity reduction, workability enhancement, bonding, damp proofing, and coloring.

¹ Worst Case HAP Emission Factors

Because there were no HAP emission factors available in AP-42 for the weigh hopper loading, 1.01E-04 lb/ton is used as a worst-case scenario.

² To estimate potential hazardous air pollutant emissions from material processing and handling, AP-42 emission factors for Concrete Batching Operations, Section 11.12 (dated 6/06), Table 11.12-8 are utilized.

The emission factor, 2.34E-04 lb/ton, shown above is the sum of all the uncontrolled metal emission factors for cement silo filling provided in AP-42.

The emission factor, 1.32E-04 lb/ton, shown above is the sum of all the uncontrolled metal emission factors for truck loading provided in AP-42.

Because there were no HAP emission factors available in AP-42 for the weigh hopper loading, 2.34E-04 lb/ton is used as a worst-case scenario.

³ The HAPs being accounted for in the "TOTAL" are metal HAPs and include Arsenic, Beryllium, Cadmium, Total Chromium, Lead, Manganese, Nickel, Total Phosphorus, and Selenium.

^a PTE Worst Case HAP (tons/yr) = Maximum Annual Combined Cement/Cement Supplement Usage (tons/yr) * Manganese Emission Factor (lb/ton) * 1 ton/2,000 lbs

^b PTE Total HAPs (tons/yr) = Maximum Annual Combined Cement/Cement Supplement Usage (tons/yr) * Total HAPs Emission Factor (lb/ton) * 1 ton/2,000 lbs

^x PTE Worst Case HAP (tons/yr) = Maximum Annual Concrete Production (tons/yr) * Manganese Emission Factor (lb/ton) * 8,760 hrs/yr * 1 ton/2,000 lbs

^s PTE Total HAPs (tons/yr) = Maximum Annual Concrete Production (tons/yr) * Total HAPs Emission Factor (lb/ton) * 1 ton/2,000 lbs

Abbreviations

PM = Particulate Matter

PM2.5 = Particulate Matter (<2.5 um)

PM10 = Particulate Matter (<10 um)

PTE = Potential to Emit

Appendix A.1(b): Unlimited Emissions Calculations
Concrete Dry Batching Operations
Paved Roads

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

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 Concrete Production = 1,051,200 tons/yr
Maximum Annual Aggregate/Sand Usage = 1,344,737 tons/yr
Maximum Annual Cement/Cement Supplement Usage = 227,168 tons/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/Sand Truck Enter Full	Dump truck (16 CY)	17.0	20.0	37.0	6.7E+04	2.5E+06	300	0.057	3,820.3
Aggregate/Sand Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	6.7E+04	1.1E+06	300	0.057	3,820.3
Cement/Cement Supplement Truck Enter Full	Tanker truck (6000 gal)	12.0	25.0	37.0	9.1E+03	3.4E+05	350	0.066	602.3
Cement/Cement Supplement Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	9.1E+03	1.1E+05	350	0.066	602.3
Aggregate/Sand Loader Full	Front-end loader (3 CY)	9.0	3.0	12.0	4.5E+05	5.4E+06	100	0.019	8,489.5
Aggregate/Sand Loader Empty	Front-end loader (3 CY)	9.0	0	9.0	4.5E+05	4.0E+06	100	0.019	8,489.5
Concrete Truck Leave Full	Dump truck (16 CY)	15.0	20.0	35.0	5.3E+04	1.8E+06	350	0.066	3,484.1
Concrete Truck Enter Empty	Dump truck (16 CY)	15.0	0	15.0	5.3E+04	7.9E+05	350	0.066	3,484.1
Total					1.2E+06	1.6E+07			3.3E+04

Average Vehicle Weight Per Trip = 14.0 tons/trip
Average Miles Per Trip = 0.028 miles/trip

Unmitigated Emission Factor, Ef = [k * (sL2)^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 =	14.0	14.0	14.0	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 =	0.38	0.07	0.01	lb/mile
Mitigated Emission Factor, Eext =	0.34	0.07	0.01	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/Sand Truck Enter Full	Dump truck (16 CY)	0.72	0.14	0.02	0.68	0.13	0.02	0.33	0.06	0.01
Aggregate/Sand Truck Leave Empty	Dump truck (16 CY)	0.72	0.14	0.02	0.68	0.13	0.02	0.33	0.06	0.01
Cement/Cement Supplement Truck Enter Full	Tanker truck (6000 gal)	0.113	0.022	3.2E-03	0.104	0.020	2.9E-03	0.052	1.0E-02	1.5E-03
Cement/Cement Supplement Truck Leave Empty	Tanker truck (6000 gal)	0.113	0.022	3.2E-03	0.104	0.020	2.9E-03	0.052	1.0E-02	1.5E-03
Aggregate/Sand Loader Full	Front-end loader (3 CY)	1.60	0.31	0.05	1.46	0.28	0.04	0.73	0.14	0.02
Aggregate/Sand Loader Empty	Front-end loader (3 CY)	1.60	0.31	0.05	1.46	0.28	0.04	0.73	0.14	0.02
Concrete Truck Leave Full	Dump truck (16 CY)	0.66	0.13	0.019	0.60	0.12	0.017	0.30	0.06	0.008
Concrete Truck Enter Empty	Dump truck (16 CY)	0.66	0.13	0.019	0.60	0.12	0.017	0.30	0.06	0.008
Totals		6.17	1.20	0.17	5.64	1.09	0.16	2.82	0.55	0.08

Methodology

Maximum Material (Usage) Throughput (tons/yr) provided by the source
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)
PM2.5 = PM10

Abbreviations

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

Appendix A.2(a): Limited Emissions Summary
Asphalt Production Operation
Summary

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

Asphalt Plant Limitations		ton/hr	ton/yr	MMCF/yr	% sulfur	% ash	% chlorine,	% lead
Maximum Hourly Asphalt Production	=	60						
Annual Asphalt Production Limitation	=	200,000						
Slag Usage Limitation	=	0						
Natural Gas Limitation	=	193						
No. 2 Fuel Oil Limitation	=	1,376.571			0.50			
No. 4 Fuel Oil Limitation	=	1,376.571			0.50			
Residual (No. 5 or No. 6) Fuel Oil Limitation	=	0			0			
Propane Limitation	=	0			0			
Butane Limitation	=	0			0			
Used/Waste Oil Limitation	=	0			0			
PM Dryer/Mixer Limitation	=	0.500						
PM10 Dryer/Mixer Limitation	=	0.367						
PM2.5 Dryer/Mixer Limitation	=	0.27						
CO Dryer/Mixer Limitation	=	0.40						
VOC Dryer/Mixer Limitation	=	0.0082						
Slag SO2 Dryer/Mixer Limitation	=	0						
Cold Mix Asphalt VOC Usage Limitation	=	0						
HCl Limitation	=	0						

Process Description	Limited/Controlled Potential Emissions (tons/year)										Hazardous Air Pollutants	
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Case HAP			
Ducted Emissions												
Dryer Fuel Combustion (worst case)	4.82	5.71	5.71	51.62	13.77	0.53	8.09	0.30	0.17	(hexane)		
Dryer/Mixer and Batch Tower (Process)	50.00	38.70	27.00	8.80	12.00	0.82	40.00	0.88	0.31	(formaldehyde)		
Dryer/Mixer Slag Processing	0	0	0	0	0	0	0	0	0			
Hot Oil Heater Fuel Combustion (worst case)	0.01	0.03	0.03	0.003	0.44	0.02	0.37	0.01	0.008	(hexane)		
Worst Case Emissions*	50.01	38.73	27.03	51.62	14.20	0.84	40.37	0.89	0.31	(formaldehyde)		
Fugitive Emissions												
Asphalt Load-Out, Silo Filling, On-Site Yard	0.11	0.11	0.11	0	0	1.71	0.29	0.03	0.009	(formaldehyde)		
Material Storage Piles	0.07	0.03	0.03	0	0	0	0	0	0			
Material Processing and Handling	0.55	0.31	0.05	0	0	0	0	0	0			
Material Screening and Conveying	2.66	0.93	0.93	0	0	0	0	0	0			
Unpaved and Paved Roads (worst case)	0.51	0.10	0.01	0	0	0	0	0	0			
Cold-Mix Asphalt Production	0	0	0	0	0	0	0	0	0			
Cold-Mix Asphalt Storage Stockpiles	0	0	0	0	0	0.67	0	0.18	0.06	(xylenes)		
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0.010	0	0.011	0.004	(xylenes)		
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	negl	negl			
Total Fugitive Emissions	4.00	1.47	1.13	0	0	2.40	0.29	0.22	0.064	(xylenes)		
Totals Limited/Controlled Emissions	54.01	40.21	28.16	51.62	14.20	3.24	40.66	1.10	0.31	(formaldehyde)		

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(a): Limited Emissions Summary
Asphalt Production Operation
Dryer/Mixer and Batch Tower Process Emissions**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

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

Maximum Hourly Asphalt Production =	60	ton/hr
Annual Asphalt Production Limitation =	200,000	ton/yr
PM Dryer/Mixer Limitation =	0.500	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation =	0.387	lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation =	0.270	lb/ton of asphalt production
CO Dryer/Mixer Limitation =	0.400	lb/ton of asphalt production
VOC Dryer/Mixer Limitation =	0.0082	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	0.500	0.500	0.500	50.0	50.0	0	50.0
PM10	0.387	0.387	0.387	38.7	38.7	0	38.7
PM2.5	0.270	0.270	0.270	27.0	27.0	0	27.0
SO ₂ *	0.0046	0.088	0.088	0.5	8.8	0	8.8
NO _x *	0.025	0.12	0.12	2.5	12.0	0	12.0
VOC	0.0082	0.0082	0.0082	0.8	0.8	0	0.8
CO**	0.400	0.400	0.400	40.0	40.0	0	40.0
Hazardous Air Pollutant							
HCl			2.10E-04			0	0
Antimony	1.80E-07	1.80E-07	1.80E-07	1.80E-05	1.80E-05	0	1.80E-05
Arsenic	5.60E-07	5.60E-07	5.60E-07	5.60E-05	5.60E-05	0	5.60E-05
Beryllium	negl	negl	negl	negl	negl	0	0
Cadmium	4.10E-07	4.10E-07	4.10E-07	4.10E-05	4.10E-05	0	4.10E-05
Chromium	5.50E-06	5.50E-06	5.50E-06	5.50E-04	5.50E-04	0	5.50E-04
Cobalt	2.60E-08	2.60E-08	2.60E-08	2.60E-06	2.60E-06	0	2.60E-06
Lead	6.20E-07	1.50E-05	1.50E-05	6.20E-05	1.50E-03	0	1.50E-03
Manganese	7.70E-06	7.70E-06	7.70E-06	7.70E-04	7.70E-04	0	7.70E-04
Mercury	2.40E-07	2.60E-06	2.60E-06	2.40E-05	2.60E-04	0	2.60E-04
Nickel	6.30E-05	6.30E-05	6.30E-05	6.30E-03	6.30E-03	0	6.30E-03
Selenium	3.50E-07	3.50E-07	3.50E-07	3.50E-05	3.50E-05	0	3.50E-05
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	4.00E-03	4.00E-03	0	4.00E-03
Acetaldehyde			1.30E-03			0	0
Acrolein			2.60E-05			0	0
Benzene	3.90E-04	3.90E-04	3.90E-04	0.04	0.04	0	0.04
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0.02	0.02	0	0.02
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	0.31	0.31	0	0.31
Hexane	9.20E-04	9.20E-04	9.20E-04	0.09	0.09	0	0.09
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0.00	0.00	0	0.00
MEK			2.00E-05			0	0
Propionaldehyde			1.30E-04			0	0
Quinone			1.60E-04			0	0
Toluene	1.50E-04	2.90E-03	2.90E-03	0.02	0.29	0	0.29
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0.02	0.09	0	0.09
Xylene	2.00E-04	2.00E-04	2.00E-04	0.02	0.02	0	0.02

Total HAPs 0.88
Worst Single HAP 0.31 (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 NO_x 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

HCl = Hydrogen Chloride

HAP = Hazardous Air Pollutant

SO₂ = Sulfur Dioxide

PAH = Polyaromatic Hydrocarbon

Appendix A.2(a): Limited Emissions Summary
Asphalt Production Operation
Dryer/Mixer Slag Processing

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

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

Criteria Pollutant	Emission Factor or Limitation (lb/ton)*	Limited Potential to Emit (tons/yr)
SO2	Slag Processing 0	Slag Processing 0

Methodology

* Testing results for Slag, obtained January 9, 2009 from similar operations at Rieth-Riley Construction Co., Inc. facility located in Valparaiso, IN (permit #127-27075-05241), produced an Emission Factor of 0.54 lb/ton from slag containing 1.10% sulfur content. The source has requested a safety factor of 0.20 lb/ton be added to the tested value for use at this location to allow for a sulfur content up to 1.5%.

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

Abbreviations

SO2 = Sulfur Dioxide

Appendix A.2(a): Limited Emissions Summary
Asphalt Production Operation
Hot Oil Heater: Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

Note: Since the fuel combustion emissions from the hot oil heater are minimal, the limited emissions are equal to the unlimited emissions.

Maximum Hot Oil Heater Fuel Input Rate = 1.00 MMBtu/hr
 Natural Gas Usage = 9 MMCF/yr
 No. 2 Fuel Oil Usage = 0 gal/yr, and 0 % 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	0.008	0	0.01
PM10/PM2.5	7.6	3.3	0.033	0	0.03
SO2	0.6	71.0	0.003	0	0.003
NOx	100	20.0	0.438	0	0.44
VOC	5.5	0.20	0.024	0	0.02
CO	84	5.0	0.368	0	0.37
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	8.8E-07	0	8.8E-07
Beryllium	1.2E-05	4.2E-04	5.3E-08	0	5.3E-08
Cadmium	1.1E-03	4.2E-04	4.8E-06	0	4.8E-06
Chromium	1.4E-03	4.2E-04	6.1E-06	0	6.1E-06
Cobalt	8.4E-05		3.7E-07		3.7E-07
Lead	5.0E-04	1.3E-03	2.2E-06	0	2.2E-06
Manganese	3.8E-04	8.4E-04	1.7E-06	0	1.7E-06
Mercury	2.6E-04	4.2E-04	1.1E-06	0	1.1E-06
Nickel	2.1E-03	4.2E-04	9.2E-06	0	9.2E-06
Selenium	2.4E-05	2.1E-03	1.1E-07	0	1.1E-07
Benzene	2.1E-03		9.2E-06		9.2E-06
Dichlorobenzene	1.2E-03		5.3E-06		5.3E-06
Ethylbenzene					0
Formaldehyde	7.5E-02	6.10E-02	3.3E-04	0	3.3E-04
Hexane	1.8E+00		0.01		0.008
Phenol					0
Toluene	3.4E-03		1.5E-05		1.5E-05
Total PAH Haps	negl		negl		0
Polycyclic Organic Matter		3.30E-03		0	0
Total HAPs =			8.3E-03	0	0.008

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(a): Limited Emissions Summary
Asphalt Production Operation
Asphalt Load-Out, Silo Filling, and Yard Emissions**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

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

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.5	
Annual Asphalt Production Limitation =	200,000	tons/yr

Pollutant	Emission Factor (lb/ton asphalt)			Limited Potential to Emit (tons/yr)			
	Load-Out	Silo Filling	On-Site Yard	Load-Out	Silo Filling	On-Site Yard	Total
Total PM*	5.2E-04	5.9E-04	NA	0.05	0.06	NA	0.11
Organic PM	3.4E-04	2.5E-04	NA	0.03	0.025	NA	0.06
TOC	0.004	0.012	0.001	0.42	1.22	0.110	1.7
CO	0.001	0.001	3.5E-04	0.13	0.118	0.035	0.29

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

PM/HAPs	0.002	0.003	0	0.005
VOC/HAPs	0.006	0.015	0.002	0.023
non-VOC/HAPs	3.2E-05	3.3E-06	8.5E-06	4.4E-05
non-VOC/non-HAPs	0.03	0.02	0.01	0.06

Total VOCs	0.39	1.22	0.1	1.7
Total HAPs	0.01	0.02	0.002	0.03
Worst Single HAP			0.009 (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):

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

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

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

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

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

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

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

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

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

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

*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(a): Limited Emissions Summary
 Asphalt Production Operation
 Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)

Company Name: Jerry David Enterprises, Inc.
 Source Address: 4301 Hogue Road, Evansville, IN 47712
 Permit Number: F163-28873-00082
 Reviewer: Hannah L. Desrosiers
 Date Received: 01/13/2010

Organic Particulate-Based Compounds (Table 11.1-15)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Limited Potential to Emit (tons/yr)			Total
					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	
PAH HAPs										
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	0.47%	8.9E-05	1.2E-04	NA	2.1E-04
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	9.5E-06	3.6E-06	NA	1.3E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	2.4E-05	3.3E-05	NA	5.7E-05
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.058%	6.5E-06	1.4E-05	NA	2.1E-05
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	2.6E-06	0	NA	2.6E-06
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	7.5E-07	0	NA	7.5E-07
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	6.5E-07	0	NA	6.5E-07
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	7.8E-07	0	NA	7.8E-07
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	2.7E-06	2.4E-06	NA	5.1E-06
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	3.5E-05	5.3E-05	NA	8.8E-05
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	1.3E-07	0	NA	1.3E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	1.7E-05	3.8E-05	NA	5.5E-05
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	2.6E-04	2.6E-04	NA	5.2E-04
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	1.6E-07	0	NA	1.6E-07
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	8.1E-04	1.3E-03	NA	0.002
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	4.3E-04	4.6E-04	NA	0.001
Perylene	198-59-0	PM/HAP	POM	Organic PM	0.022%	0.03%	7.5E-06	7.6E-06	NA	1.5E-05
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	2.8E-04	4.6E-04	NA	7.3E-04
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	5.1E-05	1.1E-04	NA	1.6E-04
Total PAH HAPs					0.002	0.003	0.002	0.003	NA	0.005
Other semi-volatile HAPs										
Phenol		PM/HAP	--	Organic PM	1.18%	0	4.0E-04	0	0	4.0E-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(a): Limited Emissions Summary
Asphalt Production Operation
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%	0.39	1.22	0.10	1.71	
non-VOC/non-HAPS											
Methane	74-82-8	non-VOC/non-HAP		TOC	6.50%	0.28%	2.7E-02	3.2E-03	7.2E-03	0.037	
Acetone	67-64-1	non-VOC/non-HAP		TOC	0.046%	0.055%	1.9E-04	6.7E-04	5.1E-05	0.001	
Ethylene	74-85-1	non-VOC/non-HAP		TOC	0.71%	1.10%	3.0E-03	1.3E-02	7.8E-04	0.017	
Total non-VOC/non-HAPS					7.30%	1.40%	0.030	0.017	0.008	0.06	
Volatile organic HAPs											
Benzene	71-43-2	VOC/HAP		TOC	0.052%	0.032%	2.2E-04	3.9E-04	5.7E-05	6.6E-04	
Bromomethane	74-83-9	VOC/HAP		TOC	0.0096%	0.0049%	4.0E-05	6.0E-05	1.1E-05	1.1E-04	
2-Butanone	78-93-3	VOC/HAP		TOC	0.049%	0.039%	2.0E-04	4.8E-04	5.4E-05	7.3E-04	
Carbon Disulfide	75-15-0	VOC/HAP		TOC	0.013%	0.016%	5.4E-05	1.9E-04	1.4E-05	2.6E-04	
Chloroethane	75-00-3	VOC/HAP		TOC	0.00021%	0.004%	8.7E-07	4.9E-05	2.3E-07	5.0E-05	
Chloromethane	74-87-3	VOC/HAP		TOC	0.015%	0.023%	6.2E-05	2.8E-04	1.7E-05	3.6E-04	
Cumene	92-82-8	VOC/HAP		TOC	0.11%	0	4.6E-04	0	1.2E-04	5.8E-04	
Ethylbenzene	100-41-4	VOC/HAP		TOC	0.28%	0.038%	1.2E-03	4.6E-04	3.1E-04	0.002	
Formaldehyde	50-00-0	VOC/HAP		TOC	0.088%	0.69%	3.7E-04	8.4E-03	9.7E-05	0.009	
n-Hexane	100-54-3	VOC/HAP		TOC	0.15%	0.10%	6.2E-04	1.2E-03	1.7E-04	0.002	
Isocane	540-84-1	VOC/HAP		TOC	0.0018%	0.00031%	7.5E-06	3.8E-06	2.0E-06	1.3E-05	
Methylene Chloride	75-09-2	non-VOC/HAP		TOC	0	0.00027%	0	3.3E-06	0	3.3E-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%	3.0E-05	6.6E-05	8.0E-06	1.0E-04	
Tetrachloroethene	127-18-4	non-VOC/HAP		TOC	0.0077%	0	3.2E-05	0	8.5E-06	4.0E-05	
Toluene	100-88-3	VOC/HAP		TOC	0.21%	0.062%	8.7E-04	7.6E-04	2.3E-04	0.002	
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	5.4E-06	0	1.4E-06	6.8E-06	
m-/p-Xylene	1330-20-7	VOC/HAP		TOC	0.41%	0.20%	1.7E-03	2.4E-03	4.5E-04	0.005	
o-Xylene	95-47-6	VOC/HAP		TOC	0.08%	0.057%	3.5E-04	6.9E-04	8.8E-05	1.1E-03	
Total volatile organic HAPs					1.50%	1.30%	0.006	0.016	0.002	0.024	

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(a): Limited Emissions Summary
Asphalt Production Operation
Material Storage Piles**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

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.

$$E_f = 1.7 \cdot (s/1.5) \cdot (365-p) / 235 \cdot (f/15)$$
 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)
Limestone	1.6	1.85	0.27	0.090	0.031
Sand	2.6	3.01	0.10	0.053	0.018
RAP	0.5	0.58	0.05	0.005	0.002
Gravel	1.6	1.85	0.04	0.014	0.005
Slag	0	0	0	0	0
Totals				0.07	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.

PM2.5 = PM10

Abbreviations

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

PTE = Potential to Emit

RAP = recycled asphalt pavement

**Appendix A.2(a): Limited Emissions Summary
Asphalt Production Operation
Material Processing, Handling, Crushing, Screening, and Conveying**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

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

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

$E_f = k \cdot (0.0032)^U \cdot [(U/5)^{1.3} / (M/2)^{1.4}]$
 where: E_f = Emission factor (lb/ton)

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

Annual Asphalt Production Limitation =	200,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	190,000	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	0.22	0.10	0.02
Front-end loader dumping of materials into feeder bins	0.22	0.10	0.02
Conveyor dropping material into dryer/mixer or batch tower	0.22	0.10	0.02
Total (tons/yr)	0.65	0.31	0.05

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)**
Screening	0.025	0.0087	2.38	0.83
Conveying	0.003	0.0011	0.29	0.10
Limited Potential to Emit (tons/yr) =			2.66	0.93

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 μ m)
 PM2.5 = Particulate Matter (<2.5 μ m)
 PTE = Potential to Emit

Appendix A.2(a): Limited Emissions Summary
Asphalt Production Operation
Unpaved Roads

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

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 = 200,000 tons/yr
 Percent Asphalt Cement/Binder (weight %) = 5.0%
 Maximum Material Handling Throughput = 190,000 tons/yr
 Maximum Asphalt Cement/Binder Throughput = 10,000 tons/yr
 No. 2 Fuel Oil Limitation = 1,376,571 gallons/yr

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

Average Vehicle Weight Per Trip = 0 tons/trip
 Average Miles Per Trip = 0 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 =	0.0	0.0	0.0	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 =	0	0	0	lb/mile
Mitigated Emission Factor, E_{ext} =	0	0	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)	0	0	0	0	0	0	0	0	0
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0	0	0	0	0	0	0	0	0
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0	0	0	0	0	0	0	0	0
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0	0	0	0	0	0	0	0	0
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0	0	0	0	0	0	0	0	0
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0	0	0	0	0	0	0	0	0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0	0	0	0	0	0	0	0	0
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0	0	0	0	0	0	0	0	0
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0	0	0	0	0	0	0	0	0
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0	0	0	0	0	0	0	0	0
Totals		0	0	0	0	0	0	0	0	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(a): Limited Emissions Summary
Asphalt Production Operation
Paved Roads**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

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 =	200,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	190,000	tons/yr
Maximum Asphalt Cement/Binder Throughput =	10,000	tons/yr
No. 2 Fuel Oil Limitation =	1,376,571	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per day (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (14 CY)	14.5	20.0	34.50	9.5E+03	3.3E+05	330	0.063	593.8
Aggregate/RAP Truck Leave Empty	Dump truck (14 CY)	14.5	0	14.50	9.5E+03	1.4E+05	330	0.063	593.8
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	15.0	25.0	40.00	4.0E+02	1.6E+04	117	0.022	8.9
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	15.0	0	15.00	4.0E+02	6.0E+03	117	0.022	8.9
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	15.0	25.0	40.00	1.9E+02	7.4E+03	117	0.022	4.1
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	15.0	0	15.00	1.9E+02	2.8E+03	117	0.022	4.1
Aggregate/RAP Loader Full	Front-end loader (3 CY)	11.0	3.0	14.00	6.3E+04	8.9E+05	145	0.027	1,739.3
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	11.0	0	11.00	6.3E+04	7.0E+05	145	0.027	1,739.3
Asphalt Concrete Truck Leave Full	Dump truck (14 CY)	14.5	20.0	34.50	1.0E+04	3.5E+05	125	0.024	236.7
Asphalt Concrete Truck Enter Empty	Dump truck (14 CY)	14.5	0	14.50	1.0E+04	1.5E+05	125	0.024	236.7
Total					1.7E+05	2.8E+06			5.2E+03

Average Vehicle Weight Per Trip =	15.4	tons/trip
Average Miles Per Trip =	0.031	miles/trip

Unmitigated Emission Factor, Ef = [k * (sL/2)^{0.85} * (W/3)^{1.5} - C] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5
k =	0.062	0.016	0.0024
W =	15.4	15.4	15.4
C =	0.00047	0.00947	0.00036
sL =	0.6	0.6	0.6

b/mi = particle size multiplier (AP-42 Table 13.2.1-1)
tons = average vehicle weight (provided by source)
lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)
g/m² = 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 =	0.44	0.08	0.01
Mitigated Emission Factor, Eext =	0.40	0.08	0.01
Dust Control Efficiency =	50%	50%	50%

lb/mile
lb/mile
(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 (14 CY)	0.13	0.03	0.00	0.12	0.02	0.00	0.08	0.01	0.00
Aggregate/RAP Truck Leave Empty	Dump truck (14 CY)	0.13	0.03	0.00	0.12	0.02	0.00	0.06	0.01	0.00
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.002	0.000	5.5E-05	0.002	0.000	5.0E-05	0.001	1.7E-04	2.5E-05
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.002	0.000	5.5E-05	0.002	0.000	5.0E-05	0.001	1.7E-04	2.5E-05
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	9.0E-04	1.7E-04	2.6E-05	8.2E-04	1.6E-04	2.3E-05	4.1E-04	8.0E-05	1.2E-05
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	9.0E-04	1.7E-04	2.6E-05	8.2E-04	1.6E-04	2.3E-05	4.1E-04	8.0E-05	1.2E-05
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0.38	0.07	0.01	0.35	0.07	0.01	0.17	0.03	0.00
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0.38	0.07	0.01	0.35	0.07	0.01	0.17	0.03	0.00
Asphalt Concrete Truck Leave Full	Dump truck (14 CY)	0.05	0.01	0.00	0.05	0.01	0.00	0.02	0.00	0.00
Asphalt Concrete Truck Enter Empty	Dump truck (14 CY)	0.05	0.01	0.00	0.05	0.01	0.00	0.02	0.00	0.00
Totals		1.13	0.22	0.03	1.03	0.20	0.03	0.51	0.10	0.01

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(a): Limited Emissions Summary
Asphalt Production Operation
Cold Mix Asphalt Production**

Company Name: Jerry David Enterprises, Inc.
 Source Address: 4301 Hogue Road, Evansville, IN 47712
 Permit Number: F163-28873-00082
 Reviewer: Hannah L. Desrosiers
 Date Received: 01/13/2010

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 Cold-mix Asphalt Stockpiles Throughput = 0 tons
 Percent Asphalt Cement/Binder (weight %) = 0%
 Maximum Asphalt Cement/Binder Content = 0.00 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
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	0	0	0
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	0	0	0
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	0	0	0
Other asphalt with solvent binder	25.9%	2.5%	0	0	0
Worst Case Limited PTE of VOC = 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
Limited PTE of Total HAPs (tons/yr) =	0
Limited PTE of Single HAP (tons/yr) =	0 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 = [Maximum Cold-mix Asphalt Stockpiles Throughput (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]
 Maximum VOC Solvent Usage (tons/yr) = [Maximum Asphalt Cement/Binder Usage (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.2(a): Limited Emissions Summary
Asphalt Production Operation
Cold Mix Asphalt Storage Stockpiles**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

Note: Since the emissions from the cold-mix asphalt storage piles are minimal, the limited emissions are equal to the unlimited

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 storage stockpiles.

Maximum Annual Cold-mix Asphalt Storage Stockpile Throughput = 40.0 tons
Percent Asphalt Cement/Binder (weight %) Content = 7%
Maximum Annual Asphalt Cement/Binder Throughput = 2.80 tons/yr

Volatile Organic Compounds

	Maximum weight % of VOC solvent in binder*	Weight % VOC solvent in binder that evaporates	Maximum VOC Solvent Content (tons/yr)	PTE of VOC (tons/yr)
Cut back asphalt rapid cure (assuming gasoline or naphtha solvent)	25.3%	95.0%	0.71	0.67
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	0.80	0.56
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	0.56	0.14
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	0.42	0.19
Other asphalt with solvent binder	25.9%	2.5%	0.73	0.02
Worst Case PTE of VOC =				0.67

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) =	0.18
PTE of Single HAP (tons/yr) =	0.06 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 Annual Asphalt Cement/Binder Throughput = [Maximum Cold-mix Asphalt Storage Stockpile Throughput (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]

Maximum Annual VOC Solvent Content (tons/yr) = [Maximum Annual Asphalt Cement/Binder Content (tons/yr)] * [Maximum Weight % of VOC Solvent in Binder]

PTE of VOC (tons/yr) = [Weight % VOC solvent in binder that evaporates] * [Maximum VOC Solvent Content (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.2(a): Limited Emissions Summary
Asphalt Production Operation
Gasoline Fuel Transfer and Dispensing Operation**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

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

Gasoline Throughput =

75

 gallons/day
 =

27.4

 kgal/yr

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	0.01
Vehicle refueling (displaced losses - controlled)	1.1	0.02
Spillage	0.7	0.01
Total		0.04

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) =	0.01	
Limited PTE of Single HAP (tons/yr) =	0.004	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

**Appendix A.2(b): Limited Emissions Calculations
Concrete Dry Batching Operations
Summary**

Company Name: Jerry David Enterprises, Inc.
 Source Address: 4301 Hogue Road, Evansville, IN 47712
 Permit Number: F163-28873-00082
 Reviewer: Hannah L. Desrochers
 Date Received: 01/13/2010

Concrete Batch Plant Maximum Capacity

Maximum Hourly Concrete Production *	=	60	cubic yards/hr
Maximum Hourly Concrete Production "	=	120	tons/hr
Annual Concrete Production Limitation "	=	75,000	cubic yards/year
Annual Concrete Production Limitation "	=	150,000	tons/yr
Aggregate Usage Limitation "	=	497,937	tons/yr
Sand Usage Limitation "	=	846,800	tons/yr
Cement Usage Limitation "	=	27,273	tons/yr
Cement supplement Usage limitation "	=	20,000	tons/yr
Maximum Hot Water Heater Fuel Input Rate "	=	3.50	MMBtu/hr
Natural Gas Usage "	=	30.66	MMCF/yr
PM Concrete Production/Truck Loading Limitation "	=	0.995	lb/ton of concrete production
PM10/PM2.5 Concrete Production/Truck Loading Limitation "	=	0.278	lb/ton of concrete production
PM Cement Handling Limitation "	=	0.72	lb/ton of cement received
PM10/PM2.5 Cement Handling Limitation "	=	0.48	lb/ton of cement received
PM Cement Supplement Handling Limitation "	=	3.14	lb/ton of cement supplement received
PM10/PM2.5 Cement Supplement Handling Limitation "	=	1.10	lb/ton of cement supplement received

Process Description	Limited/Controlled Potential Emissions (tons/year)										Hazardous Air Pollutants		
	Criteria Pollutants										Worst Case HAP		
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total					
Ducted/Ductable Emissions													
Hot Water Heater Fuel Combustion	0.03	0.12	0.12	0.01	1.53	0.08	1.29	0.029	0	0.028	(hexane)		
Material Conveying	2.02	0.74	0.74	0	0	0	0	0	0	0			
Silo Loading	41.22	17.27	17.27	0	0	0	0	0.01	0.005	0.008	(manganese)		
Weigh Hopper Loading	0.38	0.18	0.18	0	0	0	0	0.02	0.008	0.008	(manganese)		
Truck Loading	74.63	20.85	20.85	0	0	0	0	0.01	7.23E-04	0.028	(hexane)		
Total Ducted/Ductable Emissions	118.27	39.16	39.16	0.009	1.53	0.08	1.29	0.07	0.007	0.028	(hexane)		
Fugitive Emissions ¹													
Material Processing and Handling	3.05	1.44	1.44	0	0	0	0	0	0	0	0		
Paved Roads	3.93	0.76	0.76	0	0	0	0	0	0	0	0		
Total Fugitive Emissions	6.98	2.21	1.55	0	0	0	0	0	0	0	0		
Total Limited/Controlled Emissions	125.25	41.36	40.71	0.01	1.53	0.08	1.29	0.07	0.007	0.028	(hexane)		

Total emissions based on rated capacity at 8,760 hours/year.
 * Maximum Hourly Concrete Production (tons/hr) = (Maximum Hourly Concrete Production (yards³/hr) * Density of Concrete (lbs/yd³) * 1ton/2000lbs)
 † Annual Concrete Production Limitation (tons/yr) = (Maximum Hourly Concrete Production (yards³/hr) * 8760 hrs/yr)
 ‡ Annual Concrete Production Limitation (tons/yr) = (Annual Concrete Production Limitation (yards³/yr) * 4000 lbs/yd³ * 1ton/2000lbs)
 § Per AP 42 - Appendix A: Miscellaneous Data and Conversion Factors (09/85, pg A-8), the density of concrete is 4000 lbs/yd³.
 ¶ Since the unlimited emissions from the aggregate and sand delivery and transfers are minimal, the limited material usage is equal to the unlimited, worst case, material usage, represented by % of maximum annual concrete (batch) production, provided by the source.
 † Limited worst case material usage, represented by % of limited annual concrete (batch) production, provided by the source.
 ‡ Fugitive emissions from storage piles have been accounted for in Appendix A.2(a), page 9 of 14.

Appendix A.2(b): Limited Emissions Calculations
Concrete Dry Batching Operations
Hot Water Heater: Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

Note: Since the fuel combustion emissions from the hot water heater are minimal, the limited emissions are equal to the unlimited emissions.

Maximum Hot Oil Heater Fuel Input Rate = 3.50 MMBtu/hr
 Natural Gas Usage = 30.66 MMCF/yr

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factors (units)	Unlimited/Uncontrolled Potential to Emit (tons/yr)	
	Hot Water Heater	Hot Water Heater	
	Natural Gas (lb/MMCF)	Natural Gas (tons/yr)	Total Emissions (tons/yr)
PM	1.9	0.029	0.03
PM10/PM2.5	7.6	0.117	0.12
SO2	0.6	0.009	0.01
NOx	100	1.533	1.53
VOC	5.5	0.084	0.08
CO	84	1.288	1.29
Hazardous Air Pollutant			
Arsenic	2.0E-04	3.1E-06	3.1E-06
Beryllium	1.2E-05	1.8E-07	1.8E-07
Cadmium	1.1E-03	1.7E-05	1.7E-05
Chromium	1.4E-03	2.1E-05	2.1E-05
Cobalt	8.4E-05	1.3E-06	1.3E-06
Lead	5.0E-04	7.7E-06	7.7E-06
Manganese	3.8E-04	5.8E-06	5.8E-06
Mercury	2.6E-04	4.0E-06	4.0E-06
Nickel	2.1E-03	3.2E-05	3.2E-05
Selenium	2.4E-05	3.7E-07	3.7E-07
Benzene	2.1E-03	3.2E-05	3.2E-05
Dichlorobenzene	1.2E-03	1.8E-05	1.8E-05
Ethylbenzene			0
Formaldehyde	7.5E-02	1.1E-03	1.1E-03
Hexane	1.8E+00	0.03	0.028
Phenol			0
Toluene	3.4E-03	5.2E-05	5.2E-05
Total PAH Haps	negl	negl	0
Polycyclic Organic Matter			0
Total HAPs			0.029

Methodology

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

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

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(b): Limited Emissions Calculations
Concrete Dry Batching Operations
Particulate Emissions from Material Processing, Handling, and Conveying**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

Material Processing and Handling (AP 42 Section 11.12)

Annual Concrete Production Limitation =	150,000	tons/yr
Aggregate Usage Limitation =	497,937	tons/yr
Sand Usage Limitation =	846,800	tons/yr
Cement Usage Limitation =	27,273	tons/yr
Cement supplement Usage Limitation =	20,000	tons/yr

Type of Activity	Uncontrolled Emission Factor for PM (lbs/ton)	Uncontrolled Emission Factor for PM10/PM2.5 (lbs/ton)	Limited PTE of PM (tons/yr)	Limited PTE of PM10/PM2.5* (tons/yr)
Fugitive Emissions				
Aggregate delivery to ground storage (3-05-011-21) ^{1, α, Δ}	0.0023	0.0011	0.56	0.27
Aggregate transfer to conveyor (3-05-011-23) ^{1, α, Δ}	0.0023	0.0011	0.56	0.27
Sand delivery to ground storage (3-05-011-23) ^{1, β, Δ}	0.0023	0.0011	0.96	0.45
Sand transfer to conveyor (3-05-011-24) ^{1, β, Δ}	0.0023	0.0011	0.96	0.45
Subtotal			3.05	1.44
Ducted/Ductable Emissions				
Aggregate transfer to elevated storage (3-05-011-04) ^{1, α, Δ}	0.0023	0.0011	0.56	0.27
Sand transfer to elevated storage (3-05-011-05) ^{1, β, Δ}	0.0023	0.0011	0.96	0.45
Cement delivery to Silo (3-05-011-07 controlled) ^{2, γ}	0.72	0.4600	9.82	6.27
Cement supplement delivery to Silo (3-05-011-17 controlled) ^{2, δ}	3.14	1.1000	31.40	11.00
Weigh hopper loading (3-05-011-08) ^{2, ε}	0.0051	0.0024	0.38	0.18
Truck Loading (truck-mix) (3-05-011-10) ^{2, φ}	0.9950	0.2780	74.63	20.85
Subtotal			117.75	39.02
Limited Potential to Emit (tons/yr) =			120.80	40.47

Methodology

* In the absence of valid AP 42 emission factors, it is assumed that PM2.5 emissions = PM10 emissions

¹ Emission factors for Aggregate and Sand Handling, calculated using AP-42 Section 13.2.4 (fifth edition, updated 11/06) equation #1, page 13.2.4-4.

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

where: particle size multiplier (0.74 assumed for aerodynamic diameter <=100 um and 0.35 assumed for aerodynamic diameter <=10 um)

U = worst case annual mean wind speed (Source: NOAA, 2006*)

M = material % moisture content of aggregate (Source: AP-42 Section 11.1.1.1)

² To estimate potential fugitive dust emissions from material processing and handling, AP-42 emission factors for Concrete Batching Truck-Mix Operations, Section 11.12 (dated 6/06), Table 11.12-5 are utilized.

α Limited Potential to Emit (tons/yr) = (Aggregate Usage Limitation (tons/yr)) * (Emission Factor (lb/ton)) * (8760 hrs/yr) * (ton/2000 lbs)

β Limited Potential to Emit (tons/yr) = (Sand Usage Limitation (tons/yr)) * (Emission Factor (lb/ton)) * (8760 hrs/yr) * (ton/2000 lbs)

γ Limited Potential to Emit (tons/yr) = (Cement Usage Limitation (tons/yr)) * (Emission Factor (lb/ton)) * (8760 hrs/yr) * (ton/2000 lbs)

δ Limited Potential to Emit (tons/yr) = (Cement supplement Usage Limitation (tons/yr)) * (Emission Factor (lb/ton)) * (8760 hrs/yr) * (ton/2000 lbs)

ε Limited Potential to Emit (tons/yr) = (Annual Concrete Production Limitation (tons/yr)) * (Emission Factor (lb/ton)) * (8760 hrs/yr) * (ton/2000 lbs)

Δ Note: Since the emissions from the aggregate and sand delivery and transfers are minimal, the limited emissions are equal to the unlimited emissions and therefore limited usage is equal to unlimited usage.

Raw materials used in the production of ready-mix concrete may include limestone, sand, cement, and cement supplements.

Cement supplements may include both mineral and chemical admixtures.

Mineral admixtures, may include fly ash, silica fume, natural pozzolans, and ground granulated blast-furnace slag.

Chemical admixtures are added to the mix, in very small amounts, immediately before or during mixing, and may include air-entrainers, water-reducers, set retarders, set accelerators, and plasticizers (superplasticizers). All other varieties of admixtures fall into the specialty category whose functions include corrosion inhibition, shrinkage reduction, alkali-silica reactivity reduction, workability enhancement, bonding, damp proofing, and coloring.

Material Conveying (AP-42 Section 11.19.2)

Maximum Material Usage = 1,344,737 tons/yr

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)*
Ducted/Ductable Emissions				
Conveying ¹	0.003	0.0011	2.02	0.74
Limited Potential to Emit (tons/yr) =			2.02	0.74

Methodology

* In the absence of valid AP 42 emission factors, it is assumed that PM2.5 emissions = PM10 emissions

¹ To estimate potential fugitive dust emissions from raw material conveying, AP-42 emission factors for Crushed Stone Processing Operations, Chapter 11.19.2 (dated 8/04), Table 11.19.2-2 are utilized.

Maximum Material Usage (tons/yr) = [Aggregate Usage Limitation (tons/yr) + Sand Usage Limitation (tons/yr)]

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

Raw materials may include aggregates and sand.

Abbreviations

PM = Particulate Matter

PM2.5 = Particulate Matter (<2.5 um)

PM10 = Particulate Matter (<10 um)

PTE = Potential to Emit

**Appendix A.2(b): Limited Emissions Calculations
Concrete Dry Batching Operations
HAPs Emissions from Material Processing and Handling**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

Material Processing and Handling (AP 42 Section 11.12)

Annual Concrete Production Limitation =

150,000

 tons/yr
Annual Combined Cement/Cement Supplement Limitation * =

47,273

 tons/yr

	Worst Case HAP Emission Factor ¹ (Manganese)	Total HAPs ² Emission Factor (lb/ton)	PTE Worst Case HAP (Manganese)	PTE Total HAPs ³ (tons/yr)
Ducted/Ductable Emissions				
Cement delivery to Silo (3-05-011-07) ^{α, β}	1.01E-04	2.34E-04	0.002	0.006
Cement supplement delivery to Silo (3-05-011-17 controlled) ^{α, β}	1.01E-04	2.34E-04	0.002	0.006
Weigh hopper loading ^{γ, δ}	1.01E-04	2.34E-04	0.008	0.018
Truck Loading (truck-mix) (3-05-011-10) ^{γ, δ}	3.06E-05	1.32E-04	0.0007	0.010
Limited Potential to Emit HAPs (tons/yr) =			0.01	0.04

Methodology

* Cement supplements may include both mineral and chemical admixtures.

Mineral admixtures, may include fly ash, silica fume, natural pozzolans, and ground granulated blast-furnace slag.

Chemical admixtures are added to the mix, in very small amounts, immediately before or during mixing, and may include air-entrainers, water-reducers, set retarders, set accelerators, and plasticizers (superplasticizers). All other varieties of admixtures fall into the specialty category whose functions include corrosion inhibition, shrinkage reduction, alkali-silica reactivity reduction, workability enhancement, bonding, damp proofing, and coloring.

¹ Worst Case HAP Emission Factors

Because there were no HAP emission factors available in AP-42 for the weigh hopper loading, 1.01E-04 lb/ton is used as a worst-case scenario.

² To estimate potential hazardous air pollutant emissions from material processing and handling, AP-42 emission factors for Concrete Batching Operations, Section 11.12 (dated 6/06), Table 11.12-8 are utilized.

The emission factor, 2.34E-04 lb/ton, shown above is the sum of all metal emission factors for cement silo filling provided in AP-42.

The emission factor, 1.32E-04 lb/ton, shown above is the sum of all metal emission factors for truck loading provided in AP-42.

Because there were no HAP emission factors available in AP-42 for the weigh hopper loading, 2.34E-04 lb/ton is used as a worst-case scenario.

³ The HAPs being accounted for in the "TOTAL" are metal HAPs and include Arsenic, Beryllium, Cadmium, Total Chromium, Lead, Manganese, Nickel, Total Phosphorus, and Selenium.

^α PTE Worst Case HAP (tons/yr) = Annual Combined Cement/Cement Supplement Usage Limitation (tons/yr) * Manganese Emission Factor (lb/ton) * 1 ton/2,000 lbs

^β PTE Total HAPs (tons/yr) = Annual Combined Cement/Cement Supplement Usage Limitation (tons/yr) * Total HAPs Emission Factor (lb/ton) *

^γ PTE Total HAPs (tons/yr) = Annual Concrete Production Limitation (tons/yr) * Manganese Emission Factor (lb/ton) * 1 ton/2,000 lbs

^δ PTE Total HAPs (tons/yr) = Annual Concrete Production Limitation (tons/yr) * Total HAPs Emission Factor (lb/ton) * 1 ton/2,000 lbs

Abbreviations

PM = Particulate Matter

PM2.5 = Particulate Matter (<2.5 um)

PM10 = Particulate Matter (<10 um)

PTE = Potential to Emit

**Appendix A.2(b): Limited Emissions Calculations
Concrete Dry Batching Operations
Paved Roads**

Company Name: Jerry David Enterprises, Inc.
Source Address: 4301 Hogue Road, Evansville, IN 47712
Permit Number: F163-28873-00082
Reviewer: Hannah L. Desrosiers
Date Received: 01/13/2010

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 Concrete Production Limitation =	150,000	tons/yr
Annual Combined Aggregate/Sand Limitation =	1,344,737	tons/yr
Annual Combined Cement/Cement Supplement Limitation =	47,273	tons/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/Sand Truck Enter Full	Dump truck (16 CY)	17.0	20.0	37.0	6.7E+04	2.5E+08	300	0.057	3,820.3
Aggregate/Sand Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	6.7E+04	1.1E+06	300	0.057	3,820.3
Cement/Cement Supplement Truck Enter Full	Tanker truck (6000 gal)	12.0	25.0	37.0	1.9E+03	7.0E+04	250	0.066	125.3
Cement/Cement Supplement Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	1.9E+03	2.3E+04	350	0.066	125.3
Aggregate/Sand Loader Full	Front-end loader (3 CY)	9.0	3.0	12.0	4.5E+05	5.4E+08	100	0.019	8,489.6
Aggregate/Sand Loader Empty	Front-end loader (3 CY)	9.0	0	9.0	4.5E+05	4.0E+06	100	0.019	8,489.6
Concrete Truck Leave Full	Dump truck (16 CY)	15.0	20.0	35.0	7.5E+03	2.6E+05	350	0.066	497.2
Concrete Truck Enter Empty	Dump truck (16 CY)	15.0	0	15.0	7.5E+03	1.1E+05	350	0.066	497.2
Total					1.0E+06	1.4E+07			2.6E+04

Average Vehicle Weight Per Trip =	12.9	tons/trip
Average Miles Per Trip =	0.025	miles/trip

Unmitigated Emission Factor, Ef = [k * (sL/2)^{0.65} * (W3)^{1.5} - C] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.082	0.018	0.0024	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	12.9	12.9	12.0	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 =	0.33	0.06	0.01	lb/mile
Mitigated Emission Factor, Eext =	0.30	0.06	0.01	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)	0.64	0.12	0.02	0.58	0.11	0.02	0.29	0.06	0.01
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.64	0.12	0.02	0.58	0.11	0.02	0.29	0.06	0.01
Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.021	0.004	5.9E-04	0.019	0.004	5.4E-04	0.010	1.9E-03	2.7E-04
Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.021	0.004	5.9E-04	0.019	0.004	5.4E-04	0.010	1.8E-03	2.7E-04
Aggregate/RAP Loader Full	Front-end loader (3 CY)	1.41	0.27	0.04	1.29	0.25	0.04	0.65	0.13	0.02
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	1.41	0.27	0.04	1.29	0.25	0.04	0.65	0.13	0.02
Concrete Truck Leave Full	Dump truck (16 CY)	0.08	0.02	0.002	0.08	0.01	0.002	0.04	0.01	0.001
Concrete Truck Enter Empty	Dump truck (16 CY)	0.08	0.02	0.002	0.08	0.01	0.002	0.04	0.01	0.001
Totals		4.30	0.83	0.12	3.93	0.76	0.11	1.97	0.38	0.06

Methodology
 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)
 PM2.5 = PM10

Abbreviations
 PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 PM2.5 = Particulate Matter (<2.5 um)
 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: Jon David
Jerry David Enterprises
4301 Hogue Road
Evansville, IN 47712

DATE: October 6, 2010

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

SUBJECT: Final Decision
FESOP
163-28873-00082

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:
Derrick Ohning
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

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October 6, 2010

TO: Evansville Vanderburgh Public Library

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

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

Applicant Name: Jerry David Enterprises
Permit Number: 163-28873-00082

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	DPABST 10/6/2010 Jerry David Enterprises/Concrete 163-28873-00082 (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		

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1		Jon David Jerry David Enterprises/Concrete 4301 Hogue Rd Evansville IN 47712 (Source CAATS) (CONFIRM DELIVERY)										
2		Evansville City Council and Mayors Office 1NW MLK Blvd, Rm 302 Evansville IN 47708 (Local Official)										
3		Vanderburgh County Commissioners 1 NW MLK Blvd, Rm 305 Evansville IN 47708 (Local Official)										
4		Mr. Charles L. Berger Berger & Berger, Attorneys at Law 313 Main Street Evansville IN 47700 (Affected Party)										
5		Evansville Vanderburg Public Library 200 SE Martin Luther King Jr. Blvd Evansville IN 47708-1694 (Library)										
6		Mr. Randy Brown Plumbers & Steam Fitters Union, Local 136 2300 St. Joe Industrial Park Dr Evansville IN 47720 (Affected Party)										
7		Mr. Don Mottley Save Our Rivers 6222 Yankeetown Hwy Boonville IN 47601 (Affected Party)										
8		Vanderburgh County Health Dept. 420 Milberry Street Evansville IN 47713-1888 (Health Department)										
9		Kim Sherman 3355 Woodview Drive Newburgh IN 47630 (Affected Party)										
10		Mr. John Blair 800 Adams Ave Evansville IN 47713 (Affected Party)										
11		Derrick Ohning Evansville EPA 100 E. Walnut St. Suite 100, Newsome Center Evansville IN 47713 (Local Official)										
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