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: June 9, 2008

RE: Central Paving, Inc. / 017-25207-03118

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, 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 4-21.5-3-7 and IC 13-15-6-1(b) or IC 13-15-6-1(a) 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.

For an **initial Title V Operating Permit**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **thirty (30)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(b).

For a **Title V Operating Permit renewal**, a petition for administrative review must be submitted to the Office of Environmental Adjudication within **fifteen (15)** days from the receipt of this notice provided under IC 13-15-5-3, pursuant to IC 13-15-6-1(a).

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.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of an initial Title V operating permit, permit renewal, or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impractible to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency
401 M Street
Washington, D.C. 20406

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
FNTVOP.dot 3/27/08

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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www.idem.IN.gov

Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

Central Paving, Inc.
2403 South County Road 150 East
Logansport, Indiana 46947-8008

(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. Noncompliance with any provision of this permit, except any provision specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

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

Operation Permit No.: T017-25207-03118	
Issued by: *Original document signed by* Chrystal A. Wagner, Section Chief Permits Branch Office of Air Quality	Issuance Date: June 9, 2008 Expiration Date: June 9, 2013

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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 2-7-4(c)][326 IAC 2-7-5(15)][326 IAC 2-7-1(22)]

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

Source Address:	2403 South County Road 150 East, Logansport, Indiana 46947-8008
Mailing Address:	P.O. Box 357, Logansport, Indiana 46947
General Source Phone Number:	547-722-4727
SIC Code:	2951
County Location:	Cass
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Minor Source, under PSD Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)][326 IAC 2-7-5(15)]

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

(a) One (1) asphalt dryer, identified as AD-01, capable of processing 150 tons per hour of raw material, equipped with one (1) natural gas or waste oil fired 42.27 million British thermal units (MMBtu) per hour burner;

(b) three (3) vibrating screens for classifying dried aggregate;

(c) one (1) mixer for mixing classified aggregate and liquid asphalt;

(d) one (1) baghouse for controlling particulate matter (PM and PM_{10}) emissions from the dryer and mixer, exhausting to stack SV1;

(e) one (1) aggregate conveyor with a maximum capacity of 150 tons per hour;

(f) one (1) 20,000-gallon liquid asphalt storage tank; and

(g) production of stockpile mix (cold mix) asphalt.

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

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-7-4(c)][326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities which are specifically regulated, as defined in 326 IAC 2-7-1(21):

(a) 5% unpaved roads with public access and 95% paved roads [326 IAC 6-4].

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

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 2-7-5(2)][326 IAC 2-1.1-9.5][326 IAC 2-7-4(a)(1)(D)][IC 13-15-3-6(a)]

(a) This permit, T017-25207-03118, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, 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 2-7-7]

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 2-7-5(5)]

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 2-7-5(6)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-7-5(6)(E)]

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34). 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 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by the "responsible official" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) A "responsible official" is defined at 326 IAC 2-7-1(34).

B.9 Annual Compliance Certification [326 IAC 2-7-6(5)]

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

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

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Air Enforcement Branch - Indiana (AE-17J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

(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 2-7-5(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)][326 IAC 2-7-6(1) and (6)][326 IAC 1-6-3]

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

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

(b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Emergency Provisions [326 IAC 2-7-16]

(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.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-0178 (ask for Compliance Section)
Facsimile Number: 317-233-6865

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

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

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

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(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 2-7-4(c)(9) 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 2-7 and any other applicable rules.

(g) 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.

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

B.12 Permit Shield [326 IAC 2-7-15][326 IAC 2-7-20][326 IAC 2-7-12]

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided

that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced 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 Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

This permit shield does not extend to applicable requirements which are promulgated after the date of issuance of this permit unless this permit has been modified to reflect such new requirements.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued. The permit shield shall continue in effect so long as the Permittee is in compliance with the compliance order.

(c) No permit shield shall apply to any permit term or condition that is determined after issuance of this permit to have been based on erroneous information supplied in the permit application. Erroneous information means information that the Permittee knew to be false, or in the exercise of reasonable care should have been known to be false, at the time the information was submitted.

(d) Nothing in 326 IAC 2-7-15 or in this permit shall alter or affect the following:

(1) The provisions of Section 303 of the Clean Air Act (emergency orders), including the authority of the U.S. EPA under Section 303 of the Clean Air Act;

(2) The liability of the Permittee for any violation of applicable requirements prior to or at the time of this permit's issuance;

(3) The applicable requirements of the acid rain program, consistent with Section 408(a) of the Clean Air Act; and

(4) The ability of U.S. EPA to obtain information from the Permittee under Section 114 of the Clean Air Act.

(e) This permit shield is not applicable to any change made under 326 IAC 2-7-20(b)(2) (Sections 502(b)(10) of the Clean Air Act changes) and 326 IAC 2-7-20(c)(2) (trading based on State Implementation Plan (SIP) provisions).

(f) This permit shield is not applicable to modifications eligible for group processing until after IDEM, OAQ, has issued the modifications. [326 IAC 2-7-12(c)(7)]

(g) This permit shield is not applicable to minor Part 70 permit modifications until after IDEM, OAQ, has issued the modification. [326 IAC 2-7-12(b)(8)]

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5][326 IAC 2-7-10.5]

(a) All terms and conditions of permits established prior to T017-25207-03118 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised under 326 IAC 2-7-10.5, or

(3) deleted under 326 IAC 2-7-10.5.

(b) Provided that all terms and conditions are accurately reflected in this permit, all previous registrations and permits are superseded by this Part 70 operating permit.

B.14 Termination of Right to Operate [326 IAC 2-7-10][326 IAC 2-7-4(a)]

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 2-7-3 and 326 IAC 2-7-4(a).

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]

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

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

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

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-7-5(6)(C)][326 IAC 2-7-8(a)][326 IAC 2-7-9]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 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 2-7-5(6)(C)] The notification by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(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 2-7-9(a)(3)]

(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 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(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 2-7-9(c)]

B.17 Permit Renewal [326 IAC 2-7-3][326 IAC 2-7-4][326 IAC 2-7-8(e)]

(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 2-7-4. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Request for renewal shall be submitted to:

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

(b) A timely renewal application is one that is:

(1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.18 Permit Amendment or Modification [326 IAC 2-7-11][326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

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

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

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

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.19 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-7-5(8)][326 IAC 2-7-12(b)(2)]

(a) No Part 70 permit revision shall be required under any approved economic incentives, marketable Part 70 permits, emissions trading, and other similar programs or processes for changes that are provided for in a Part 70 permit.

(b) Notwithstanding 326 IAC 2-7-12(b)(1) and 326 IAC 2-7-12(c)(1), minor Part 70 permit modification procedures may be used for Part 70 modifications involving the use of economic incentives, marketable Part 70 permits, emissions trading, and other similar approaches to the extent that such minor Part 70 permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated or approved by the U.S. EPA.

B.20 Operational Flexibility [326 IAC 2-7-20][326 IAC 2-7-10.5]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b),(c), or (e) 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 preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

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

and

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

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

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b),(c), or (e). 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 2-7-20(b)(1), (c)(1), and (e)(2).

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-7-20(a). For each such Section 502(b)(10) of the Clean Air Act change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

The notification which shall be submitted is not considered an application form, report or compliance certification. Therefore, the notification by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Emission Trades [326 IAC 2-7-20(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 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(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 2-7-5(9). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(e) 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.21 Source Modification Requirement [326 IAC 2-7-10.5]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-7-10.5.

B.22 Inspection and Entry [326 IAC 2-7-6][IC 13-14-2-2][IC 13-30-3-1][IC 13-17-3-2]

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 Part 70 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 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 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 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.23 Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

The application which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

B.24 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), 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.25 Credible Evidence [326 IAC 2-7-5(3)][326 IAC 2-7-6][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 2-7-5(1)]

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

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

C.2 Opacity [326 IAC 5-1]

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

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

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

C.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 or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

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). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(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. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-7-6(1)]

C.7 Performance Testing [326 IAC 3-6]

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

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(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.8 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 2-7-5(1)][326 IAC 2-7-6(1)]

C.9 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

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

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

C.10 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

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

C.11 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(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 2-7-5][326 IAC 2-7-6]

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 prepared and submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on September 23, 2003.

(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 2-7-5(12)] [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 2-7-5] [326 IAC 2-7-6]

(a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall maintain the following records:

(1) monitoring data;

(2) monitor performance data, if applicable; and

(3) corrective actions taken.

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

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

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.16 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

(a) In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), starting in 2004 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) (“Regulated pollutant, which is used only for purposes of Section 19 of this rule”) from the source, for purpose of fee assessment.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

(b) The emission statement 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.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

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

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

C.18 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

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

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(e) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

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

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

(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.

(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) asphalt dryer, identified as AD-01, capable of processing 150 tons per hour of raw material, equipped with one (1) natural gas or waste oil fired 42.27 million British thermal units (MMBtu) per hour burner;

(b) three (3) vibrating screens for classifying dried aggregate;

(c) one (1) mixer for mixing classified aggregate and liquid asphalt;

(d) one (1) baghouse for controlling particulate matter (PM and PM_{10}) emissions from the dryer and mixer, exhausting to stack SV1;

(e) one (1) aggregate conveyor with a maximum capacity of 150 tons per hour;

(f) one (1) 20,000-gallon liquid asphalt storage tank; and

(g) production of stockpile mix (cold mix) asphalt.

Under NSPS Subpart I, this asphalt plant 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.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2]

(a) The potential to emit PM from the aggregate dryer/mixer shall be limited to less than 0.315 pounds per ton of asphalt produced.

(b) The potential to emit PM_{10} from the aggregate dryer/mixer shall be limited to less than 0.338 pounds per ton of asphalt produced.

(c) The potential to emit CO from the aggregate dryer/mixer shall be limited to less than 0.376 pounds per ton of asphalt produced.

(d) The amount of VOC solvent used in medium cure cutback asphalt shall be limited to less than 215.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

These limits shall render the requirements of 326 IAC 2-2 (PSD) not applicable.

D.1.2 Sulfur Dioxide (SO_2) Emission Limitations [326 IAC 7-1.1]

Pursuant to 326 IAC 7-1.1-2, the sulfur content of the residual oil (waste oil) used in the aggregate dryer/mixer shall not exceed 1.6 pounds per MMBtu.

D.1.3 Volatile Organic Compound Rules for Asphalt Pavers [326 IAC 8-5-2]

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

(a) penetrating prime coating;

(b) stockpile storage;

(c) application during the months of November, December, January, February, and March.

D.1.4 Preventive Maintenance Plan [326 IAC 1-6-3]

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

Compliance Determination Requirements

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

The Permittee shall perform PM and PM_{10} testing in order to demonstrate compliance with the limits to avoid 326 IAC 2-2. This testing shall be repeated at least once every five years from the date of the last valid compliance demonstration. PM_{10} includes filterable and condensable PM_{10}.

D.1.6 Particulate Matter (PM)

The baghouse shall be in operation at all times the aggregate dryer/mixer is in operation, in order to comply with D.1.1(a) and D.1.1(b).

D.1.7 Sulfur Dioxide (SO_2) Emissions and Sulfur Content [326 IAC 7-2]

Pursuant to 326 IAC 7-1.1-1, the source shall comply with the compliance determination requirements in 326 IAC 7-2:

(a) The Permittee shall submit to the commissioner the following reports based on fuel sampling and analysis data obtained in accordance with procedures specified under 326 IAC 3-7:

(1) Reports of calendar month average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate in pounds per MMBtu upon request.

(b) Compliance or noncompliance with the emission limitations contained in 326 IAC 7-1.1, 326 IAC 7-4, or 326 IAC 7-4.1 may be determined by a stack test conducted in accordance with 326 IAC 3-6 utilizing procedures outlined in 40 CFR 60, Appendix A, Method 6, 6A, 6C, or 8.

(c) Fuel sampling and analysis data shall be collected pursuant to the procedures specified in 326 IAC 3-7-4 for oil combustion, and these data may be used to determine compliance or noncompliance with the emission limitations contained in 326 IAC 7-1.1, 326 IAC 7-4, or 326 IAC 7-4.1. Computation of calculated sulfur dioxide emission rates from fuel sampling and analysis data shall be based on the emission factors contained in U.S. EPA publication AP-42 unless other emission factors based on site-specific sulfur dioxide measurements are approved by the commissioner and the U.S. EPA. Fuel sampling and analysis data shall be collected as follows:

(1) Compliance or noncompliance shall be determined using a calendar month average sulfur dioxide emission rate in pounds per MMBtu.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)][326 IAC 2-7-6(1)]

D.1.8 Visible Emissions Notations

(a) Visible emission notations of the aggregate dryer/mixer stack exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Excursions or Exceedances shall be considered a deviation from this permit.

D.1.9 Baghouse Parametric Monitoring

(a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the aggregate dryer/mixer, at least once per day when the aggregate dryer/mixer is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

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

D.1.10 Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

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

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.11 Record Keeping Requirement

(a) To document compliance with Condition D.1.1(d), the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limit established in Condition D.1.1(d). Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) Calendar dates covered in the compliance determination period;

(2) Cutback asphalt medium cure liquid binder usage per month since the last compliance determination period;

(3) VOC solvent content by weight of the cutback asphalt medium cure liquid binder used each month; and

(4) Amount of VOC solvent used in the production of cold mix asphalt, and the amount of VOC emitted each month.

(b) To document compliance with Condition D.1.2, the Permittee shall maintain records in accordance with (1) through (3) below. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(1) A certification, signed by the owner or operator, that the records of the fuel oil supplier certifications represent all of the fuel combusted during the period; and

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

(2) The name of the fuel supplier; and

(3) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

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

(c) To document compliance with Condition D.1.8, the Permittee shall maintain a daily record of visible emission notations of the aggregate dryer and mixer baghouse stack exhaust and the conveying, material transfer points, and screening once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (e.g. the process did not operate that day).

(d) To document compliance with Condition D.1.9, the Permittee shall maintain once per day records of the pressure drop of the aggregate dryer and mixer baghouse during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of pressure drop reading, (e.g. the process did not operate that day).

D.1.12 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1(d) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit,

using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

D.1.13 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

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

D.1.14 NSPS Subpart I Requirements [40 CFR Part 60, Subpart I] [326 IAC 12]

Pursuant to CFR Part 60, Subpart I, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart I, which are incorporated by reference as 326 IAC 12-1 for the asphalt plant as specified as follows. Pursuant to 40 CFR 60.90(a), the affected facility to which the provisions of this subpart apply is each hot mix asphalt facility. For the purpose of this subpart, a hot mix asphalt facility is comprised only of any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler, systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems.

§ 60.91 Definitions

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

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

§ 60.92 Standard for particulate matter

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

(1) Contain particulate matter in excess of 90 mg/dscm (0.04 gr/dscf).

(2) Exhibit 20 percent opacity, or greater.

§ 60.93 Test methods and procedures

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

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

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

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Mailing Address: P.O. Box 357, Logansport, Indiana 46947
Part 70 Permit No.: T017-25207-03118

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:
Phone:
Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

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

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Mailing Address: P.O. Box 357, Logansport, Indiana 46947
Part 70 Permit No.: T017-25207-03118

This form consists of 2 pages **Page 1 of 2**

□ This is an emergency as defined in 326 IAC 2-7-1(12)

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

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

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

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

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

Part 70 Quarterly Report

Source Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Mailing Address: P.O. Box 357, Logansport, Indiana 46947
Part 70 Permit No.: T017-25207-03118
Facility: Production of stockpile mix (cold mix) asphalt
Parameter: Medium Cure Liquid Binder Usage
Limit: Cutback asphalt medium cure liquid binder usage shall be less than 215 tons of VOC solvent per twelve (12) consecutive month period

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: _____

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
PART 70 OPERATING PERMIT
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Mailing Address: P.O. Box 357, Logansport, Indiana 46947
Part 70 Permit No.: T017-25207-03118

Months: _____ to _____ Year: _____

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

□ 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:	

Page 2 of 2

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

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	**Central Paving, Inc.**
Source Location:	**2403 South County Road 150 East, Logansport, Indiana 46947-8008**
County:	**Cass**
SIC Code:	**2951**
Permit Renewal No.:	**T017-25207-03118**
Permit Reviewer:	**Stephanie Wilkerson**

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Central Paving, Inc. relating to the operation of a stationary batch-mix hot asphalt plant.

History

On August 28, 2007, Central Paving, Inc. submitted an application to the OAQ requesting to renew its operating permit. Central Paving, Inc. was issued a Part 70 Operating Permit on May 29, 2003. The source was initially issued a Federally Enforceable State Operating Permit (FESOP) on July 10, 1997.

Permitted Emission Units and Pollution Control Equipment

(a) One (1) asphalt dryer, identified as AD-01, capable of processing 150 tons per hour of raw material, equipped with one (1) natural gas or waste oil fired 42.27 million British thermal units (MMBtu) per hour burner;

(b) three (3) vibrating screens for classifying dried aggregate;

(c) one (1) mixer for mixing classified aggregate and liquid asphalt;

(d) one (1) baghouse for controlling particulate matter (PM and PM_{10}) emissions from the dryer and mixer, exhausting to stack SV1;

(e) one (1) aggregate conveyor with a maximum capacity of 150 tons per hour;

(f) one (1) 20,000-gallon liquid asphalt storage tank; and

(g) production of stockpile mix (cold mix) asphalt.

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

Insignificant Activities

(a) One (1) natural gas fired hot oil heater, with a maximum rated capacity of 2.115 MMBtu/hour;

(b) five (5) hopper bottom aggregate storage bins, each with a capacity of 20 tons;

(c) two (2) 10,000-gallon liquid asphalt storage tanks;

(d) 5% unpaved roads with public access and 95% paved roads [326 IAC 6-4];

(e) multiple aggregate storage piles with a total maximum storage capacity of 20,000 tons;

(f) one (1) natural gas-fired pre-heater for the asphalt dryer, with a maximum rated capacity of 0.3 MMBtu/hour; and

(g) one (1) 14,000-gallon waste oil storage tank, identified as AST-WO.

Existing Approvals

Since the issuance of Part 70 Operating Permit T017-15214-03118 on May 29, 2003, the source has constructed or has been operating under the following approvals as well:

(a) Administrative Amendment No. 017-17853-03118 issued on July 11, 2003;

(b) Administrative Amendment No. 017-20816-03118 issued on August 10, 2005;

(c) Significant Permit Modification No. 017-22251-03118 issued on February 1, 2006;

(d) Significant Source Modification No. 017-25206-03118 issued on December 31, 2007; and

(e) Significant Permit Modification No. 017-25235-03118 issued on January 16, 2008.

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

The following terms and conditions from previous approvals have been revised in this Part 70 Operating Permit Renewal:

(a) PSD Limits

(1) Previous permits have limited the particulate matter (PM) from the aggregate dryer/mixer using only the requirements of 40 CFR 60, Subpart I. In order to properly state the limits in the permit, a different PM limit has been established for the aggregate dryer/mixer to comply with PSD. When the source complies with the limit of 0.04 gr/dscf from Subpart I, it is also in compliance with the 0.315 lb/ton of asphalt produced limit established for PSD avoidance.

(2) In order to avoid PSD, the amount of VOC solvent used in the medium cure cutback has been reduced to 215 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. This limit, combined with the limited VOC emissions from other operations onsite will maintain VOC emissions below the 250 tons per year threshold for PSD.

(3) Based on information from the source, the limits for PM and PM_{10} are no longer necessary for the unpaved roads. These requirements have been removed from the permit.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Cass County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.
[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for $PM_{2.5}$.	

(a) Ozone Standards

(1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.

(2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, and St. Joseph Counties as attainment for the 8-hour ozone standard.

(3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph Counties as attainment for the 8-hour ozone standard.

(4) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Cass 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) $PM_{2.5}$
Cass County has been classified as unclassifiable or attainment for $PM_{2.5}$. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for $PM_{2.5}$ emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for $PM_{2.5}$ emissions, it has directed states to regulate PM_{10} emissions as a surrogate for $PM_{2.5}$ emissions.

(c) Other Criteria Pollutants
Cass 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.

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

Unrestricted Potential Emissions

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

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM, PM_{10}, VOC, and CO is greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants is less than 100 tons per year.

(c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-7, fugitive emissions are not counted toward the determination of Part 70 applicability.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2006 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	N/R
PM_{10}	2.0
SO_2	0.0
VOC	82
CO	2.0
NO_x	1.0
HAP	N/R

N/R = Not Reported

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, pursuant to which the source has to meet the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 permit renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential to Emit (tons/year)						
Process/ Emission Unit	**PM**	**PM_{10}**	**SO_2**	**VOC**	**CO**	**NO_X**	**HAPs (single/ combined)**
Dryer/Mixer	206.96	222.07	57.82	23.65	247.03	78.84	1.77 (xylenes)/ 5.10
Silo Filling/Load-out/On-site Yard	0.73	0.73	0.00	11.25	1.89	0.00	0.06 (formalde-hyde)/ 0.19
Hot Oil & Asphalt Heater	0.00	0.00	0.00	0.0003	0.09	0.00	0.0003 (naphthalene)/ 0.0003
Material Storage Piles	1.60	0.56	-	-	-	-	-
Material Processing & Handling	4.24	2.01	-	-	-	-	-
Material Crushing, Screening & Conveying	20.85	7.61	-	-	-	-	-
Paved & Unpaved Roads	14.00	2.73	-	-	-	-	-
Cold Mix Asphalt Production	-	-	-	215	-	-	0.67 (naphthalene)/ 0.7
Volatile Organic Storage Vessels	-	-	-	neg.	-	-	neg.
Total	**248.38**	**235.70**	**57.82**	**249.91**	**249.02**	**78.84**	**1.77 (xylenes)/ 5.99**
Major Source Threshold	**250**	**250**	**250**	**250**	**250**	**250**	**10/25**

Neg. = negligible

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

Federal Rule Applicability

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to existing emission units that involve a pollutant-specific emission unit and meet the following criteria:

(1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each existing emission unit and specified pollutant subject to CAM:

Emission Unit / Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Dryer/Mixer - PM	Y	Y	21,024	206.96	100	Y	N
Dryer/Mixer - PM_{10}	Y	Y	2,956.5	222.07	100	Y	N
Silo Filling/Load-out/On-site Yard - PM/PM_{10}	N	N	0.73	0.73	100	N	N
Silo Filling/Load-out/On-site Yard - VOC	N	N	11.25	11.25	100	N	N
Hot Oil & Asphalt Heater - VOC	N	N	0.0003	0.0003	100	N	N
Material Storage Piles - PM/PM_{10}	N	N	2.16	2.16	100	N	N
Material Processing & Handling - PM/PM_{10}	N	N	6.25	6.25	100	N	N
Material Crushing, Screening & Conveying - PM/PM_{10}	N	N	28.46	28.46	100	N	N
Paved & Unpaved Roads - PM/PM_{10}	N	N	16.76	16.76	100	N	N
Cold Mix Asphalt Production - VOC	N	Y	13,153.14	215.00	100	N	N
Volatile Organic Storage Vessels - VOC	N	N	negligible	negligible	100	N	N

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to the asphalt dryer/mixer for PM and PM_{10} upon issuance of the Title V Renewal. A CAM plan will be incorporated into this Part 70 permit renewal.

(b) This source is subject to the New Source Performance Standard for Hot Mix Asphalt Facilities (40 CFR 60, Subpart I), which is incorporated by reference as 326 IAC 12. This source was constructed before the applicability date of June 11, 1973, but it was modified in 2001, making the requirements of this Subpart applicable.

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

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

(c) The three (3) liquid asphalt storage tanks either have capacities less than 75 cubic meters (75 m^3) or store a liquid with a true vapor pressure of less than fifteen kilopascals (15 kPa), rendering them not subject to the New Source Performance Standard for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 (40 CFR 60, Subpart Kb), which is incorporated by reference as 326 IAC 12. Therefore, these requirements are not included in this permit.

(d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Asphalt Processing and Asphalt Roofing Manufacturing, Subpart LLLLL are not included in the permit for the source. This source does not perform asphalt flux preparation, does not manufacture asphalt roofing products, and is not a major source of hazardous air pollutants (HAPs). Therefore, the requirements of 40 CFR 63, Subpart LLLLL, do not apply to this source.

State Rule Applicability - Entire Source

326 IAC 1-5-2 (Emergency Reduction Plans)
This source is subject to the requirements of 326 IAC 1-5-2 (Emergency Reduction Plans). In accordance with those requirements, the source submitted an Emergency Reduction Plan to IDEM, OAQ, on September 23, 2003.

326 IAC 2-2 (Prevention of Significant Deterioration)
The Permittee has agreed to limit the emissions of PM, PM_{10}, VOC, and CO to less than 250 tons per year. Therefore, this source is not subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration).

(a) The potential to emit PM from the aggregate dryer/mixer shall be limited to less than 0.315 pounds per ton of asphalt produced. This will limit the sourcewide potential to emit PM to less than 250 tons per year. Therefore, 326 IAC 2-2 does not apply.

(b) The potential to emit PM_{10} from the aggregate dryer/mixer shall be limited to less than 0.338 pounds per ton of asphalt produced. This will limit the sourcewide potential to emit PM_{10} to less than 250 tons per year. Therefore, 326 IAC 2-2 does not apply.

(c) The potential to emit CO from the aggregate dryer/mixer shall be limited to less than 0.376 pounds per ton of asphalt produced. This will limit the sourcewide potential to emit CO to less than 250 tons per year. Therefore, 326 IAC 2-2 does not apply.

(d) This source has chosen to only use medium cure cutback or emulsified asphalt. The amount of VOC solvent used in medium cure cutback asphalt shall be limited to less than 215.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month; and the cut back asphalt medium cure shall contain a maximum of 28.6% of the liquid binder by weight of VOC solvent and 70% by weight of VOC solvent evaporating. This will limit the potential to emit of VOC from cutback and emulsified asphalt usage to less than 215.0 tons per year, and the total source potential to emit of

VOC to less than 250.0 tons per year, including the heater, the aggregate dryer burner, storage, silo filling, and load out. Thus, 326 IAC 2-2 does not apply.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)
After applicable limits, this source does not have potential HAP emissions greater than ten (10) tons of a single HAP or twenty-five (25) tons of a combination of HAPs per year, and thus is not a major source of HAPs. Therefore, the requirements of 326 IAC 2-4.1 do not apply.

326 IAC 2-6 (Emission Reporting)
This source is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit under 326 IAC 2-7, Part 70 program. Pursuant to this rule, the Permittee shall submit an emission statement certified pursuant to the requirements of 326 IAC 2-6. Because the source does not have a potential to emit greater than the thresholds given in 326 IAC 2-6-3(a)(1), and is not located in Lake, Porter, or LaPorte Counties, the source shall submit an emissions report on a triennial basis, rather than an annual basis.

(a) In accordance with the compliance schedule specified in 326 IAC 2-6-3, an emission statement must be submitted triennially by July 1 beginning in 2004 and every 3 years after. Therefore, the next emission statement for this source must be submitted by July 1, 2010. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

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

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

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

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

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
Pursuant to 326 IAC 6-5, for any new source which has not received all the necessary preconstruction approvals before December 13, 1985, a fugitive dust control plan must be submitted, reviewed, and approved. The source was issued an Operation Permit (#99-08-88-3118) on August 29, 1984; therefore this source is not subject to 326 IAC 6-5 for fugitive particulate matter emissions.

State Rule Applicability – Individual Facilities

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to the applicability determination in 326 IAC 6-3-1(c), the requirements of 326 IAC 6-3 do not apply to the hot-mix asphalt operations at this source because the particulate matter emission limit required in 326 IAC 12 (as the incorporation of the New Source Performance Standard for Hot Mix Asphalt Facilities, 40 CFR 60, Subpart I) is more stringent than the particulate limitation required by 326 IAC 6-3, as follows:

(a) *Particulate limit from 326 IAC 6-3-2:*
Particulate from the aggregate dryer burner shall be limited to 55.44 pounds per hour when operating at a process weight rate of 150 tons per hour. Interpolation and

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

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

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

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

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)
The aggregate dryer/mixer is subject to the requirements of 326 IAC 7-1.1 (Sulfur Dioxide Emissions) because the uncontrolled potential to emit of SO_2 is greater than 25 tons per year.

(a) Pursuant to 326 IAC 7-1.1-2, the sulfur content of the residual oil (waste oil) used in the aggregate dryer/mixer shall not exceed 1.6 pounds per MMBtu. This equates to a fuel oil sulfur content limit of 1.6%.

(b) The hot oil heater and the pre-heater for the asphalt dryer are not subject to the requirements of this rule because potential SO_2 emissions from these units are less than 25 tons per year.

326 IAC 7-2 (Sulfur Dioxide Emission Compliance)
(a) The aggregate dryer/mixer is subject to the requirements of 326 IAC 7-1.1. As such, and pursuant to 326 IAC 7-1.1-1, the source shall comply with the compliance determination requirements in 326 IAC 7-2:

(1) The Permittee shall submit to the commissioner the following reports based on fuel sampling and analysis data obtained in accordance with procedures specified under 326 IAC 3-7:

(A) Reports of calendar month average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate in pounds per MMBtu upon request.

(2) Compliance or noncompliance with the emission limitations contained in 326 IAC 7-1.1, 326 IAC 7-4, or 326 IAC 7-4.1 may be determined by a stack test conducted in accordance with 326 IAC 3-6 utilizing procedures outlined in 40 CFR 60, Appendix A, Method 6, 6A, 6C, or 8.

(3) Fuel sampling and analysis data shall be collected pursuant to the procedures specified in 326 IAC 3-7-4 for oil combustion, and these data may be used to determine compliance or noncompliance with the emission limitations contained in 326 IAC 7-1.1, 326 IAC 7-4, or 326 IAC 7-4.1. Computation of calculated sulfur dioxide emission rates from fuel sampling and analysis data shall be based on the emission factors contained in U.S. EPA publication AP-42 unless other emission factors based on site-specific sulfur dioxide measurements are approved by the commissioner and the U.S. EPA. Fuel sampling and analysis data shall be collected as follows:

(A) Compliance or noncompliance shall be determined using a calendar month average sulfur dioxide emission rate in pounds per MMBtu.

(b) The hot oil heater and pre-heater for the asphalt dryer are not subject to the requirements of this rule because these facilities are not subject to 326 IAC 7-1.1.

326 IAC 8-1-6 (BACT)
This source is not subject to the provisions of 326 IAC 8-1-6 because the use of cutback asphalt to manufacture stockpile mix, which is the only source of potential VOC emissions greater than 25 tons per year, is regulated by the provisions of 326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving). Therefore, it is not subject to the requirements of this rule.

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

(a) penetrating prime coating;

(b) stockpile storage;

(c) application during the months of November, December, January, February, and March.

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

Testing Requirements

The Permittee shall perform PM and PM_{10} testing in order to demonstrate compliance with the limits to avoid 326 IAC 2-2. This testing shall be repeated at least once every five years from the date of the last valid compliance demonstration. PM_{10} includes filterable and condensable PM_{10}.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

The compliance monitoring requirements are as follows:

Visible Emissions Notations

(a) Visible emission notations of the aggregate dryer/mixer stack exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) If abnormal emissions are observed, the Permittee shall take reasonable steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Excursions or Exceedances shall be considered a deviation from this permit.

Daily Monitoring of Baghouse Operational Parameters

(a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the aggregate dryer/mixer, at least once per day when the aggregate dryer/mixer is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions and Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

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

Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

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

These monitoring conditions are necessary because the baghouse for the aggregate dryer/mixer must operate properly to ensure compliance with 326 IAC 2-2 (Prevention of Significant Deterioration) and 326 IAC 12 (New Source Performance Standards).

Recommendation

The staff recommends to the Commissioner that the Part 70 Operating Permit Renewal be approved. This recommendation is based on the following facts and conditions:
Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on August 28, 2007. Additional information was received on February 28, 2008.

Conclusion

The operation of this stationary batch-mix hot asphalt plant shall be subject to the conditions of the attached Part 70 Operating Permit Renewal No. 017-25207-03118.

Appendix A: Emissions Calculations
Emission Summary

Company Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Permit Number: T017-25207-03118
Reviewer: Stephanie Wilkerson

Asphalt Plant Maximum Capacity

Maximum Hourly Asphalt Production =	150	ton/hr							
Maximum Annual Asphalt Production =	1,314,000	ton/yr							
Maximum Fuel Input Rate =	42	MMBtu/hr							
Equivalent Natural Gas Usage =	370	MMCF/yr							
Equivalent Used/Waste Oil Usage =	2,644,894	gal/yr, and	0.181	% sulfur	0.950	% ash	0.020	% chlorine,	0.011 % lead

Unlimited/Uncontrolled Emissions

	Unlimited/Uncontrolled Potential to Emit (tons/year)								
	Criteria Pollutants						Hazardous Air Pollutants		
Process Description	**PM**	**PM10**	**SO2**	**NOx**	**VOC**	**CO**	**Total HAPs**	**Worst Case HAP**	
Ducted Emissions									
Fuel Combustion (worst case)	80.40	64.07	35.26	25.13	1.32	15.55	3.24	1.75	(hydrogen chloride)
Dryer/Mixer and Batch Tower	21024.00	2956.50	57.82	78.84	23.65	262.80	5.10	1.77	(xylenes)
Worst Case Emissions	**21024.00**	**2956.50**	**57.82**	**78.84**	**23.65**	**262.80**	**5.10**	**1.77**	(hydrogen chloride)
Fugitive Emissions									
Asphalt Load-Out, Silo Filling, On-Site Yard	0.73	0.73	0	0	11.25	1.89	0.19	0.06	(formaldehyde)
Hot Oil and Asphalt Heaters	0	0	0	0	2.7E-04	0.09	2.7E-04	2.7E-04	(naphthalene)
Material Storage Piles	1.60	0.56	0	0	0	0	0	0	
Material Processing and Handling	4.24	2.01	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	20.85	7.61	0	0	0	0	0	0	
Paved and Unpaved Roads (worst case)	14.03	2.73	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	13153.14	0	42.79	40.77	(naphthalene)
Volatile Organic Liquid Storage Vessels	0	0	0	0	negl.	0	negl.	negl.	
Total Fugitive Emissions	**41.45**	**13.64**	**0**	**0**	**13164.39**	**1.99**	**42.98**	**40.83**	(naphthalene)
Totals Unlimited/Uncontrolled PTE	**21065.45**	**2970.14**	**57.82**	**78.84**	**13188.05**	**264.79**	**48.08**	**40.83**	(naphthalene)

negl = negligible

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

Company Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Permit Number: T017-25207-03118
Reviewer: Stephanie Wilkerson

The following calculations determine the Unlimited/Uncontrolled emissions created from the combustion of natural gas and used/waste oil in the dryer/mixer and all other fuel combustion sources at the source.

Asphalt Plant Maximum Capacity

Maximum Annual Asphalt Production =	1,314,000	ton/yr							
Maximum Fuel Input Rate =	42	MMBtu/hr							
Equivalent Natural Gas Usage =	370	MMCF/yr							
Equivalent Used/Waste Oil Usage =	2,644,894	gal/yr, and	0.2	% sulfur	0.95	% ash	0.020	% chlorine,	0.011 % lead

Unlimited/Uncontrolled Emissions

	Emission Factor (units)		Unlimited/Uncontrolled Potential to		
Criteria Pollutant	Natural Gas (lb/MMCF)	Used/ Waste Oil (lb/kgal)	Natural Gas (tons/yr)	Used/ Waste Oil (tons/yr)	**Worse Case Fuel (tons/yr)**
PM	1.9	60.8	0.35	80.40	**80.4048**
PM10	7.6	48.45	1.41	64.07	**64.07**
SO2	0.6	26.7	0.11	35.26	**35.26**
NOx	100	19.0	18.51	25.13	**25.13**
VOC	5.5	1.0	1.02	1.32	**1.32**
CO	84	5.0	15.551978	6.61	**15.55**
Hazardous Air Pollutant					
HCl		1.3		1.75	**1.75**
Antimony		negl		negl	**0.0E+00**
Arsenic	2.0E-04	1.1E-01	3.7E-05	1.45E-01	**1.5E-01**
Beryllium	1.2E-05	negl	2.2E-06	negl	**2.2E-06**
Cadmium	1.1E-03	9.3E-03	2.0E-04	1.23E-02	**1.2E-02**
Chromium	1.4E-03	2.0E-02	2.6E-04	2.64E-02	**2.6E-02**
Cobalt	8.4E-05	2.1E-04	1.6E-05	2.78E-04	**2.8E-04**
Lead	5.0E-04	0.605	9.3E-05	8.0E-01	**0.80**
Manganese	3.8E-04	6.8E-02	7.0E-05	8.99E-02	**0.09**
Mercury	2.6E-04		4.8E-05		**4.8E-05**
Nickel	2.1E-03	1.1E-02	3.9E-04	1.45E-02	**0.015**
Selenium	2.4E-05	negl	4.4E-06	negl	**4.4E-06**
1.1.1-Trichloroethane					**0.0E+00**
1,3-Butadiene					**0.0E+00**
Acetaldehyde					**0.0E+00**
Acrolein					**0.0E+00**
Benzene	2.1E-03		3.9E-04		**3.9E-04**
Bis(2-ethylhexyl)phthalate		2.2E-03		2.91E-03	**2.9E-03**
Dichlorobenzene	1.2E-03	8.0E-07	2.2E-04	1.06E-06	**2.2E-04**
Ethylbenzene					**0.0E+00**
Formaldehyde	7.5E-02		1.4E-02		**0.014**
Hexane	1.8E+00		0.33		**0.333**
Phenol		2.4E-03		3.17E-03	**3.2E-03**
Toluene	3.4E-03		6.3E-04		**6.3E-04**
Total PAH Haps	negl	3.9E-02	negl	5.17E-02	**5.2E-02**
Polycyclic Organic Matter					**0.0E+00**
Xylene					**0.0E+00**
		Total HAPs	**0.35**	**2.89**	**3.24**

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
Sources of AP-42 Emission Factors for fuel combution:
Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
Waste Oil: AP-42 Chapter 1.11 (dated 10/96), Tables 1.11-1, 1.11-2, 1.11-3, 1.11-4, and 1.11-5

Abbreviations

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

Appendix A: Emissions Calculations
Dryer/Mixer and Batch Tower
Volatile Organic Compounds and Hazardous Air Pollutants

Company Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Permit Number: T017-25207-03118
Reviewer: Stephanie Wilkerson

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

Maximum Annual Asphalt Production = 1,314,000 ton/yr

	Uncontrolled Emission Factors (lb/ton)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
	Batch-Mix Plant (dryer, hot screens, and mixer)		Batch-Mix Plant (dryer, hot screens, and mixer)		
Criteria Pollutant*	Natural Gas	Waste Oil	Natural Gas	Waste Oil	**Worse Case PTE**
PM	32	32	21024	21024	**21024**
PM10	4.5	4.5	2956.5	2956.5	**2956.5**
SO2	0.0046	0.088	3.0	57.8	**57.82**
NOx	0.025	0.12	16.4	78.8	**78.8**
VOC	0.0082	0.036	5.4	23.7	**23.7**
CO	0.4	0.4	262.8	262.8	**262.8**
Hazardous Air Pollutant					
Arsenic	4.60E-07	4.60E-07	3.02E-04	3.02E-04	**3.02E-04**
Beryllium	1.50E-07	1.50E-07	9.86E-05	9.86E-05	**9.86E-05**
Cadmium	6.10E-07	6.10E-07	4.01E-04	4.01E-04	**4.01E-04**
Chromium	5.70E-07	5.70E-07	3.74E-04	3.74E-04	**3.74E-04**
Lead	8.90E-07	1.00E-05	5.85E-04	6.57E-03	**6.57E-03**
Manganese	6.90E-06	6.90E-06	4.53E-03	4.53E-03	**4.53E-03**
Mercury	4.10E-07	4.10E-07	2.69E-04	2.69E-04	**2.69E-04**
Nickel	3.00E-06	3.00E-06	1.97E-03	1.97E-03	**1.97E-03**
Selenium	4.90E-07	4.90E-07	3.22E-04	3.22E-04	**3.22E-04**
Acetaldehyde	3.20E-04	3.20E-04	0.21	0.21	**0.21**
Benzene	2.80E-04	2.80E-04	0.18	0.18	**0.18**
Ethylbenzene	2.20E-03	2.20E-03	1.45	1.45	**1.45**
Formaldehyde	7.40E-04	7.40E-04	0.49	0.49	**0.49**
Quinone	2.70E-04	2.70E-04	0.18	0.18	**0.18**
Toluene	1.00E-03	1.00E-03	0.66	0.66	**0.66**
Total PAH Haps	1.10E-04	2.30E-04	0.07	0.15	**0.15**
Xylene	2.70E-03	2.70E-03	1.77	1.77	**1.77**
			Total HAPs		**5.10**
			Worst Single HAP		**1.77** **(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, 11.1-5, 11.1-6, 11.1-9, and 11.1-11
*Emission of PM, PM10, SO2, NOx, and, CO from Batch-Mix Plants are included with the emission calculations for fuel combustior

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

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

Company Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Permit Number: T017-25207-03118
Reviewer: Stephanie Wilkerson

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 =	1,314,000	tons/yr

	Emission Factor (lb/ton asphalt)			Unlimited/Uncontrolled Potential to Emit (tons/yr)			
Pollutant	**Load-Out**	**Silo Filling**	**On-Site Yard**	**Load-Out**	**Silo Filling**	**On-Site Yard**	**Total**
Total PM	5.2E-04	5.9E-04	NA	0.34	0.38	NA	**0.73**
Organic PM	3.4E-04	2.5E-04	NA	0.22	0.167	NA	**0.39**
TOC	0.004	0.012	0.001	2.73	8.01	0.723	**11.5**
CO	0.001	0.001	3.5E-04	0.89	0.775	0.231	**1.89**

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

PM/HAPs	**0.016**	**0.019**	**0**	**0.035**
VOC/HAPs	**0.040**	**0.102**	**0.011**	**0.153**
non-VOC/HAPs	**2.1E-04**	**2.2E-05**	**5.6E-05**	**2.9E-04**
non-VOC/non-HAPs	**0.20**	**0.11**	**0.05**	**0.36**

Total VOCs	**2.57**	**8.01**	**0.7**	**11.3**
Total HAPs	**0.06**	**0.12**	**0.011**	**0.19**
			Worst Single HAP	**0.058 (formaldehyde)**

Methodology

Unlimited/Uncontrolled Potential to Emit (tons/yr) = (Maximum Annual Asphalt Production (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-14, 11.1-15, and 11.1-16
Plant Load-Out Emission Factor Equations (AP-42 Table 11.1-14)::

Total PM/PM10 Ef = 0.000181 + 0.00141(-V)e^((0.0251)(T+460)-20.43)
Organic PM Ef = 0.00141(-V)e^((0.0251)(T+460)-20.43)
TOC Ef = 0.0172(-V)e^((0.0251)(T+460)-20.43)
CO Ef = 0.00558(-V)e^((0.0251)(T+460)-20.43)

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

PM/PM10 Ef = 0.000332 + 0.00105(-V)e^((0.0251)(T+460)-20.43)
Organic PM Ef = 0.00105(-V)e^((0.0251)(T+460)-20.43)
TOC Ef = 0.0504(-V)e^((0.0251)(T+460)-20.43)
CO Ef = 0.00488(-V)e^((0.0251)(T+460)-20.43)

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

Abbreviations

TOC = Total Organic Compounds
CO = Carbon Monoxide
PM = Particulate Matter
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound

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

Company Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Permit Number: T017-25207-03118
Reviewer: Stephanie Wilkerson

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%	5.8E-04	7.8E-04	NA	1.4E-03
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	6.3E-05	2.3E-05	NA	8.6E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	1.6E-04	2.2E-04	NA	3.7E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	4.3E-05	9.3E-05	NA	1.4E-04
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	1.7E-05	0	NA	1.7E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	4.9E-06	0	NA	4.9E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	4.3E-06	0	NA	4.3E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	5.2E-06	0	NA	5.2E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	1.7E-05	1.6E-05	NA	3.3E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	2.3E-04	3.5E-04	NA	5.8E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	8.3E-07	0	NA	8.3E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	1.1E-04	2.5E-04	NA	3.6E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	1.7E-03	1.7E-03	NA	3.4E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	1.1E-06	0	NA	1.1E-06
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	5.3E-03	8.8E-03	NA	0.014
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	2.8E-03	3.0E-03	NA	5.8E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	4.9E-05	5.0E-05	NA	9.9E-05
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	1.8E-03	3.0E-03	NA	4.8E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	3.4E-04	7.3E-04	NA	1.1E-03
Total PAH HAPs							**0.013**	**0.019**	**NA**	**0.032**
Other semi-volatile HAPs										
Phenol		PM/HAP	---	Organic PM	1.18%	0	2.6E-03	0	0	2.6E-03

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

Methodology

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

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

Abbreviations

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

Appendix A: General Asphalt FESOP Emissions Calculations
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%	**2.57**	**8.01**	**0.68**	**11.25**
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	1.8E-01	2.1E-02	4.7E-02	0.245
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	1.3E-03	4.4E-03	3.3E-04	0.006
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	1.9E-02	8.8E-02	5.1E-03	0.113
Total non-VOC/non-HAPS					7.30%	1.40%	**0.199**	**0.112**	**0.053**	**0.36**
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	1.4E-03	2.6E-03	3.8E-04	4.4E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	2.6E-04	3.9E-04	6.9E-05	7.2E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	1.3E-03	3.1E-03	3.5E-04	4.8E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	3.6E-04	1.3E-03	9.4E-05	1.7E-03
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	5.7E-06	3.2E-04	1.5E-06	3.3E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	4.1E-04	1.8E-03	1.1E-04	2.4E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	3.0E-03	0	7.9E-04	3.8E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	7.7E-03	3.0E-03	2.0E-03	0.013
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	2.4E-03	5.5E-02	6.4E-04	0.058
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	4.1E-03	8.0E-03	1.1E-03	0.013
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	4.9E-05	2.5E-05	1.3E-05	8.7E-05
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	2.2E-05	0	2.2E-05
MTBE	1634-04-4	VOC/HAP	---	TOC	0	0	0	0	0	0
Styrene	100-42-5	VOC/HAP	---	TOC	0.0073%	0.0054%	2.0E-04	4.3E-04	5.3E-05	6.8E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	2.1E-04	0	5.6E-05	2.7E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	5.7E-03	5.0E-03	1.5E-03	0.012
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	3.6E-05	0	9.4E-06	4.5E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	1.1E-02	1.6E-02	3.0E-03	0.030
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	2.2E-03	4.6E-03	5.8E-04	7.3E-03
Total volatile organic HAPs					1.50%	1.30%	**0.041**	**0.104**	**0.011**	**0.156**

Methodology

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

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

Abbreviations

TOC = Total Organic Compounds

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

MTBE = Methyl tert butyl ether

Appendix A: Emissions Calculations
Hot Oil and Asphalt Heaters

Company Name: **Central Paving, Inc.**
Source Address: **2403 South County Road 150 East, Logansport, Indiana 46947-8008**
Permit Number: **T017-25207-03118**
Reviewer: **Stephanie Wilkerson**

The following calculations determine the unlimited/uncontrolled fugitive emissions from the hot oil and asphalt heaters

Maximum Fuel Input Rate =	2.4	MMBtu/hr
Equivalent Natural Gas Usage =	21.1	MMCF/yr

	Emission Factors	Unlimited/Uncontrolled Potential to Emit (tons/yr)	
Criteria Pollutant	Natural Gas (lb/ft3)	Natural Gas	**Worse Case PTE**
VOC	2.60E-08	2.75E-04	**0.000**
CO	8.90E-06	0.094	**0.094**
Hazardous Air Pollutant			
Formaldehyde:	2.60E-08	2.75E-04	**2.75E-04**
Acenaphthene			**0.00E+00**
Acenaphthylene			**0.00E+00**
Anthracene			**0.00E+00**
Benzo(b)fluoranthene			**0.00E+00**
Fluoranthene			**0.00E+00**
Fluorene			**0.00E+00**
Naphthalene			**0.00E+00**
Phenanthrene			**0.00E+00**
Pyrene			**0.00E+00**
		Total HAPs	**2.75E-04**
		Worst Single HAP	**2.75E-04** **(Formaldehyde)**

Methodology

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

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

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

Abbreviations

CO = Carbon Monoxide

VOC = Volatile Organic Compound

Appendix A: Emissions Calculations
Material Storage Piles

Company Name: **Central Paving, Inc.**
Source Address: **2403 South County Road 150 East, Logansport, Indiana 46947-8008**
Permit Number: **T017-25207-03118**
Reviewer: **Stephanie Wilkerson**

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.

Ef = 1.7*(s/1.5)*(365-p)/235*(f/15)
where Ef = 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 (tons/yr)
Limestone	1.6	1.85	0.75	0.253	0.089
Sand	2.6	3.01	0.75	0.412	0.144
RAP	0.5	0.58	0.75	0.079	0.028
Gravel	1.6	1.85	0.75	0.253	0.089
Slag	3.8	4.40	0.75	0.602	0.211
			Totals	**1.60**	**0.56**

Methodology
PTE of PM (tons/yr) = (Emission Factor (lb/acre/day)) * (Maximum Pile Size (acres)) * (ton/2000 lbs) * (8760 hours/yr)
PTE of PM10 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%
*Silt content values obtained from AP-42 Table 13.2.4-1 (dated 1/95)
**Maximum pile size (acres) anticipated for a source with an annual asphalt production of 1,314,000 tons/yr

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

Appendix A: Emissions Calculations
Material Processing and Handling
Fugitive Dust

Company Name: **Central Paving, Inc.**
Source Address: **2403 South County Road 150 East, Logansport, Indiana 46947-8008**
Permit Number: **T017-25207-03118**
Reviewer: **Stephanie Wilkerson**

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

To estimate potential fugitive dust emissions from processing and hangling 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.

Ef = k*(0.0032)*[(U/5)^1.3 / (M/2)^1.4]

where: Ef = Emission factor (lb/ton)

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

Maximum Annual Asphalt Production =	1,314,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	1,248,300	tons/yr

Type of Activity	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM10 (tons/yr)
Truck unloading of materials into storage piles	1.41	0.67
Front-end loader dumping of materials into feeder bins	1.41	0.67
Conveyor dropping material into dryer/mixer or batch tower	1.41	0.67
Total (tons/yr)	**4.24**	**2.01**

Methodology

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

Material Screening and Conveying (AP-42 Section 11.19.2)

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

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM10 (lbs/ton)*	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM10 (tons/yr)
Crushing	0.0054	0.0024	3.37	1.50
Screening	0.025	0.0087	15.60	5.43
Conveying	0.003	0.0011	1.87	0.69
Limited Potential to Emit (tons/yr) =			**20.85**	**7.61**

Appendix A: Emissions Calculations
Fugitive Dust Emissions - Unpaved Roads

Company Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Permit Number: T017-25207-03118
Reviewer: Stephanie Wilkerson

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 =	1,314,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	1,248,300	tons/yr
Maximum Asphalt Cement/Binder Throughput =	65,700	tons/yr
Maximum Waste Oil Usage =	2,644,894	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	23.0	22.0	45	5.7E+04	2.6E+06	61	0.012	652.8
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	23.0	0	23.0	5.7E+04	1.3E+06	61	0.012	652.8
Aspalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	26.0	22.0	48.0	3.0E+03	1.4E+05	61	0.012	34.4
Aspalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	26.0	0	26.0	3.0E+03	7.8E+04	61	0.012	34.4
Waste Oil Truck Enter Full	Tanker truck (6000 gal)	26.0	22.0	48.0	4.1E+02	2.0E+04	61	0.012	4.7
Waste Oil Truck Leave Empty	Tanker truck (6000 gal)	26.0	0	26.0	4.1E+02	1.1E+04	61	0.012	4.7
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.0	19.0	3.1E+05	5.9E+06	15	0.003	886.6
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	3.1E+05	4.7E+06	15	0.003	886.6
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	23.0	24.0	47.0	5.5E+04	2.6E+06	61	0.012	629.9
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	23.0	0	23.0	5.5E+04	1.3E+06	61	0.012	629.9
	Total				**8.5E+05**	**1.9E+07**			**4.4E+03**

Average Vehicle Weight Per Trip =	21.7	tons/trip
Average Miles Per Trip =	0.005	miles/trip

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

	PM	PM10	
where k =	4.9	1.5	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)
a =	0.7	0.9	= constant (AP-42 Table 13.2.2-2)
W =	21.7	21.7	tons = average vehicle weight (provided by source)
b =	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [(365 - P)/365]
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	
Unmitigated Emission Factor, Ef =	6.29	1.60	lb/mile
Mitigated Emission Factor, Eext =	4.14	1.05	lb/mile
Dust Control Efficiency =	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	2.05	0.52	1.35	0.34	0.67	0.17
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	2.05	0.52	1.35	0.34	0.67	0.17
Aspalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.108	0.028	0.071	0.018	0.036	0.009
Aspalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.108	0.028	0.071	0.018	0.036	0.009
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.015	0.004	0.010	0.002	0.005	0.001
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.015	0.004	0.010	0.002	0.005	0.001
Aggregate/RAP Loader Full	Front-end loader (3 CY)	2.79	0.71	1.83	0.47	0.92	0.23
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	2.79	0.71	1.83	0.47	0.92	0.23
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	1.98	0.50	1.30	0.33	0.65	0.17
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	1.98	0.50	1.30	0.33	0.65	0.17
	Totals	**13.89**	**3.54**	**9.13**	**2.33**	**4.57**	**1.16**

Methodology

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

Abbreviations

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

Appendix A: Emissions Calculations
Fugitive Dust Emissions - Paved Roads

Company Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Permit Number: T017-25207-03118
Reviewer: Stephanie Wilkerson

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 =	1,314,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	1,248,300	tons/yr
Maximum Asphalt Cement/Binder Throughput =	65,700	tons/yr
Maximum Waste Oil Usage =	2,644,894	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per day (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	23.0	22.0	45.00	5.7E+04	2.6E+06	1154	0.219	12401.3
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	23.0	0	23.00	5.7E+04	1.3E+06	1154	0.219	12401.3
Aspalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	26.0	22.0	48.00	3.0E+03	1.4E+05	1154	0.219	652.7
Aspalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	26.0	0	26.00	3.0E+03	7.8E+04	1154	0.219	652.7
Waste Oil Truck Enter Full	Tanker truck (6000 gal)	26.0	22.0	48.00	4.1E+02	2.0E+04	1154	0.219	88.8
Waste Oil Truck Leave Empty	Tanker truck (6000 gal)	26.0	0	26.00	4.1E+02	1.1E+04	1154	0.219	88.8
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.0	19.00	3.1E+05	5.9E+06	286	0.054	16904.1
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	3.1E+05	4.7E+06	286	0.054	16904.1
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	23.0	24.0	47.00	5.5E+04	2.6E+06	1154	0.219	11966.2
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	23.0	0	23.00	5.5E+04	1.3E+06	1154	0.219	11966.2
	Total				**8.5E+05**	**1.9E+07**			**8.4E+04**

Average Vehicle Weight Per Trip =	21.7	tons/trip
Average Miles Per Trip =	0.098	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	
where k =	0.082	0.016	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	21.7	21.7	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-
sL =	0.6	0.6	g/m^2 = Ubitiguous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summe

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	
Unmitigated Emission Factor, Ef =	0.73	0.14	lb/mile
Mitigated Emission Factor, Eext =	0.67	0.13	lb/mile
Dust Control Efficiency =	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	4.53	0.88	4.14	0.81	2.07	0.40
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	4.53	0.88	4.14	0.81	2.07	0.40
Aspalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.238	0.046	0.218	0.042	0.109	2.1E-02
Aspalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.238	0.046	0.218	0.042	0.109	2.1E-02
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	3.2E-02	6.3E-03	3.0E-02	5.8E-03	1.5E-02	2.9E-03
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	3.2E-02	6.3E-03	3.0E-02	5.8E-03	1.5E-02	2.9E-03
Aggregate/RAP Loader Full	Front-end loader (3 CY)	6.17	1.20	5.64	1.10	2.82	0.55
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	6.17	1.20	5.64	1.10	2.82	0.55
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	4.37	0.85	3.99	0.78	2.00	0.39
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	4.37	0.85	3.99	0.78	2.00	0.39
	Totals	**30.68**	**5.97**	**28.05**	**5.46**	**14.03**	**2.73**

Methodology

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

Abbreviations

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

Appendix A: Emissions Calculations
Cold Mix Asphalt Production and Stockpiles

Company Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Permit Number: T017-25207-03118
Reviewer: Stephanie Wilkerson

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

Maximum Annual Asphalt Production =	1,314,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Asphalt Cement/Binder Throughput =	65,700	tons/yr

Volatile Organic Compounds

	Maximum weight % of VOC solvent in binder	Weight % VOC solvent in binder that evaporates	Maximum VOC Solvent Usage (tons/yr)	PTE of VOC (tons/yr)
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	18790.2	13153.1
			Worst Case PTE of VOC =	**13153.1**

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	0.33%	
Worst Case Single HAP Content of VOC solvent (weight %)* =	0.3%	Naphthalene
PTE of Total HAPs (tons/yr) =	**42.79**	
PTE of Single HAP (tons/yr) =	**40.77**	**Naphthalene**

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

		Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents				
Volatile Organic HAP	CAS#	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% Xylenes**	**0.31% Naphthalene**	**0.50% Xylenes**	**0.23% Xylenes**	**0.07% Chrysene**

Methodology

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

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

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

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

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

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

Abbreviations

VOC = Volatile Organic Compounds

PTE = Potential to Emit

Appendix A: Emissions Calculations
Limited Emission Summary

Company Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Permit Number: T017-25207-03118
Reviewer: Stephanie Wilkerson

Asphalt Plant Limitations

Annual Asphalt Production Limitation =	1,314,000	ton/yr								
Natural Gas Limitation =	700	MMCF/yr								
Used/Waste Oil Limitation =	1,330,000	gal/yr, and	0.181	% sulfur	0.950	% ash	0.020	% chlorine,	0.011	% lead
PM Dryer/Mixer Limitation =	0.315	lb/ton of asphlt production								
PM10 Dryer/Mixer Limitation =	0.338	lb/ton of asphlt production								
CO Dryer/Mixer Limitation =	0.376	lb/ton of asphlt production								
VOC Dryer/Mixer Limitation =	0.036	lb/ton of asphlt production								
Cold Mix Asphalt VOC Usage Limitation =	346	tons/yr								

Limited/Controlled Emissions

	Limited/Controlled Potential Emissions (tons/year)								
	Criteria Pollutants						Hazardous Air Pollutants		
Process Description	**PM**	**PM10**	**SO2**	**NOx**	**VOC**	**CO**	**Total HAPs**	**Worst Case HAP**	
Ducted Emissions									
Fuel Combustion (worst case)	40.43	32.22	17.73	35.00	1.93	29.40	2.11	0.88	(hydrogen chloride)
Dryer/Mixer and Batch Tower	206.96	222.07	57.82	78.84	23.65	247.03	5.10	1.77	(xylenes)
Worst Case Emissions	**206.96**	**222.07**	**57.82**	**78.84**	**23.65**	**247.03**	**5.10**	**1.77**	(xylenes)
Fugitive Emissions									
Asphalt Load-Out, Silo Filling, On-Site Yard	0.73	0.73	0	0	11.25	1.89	0.19	0.06	(formaldehyde)
Hot Oil and Asphalt Heaters	0	0	0	0	2.7E-04	0.09	2.7E-04	2.7E-04	(naphthalene)
Material Storage Piles	1.60	0.56	0	0	0	0	0	0	
Material Processing and Handling	4.24	2.01	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	20.85	7.61	0	0	0	0	0	0	
Paved and Unpaved Roads (worst case)	14.00	2.73	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	215.00	0	0.70	0.67	(naphthalene)
Volatile Organic Liquid Storage Vessels	0	0	0	0	negl.	0	negl.	negl.	
Total Fugitive Emissions	**41.42**	**13.64**	**0**	**0**	**226.25**	**1.99**	**0.89**	**0.67**	(naphthalene)
Totals Limited/Controlled Emissions	**248.38**	**235.70**	**57.82**	**78.84**	**249.91**	**249.02**	**5.99**	**1.77**	(xylenes)

negl = negligible

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

Company Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Permit Number: T017-25207-03118
Reviewer: Stephanie Wilkerson

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

Production and Fuel Limitations

Annual Asphalt Production Limitation =	1,314,000	ton/yr							
Natural Gas Limitation =	700	MMCF/yr							
Used/Waste Oil Limitation =	1,330,000	gal/yr, and	0.2	% sulfur	0.95	% ash	0.020	% chlorine,	0.011	% lead

Limited Emissions

	Emission Factor (units)		Limited Potential to Emit (tons/yr)		
Criteria Pollutant	Natural Gas (lb/MMCF)	Used/ Waste Oil (lb/kgal)	Natural Gas (tons/yr)	Used/ Waste Oil (tons/yr)	**Worse Case Fuel (tons/yr)**
PM	1.9	60.8	0.67	40.43	**40.432**
PM10	7.6	48.45	2.66	32.22	**32.22**
SO2	0.6	26.7	0.21	17.73	**17.73**
NOx	100	19.0	35.00	12.64	**35.00**
VOC	5.5	1.0	1.93	0.67	**1.93**
CO	84	5.0	29.4	3.33	**29.40**
Hazardous Air Pollutant					
HCl		1.3		0.88	**0.88**
Antimony		negl		negl	**0.0E+00**
Arsenic	2.0E-04	1.1E-01	7.0E-05	7.32E-02	**7.3E-02**
Beryllium	1.2E-05	negl	4.2E-06	negl	**4.2E-06**
Cadmium	1.1E-03	9.3E-03	3.9E-04	6.18E-03	**6.2E-03**
Chromium	1.4E-03	2.0E-02	4.9E-04	1.33E-02	**1.3E-02**
Cobalt	8.4E-05	2.1E-04	2.9E-05	1.40E-04	**1.4E-04**
Lead	5.0E-04	0.605	1.8E-04	4.0E-01	**0.40**
Manganese	3.8E-04	6.8E-02	1.3E-04	4.52E-02	**0.05**
Mercury	2.6E-04		9.1E-05		**9.1E-05**
Nickel	2.1E-03	1.1E-02	7.4E-04	7.32E-03	**0.007**
Selenium	2.4E-05	negl	8.4E-06	negl	**8.4E-06**
1.1.1-Trichloroethane					**0.0E+00**
1,3-Butadiene					**0.0E+00**
Acetaldehyde					**0.0E+00**
Acrolein					**0.0E+00**
Benzene	2.1E-03		7.4E-04		**7.4E-04**
Bis(2-ethylhexyl)phthalate		2.2E-03		1.46E-03	**1.5E-03**
Dichlorobenzene	1.2E-03	8.0E-07	4.2E-04	5.32E-07	**4.2E-04**
Ethylbenzene					**0.0E+00**
Formaldehyde	7.5E-02		2.6E-02		**0.026**
Hexane	1.8E+00		0.63		**0.630**
Phenol		2.4E-03		1.60E-03	**1.6E-03**
Toluene	3.4E-03		1.2E-03		**1.2E-03**
Total PAH Haps	negl	3.9E-02	negl	2.60E-02	**2.6E-02**
Polycyclic Organic Matter					**0.0E+00**
Xylene					**0.0E+00**
		Total HAPs	**0.66**	**1.45**	**2.11**

Methodology

Natural Gas: Limited Potential to Emit (tons/yr) = (Natural Gas Limitation (MMCF/yr)) * (Emission Factor (lb/MMCF)) * (ton/2000 lbs)
All Other Fuels: Limited Potential to Emit (tons/yr) = (Fuel Limitation (gals/yr)) * (Emission Factor (lb/kgal)) * (kgal/1000 gal) * (ton/2000 lbs)
Sources of AP-42 Emission Factors for fuel combution:
Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
No. 2, No.4, and No.6 Fuel Oil: AP-42 Chapter 1.3 (dated 9/98), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11
Propane and Butane: AP-42 Chapter 1.5 (dated 10/96), Tables 1.5-1 (assuming PM = PM10)
Waste Oil: AP-42 Chapter 1.11 (dated 10/96), Tables 1.11-1, 1.11-2, 1.11-3, 1.11-4, and 1.11-5
Diesel Engine Oil: AP-42 Chapter 3.3 (dated 10/96), Tables 3.3-1 and 3.3-2

Abbreviations

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

Appendix A: Emissions Calculations
Limited Emissions
Dryer/Mixer and Batch Tower
Volatile Organic Compounds and Hazardous Air Pollutants

Company Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Permit Number: T017-25207-03118
Reviewer: Stephanie Wilkerson

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

Annual Asphalt Production Limitation =	1,314,000	ton/yr
PM Dryer/Mixer Limitation =	0.315	lb/ton of asphlt production
PM10 Dryer/Mixer Limitation =	0.338	lb/ton of asphlt production
CO Dryer/Mixer Limitation =	0.376	lb/ton of asphlt production
VOC Dryer/Mixer Limitation =	0.036	lb/ton of asphlt production

	Emission Factor or Limitation (lb/ton) (dryer, hot screens, and mixer, controlled by fabric filter)		Limited/Controlled Potential to Emit (tons/yr) Batch-Mix Plant (dryer, hot screens, and mixer, controlled by fabric filter)		
Criteria Pollutant*	Natural Gas	Waste Oil	Natural Gas	Waste Oil	**Worse Case PTE**
PM	0.32	0.315	207.0	207.0	**207.0**
PM10	0.34	0.338	222.1	222.1	**222.1**
SO2	0.0046	0.088	3.0	57.8	**57.8**
NOx	0.025	0.12	16.4	78.8	**78.8**
VOC	0.036	0.036	23.7	23.7	**23.7**
CO	0.38	0.376	247.0	247.0	**247.0**
Hazardous Air Pollutant					
Arsenic	4.60E-07	4.60E-07	3.02E-04	3.02E-04	**3.02E-04**
Beryllium	1.50E-07	1.50E-07	9.86E-05	9.86E-05	**9.86E-05**
Cadmium	6.10E-07	6.10E-07	4.01E-04	4.01E-04	**4.01E-04**
Chromium	5.70E-07	5.70E-07	3.74E-04	3.74E-04	**3.74E-04**
Lead	8.90E-07	1.00E-05	5.85E-04	6.57E-03	**6.57E-03**
Manganese	6.90E-06	6.90E-06	4.53E-03	4.53E-03	**4.53E-03**
Mercury	4.10E-07	4.10E-07	2.69E-04	2.69E-04	**2.69E-04**
Nickel	3.00E-06	3.00E-06	1.97E-03	1.97E-03	**1.97E-03**
Selenium	4.90E-07	4.90E-07	3.22E-04	3.22E-04	**3.22E-04**
Acetaldehyde	3.20E-04	3.20E-04	0.21024	0.21024	**0.21**
Benzene	2.80E-04	2.80E-04	0.18396	0.18396	**0.18**
Ethylbenzene	2.20E-03	2.20E-03	1.4454	1.4454	**1.45**
Formaldehyde	7.40E-04	7.40E-04	0.48618	0.48618	**0.49**
Quinone	2.70E-04	2.70E-04	0.17739	0.17739	**0.18**
Toluene	1.00E-03	1.00E-03	0.657	0.657	**0.66**
Total PAH Haps	1.10E-04	2.30E-04	0.07227	0.15111	**0.15**
Xylene	2.70E-03	2.70E-03	1.7739	1.7739	**1.7739**
			Total HAPs		**5.10**
			Worst Single HAP		**1.7739 (xylene)**

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, 11.1-5, 11.1-6, 11.1-9, and 11.1-11
*Emission of PM, PM10, SO2, NOx, and, CO from Batch-Mix Plants are included with the emission calculations for fuel combustion

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

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

Company Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Permit Number: T017-25207-03118
Reviewer: Stephanie Wilkerson

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

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.5	
Annual Asphalt Production Limitation =	1,314,000	tons/yr

	Emission Factor (lb/ton asphalt)			Limited Potential to Emit (tons/yr)			
Pollutant	**Load-Out**	**Silo Filling**	**On-Site Yard**	**Load-Out**	**Silo Filling**	**On-Site Yard**	**Total**
Total PM	5.2E-04	5.9E-04	NA	0.34	0.38	NA	**0.73**
Organic PM	3.4E-04	2.5E-04	NA	0.22	0.167	NA	**0.39**
TOC	0.004	0.012	0.001	2.73	8.01	0.723	**11.5**
CO	0.001	0.001	3.5E-04	0.89	0.775	0.231	**1.89**

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

PM/HAPs	**0.016**	**0.019**	**0**	**0.035**
VOC/HAPs	**0.040**	**0.102**	**0.011**	**0.153**
non-VOC/HAPs	**2.1E-04**	**2.2E-05**	**5.6E-05**	**2.9E-04**
non-VOC/non-HAPs	**0.20**	**0.11**	**0.05**	**0.36**

Total VOCs	**2.57**	**8.01**	**0.7**	**11.3**
Total HAPs	**0.06**	**0.12**	**0.011**	**0.19**
			Worst Single HAP	**0.058 (formaldehyde)**

Methodology

Limited Potential to Emit (tons/yr) = (Annual Asphalt Production Limitation (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-14, 11.1-15, and 11.1-16
Plant Load-Out Emission Factor Equations (AP-42 Table 11.1-14)::

Total PM/PM10 Ef = 0.000181 + 0.00141(-V)e^((0.0251)(T+460)-20.43)
Organic PM Ef = 0.00141(-V)e^((0.0251)(T+460)-20.43)
TOC Ef = 0.0172(-V)e^((0.0251)(T+460)-20.43)
CO Ef = 0.00558(-V)e^((0.0251)(T+460)-20.43)

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

PM/PM10 Ef = 0.000332 + 0.00105(-V)e^((0.0251)(T+460)-20.43)
Organic PM Ef = 0.00105(-V)e^((0.0251)(T+460)-20.43)
TOC Ef = 0.0504(-V)e^((0.0251)(T+460)-20.43)
CO Ef = 0.00488(-V)e^((0.0251)(T+460)-20.43)

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

Abbreviations

TOC = Total Organic Compounds
CO = Carbon Monoxide
PM = Particulate Matter
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound

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

Company Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Permit Number: T017-25207-03118
Reviewer: Stephanie Wilkerson

Organic Particulate-Based Compounds (Table 11.1-15)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Limited Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of Total Organic PM)	Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)	Load-out	Silo Filling	Onsite Yard	Total
PAH HAPs										
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	0.47%	5.8E-04	7.8E-04	NA	1.4E-03
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	6.3E-05	2.3E-05	NA	8.6E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	1.6E-04	2.2E-04	NA	3.7E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	4.3E-05	9.3E-05	NA	1.4E-04
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	1.7E-05	0	NA	1.7E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	4.9E-06	0	NA	4.9E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	4.3E-06	0	NA	4.3E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	5.2E-06	0	NA	5.2E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	1.7E-05	1.6E-05	NA	3.3E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	2.3E-04	3.5E-04	NA	5.8E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	8.3E-07	0	NA	8.3E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	1.1E-04	2.5E-04	NA	3.6E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	1.7E-03	1.7E-03	NA	3.4E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	1.1E-06	0	NA	1.1E-06
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	5.3E-03	8.8E-03	NA	0.014
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	2.8E-03	3.0E-03	NA	5.8E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	4.9E-05	5.0E-05	NA	9.9E-05
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	1.8E-03	3.0E-03	NA	4.8E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	3.4E-04	7.3E-04	NA	1.1E-03
Total PAH HAPs							**0.013**	**0.019**	**NA**	**0.032**
Other semi-volatile HAPs										
Phenol		PM/HAP	---	Organic PM	1.18%	0	2.6E-03	0	0	2.6E-03

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

Methodology

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

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

Abbreviations

PM = Particulate Matter

HAP = Hazardous Air Pollutant

POM = Polycyclic Organic Matter

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

Organic Volatile-Based Compounds (Table 11.1-16)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Limited Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of TOC)	Silo Filling and Asphalt Storage Tank (% by weight of TOC)	Load-out	Silo Filling	Onsite Yard	Total
VOC		VOC	---	TOC	94%	100%	**2.57**	**8.01**	**0.68**	**11.25**
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	1.8E-01	2.1E-02	4.7E-02	0.245
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	1.3E-03	4.4E-03	3.3E-04	0.006
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	1.9E-02	8.8E-02	5.1E-03	0.113
Total non-VOC/non-HAPS					7.30%	1.40%	**0.199**	**0.112**	**0.053**	**0.36**
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	1.4E-03	2.6E-03	3.8E-04	4.4E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	2.6E-04	3.9E-04	6.9E-05	7.2E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	1.3E-03	3.1E-03	3.5E-04	4.8E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	3.6E-04	1.3E-03	9.4E-05	1.7E-03
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	5.7E-06	3.2E-04	1.5E-06	3.3E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	4.1E-04	1.8E-03	1.1E-04	2.4E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	3.0E-03	0	7.9E-04	3.8E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	7.7E-03	3.0E-03	2.0E-03	0.013
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	2.4E-03	5.5E-02	6.4E-04	0.058
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	4.1E-03	8.0E-03	1.1E-03	0.013
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	4.9E-05	2.5E-05	1.3E-05	8.7E-05
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	2.2E-05	0	2.2E-05
MTBE	1634-04-4	VOC/HAP	---	TOC	0	0	0	0	0	0
Styrene	100-42-5	VOC/HAP	---	TOC	0.0073%	0.0054%	2.0E-04	4.3E-04	5.3E-05	6.8E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	2.1E-04	0	5.6E-05	2.7E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	5.7E-03	5.0E-03	1.5E-03	0.012
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	3.6E-05	0	9.4E-06	4.5E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	1.1E-02	1.6E-02	3.0E-03	0.030
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	2.2E-03	4.6E-03	5.8E-04	7.3E-03
Total volatile organic HAPs					1.50%	1.30%	**0.041**	**0.104**	**0.011**	**0.156**

Methodology

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

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

Abbreviations

TOC = Total Organic Compounds

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

MTBE = Methyl tert butyl ether

Appendix A: Emissions Calculations
Limited Emissions
Fugitive Dust Emissions - Material Processing and Handling

Company Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Permit Number: T017-25207-03118
Reviewer: Stephanie Wilkerson

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

To estimate potential fugitive dust emissions from processing and hangling 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.

Ef = k*(0.0032)*[(U/5)^1.3 / (M/2)^1.4]

where:

Ef =	Emission factor (lb/ton)	
k (PM) =	0.74	= particle size multiplier (0.74 assumed for aerodynamic diameter <=100 um)
k (PM10) =	0.35	= particle size multiplier (0.35 assumed for aerodynamic diameter <=10 um)
U =	10.2	= worst case annual mean wind speed (Source: NOAA, 2005*)
M =	4.0	= material % moisture content of aggregate (Source: AP-42 Section 11.1.1.1)
Ef (PM) =	2.27E-03	lb PM/ton of material handled
Ef (PM10) =	1.07E-03	lb PM10/ton of material handled

Annual Asphalt Production Limitation =	1,314,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	1,248,300	tons/yr

Type of Activity	Limited PTE of PM (tons/yr)	Limited PTE of PM10 (tons/yr)
Truck unloading of materials into storage piles	1.41	0.67
Front-end loader dumping of materials into feeder bins	1.41	0.67
Conveyor dropping material into dryer/mixer or batch tower	1.41	0.67
Total (tons/yr)	**4.24**	**2.01**

Methodology

Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
Limited Potential to Emit (tons/yr) = (Maximum Material Handling Throughput (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Raw materials may include limestone, sand, recycled asphalt pavement (RAP), gravel, slag, and other additivies
*Worst case annual mean wind speed (South Bend, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2005

Material Screening and Conveying (AP-42 Section 19.2.2)

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

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM10 (lbs/ton)*	Limited PTE of PM (tons/yr)	Limited PTE of PM10 (tons/yr)
Crushing	0.0054	0.0024	3.37	1.50
Screening	0.025	0.0087	15.60	5.43
Conveying	0.003	0.0011	1.87	0.69
Limited Potential to Emit (tons/yr) =			**20.85**	**7.61**

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

Company Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Permit Number: T017-25207-03118
Reviewer: Stephanie Wilkerson

Unpaved Roads at Industrial Site

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

Annual Asphalt Production Limitation =	1,314,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	1,248,300	tons/yr
Maximum Asphalt Cement/Binder Throughput =	65,700	tons/yr
Waste Oil Usage =	1,330,000	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	23.0	22.0	45	5.7E+04	2.6E+06	61	0.012	652.8
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	23.0	0	23.0	5.7E+04	1.3E+06	61	0.012	652.8
Aspalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	26.0	22.0	48.0	3.0E+03	1.4E+05	61	0.012	34.4
Aspalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	26.0	0	26.0	3.0E+03	7.8E+04	61	0.012	34.4
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	26.0	22.0	48.0	2.0E+02	9.8E+03	61	0.012	2.4
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	26.0	0	26.0	2.0E+02	5.3E+03	61	0.012	2.4
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.0	19.0	3.1E+05	5.9E+06	15	0.003	886.6
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	3.1E+05	4.7E+06	15	0.003	886.6
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	23.0	24.0	47.0	5.5E+04	2.6E+06	61	0.012	629.9
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	23.0	0	23.0	5.5E+04	1.3E+06	61	0.012	629.9
	Total				**8.5E+05**	**1.9E+07**			**4.4E+03**

Average Vehicle Weight Per Trip =	21.7	tons/trip
Average Miles Per Trip =	0.005	miles/trip

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

	PM	PM10	
where k =	4.9	1.5	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)
a =	0.7	0.9	= constant (AP-42 Table 13.2.2-2)
W =	21.7	21.7	tons = average vehicle weight (provided by source)
b =	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [(365 - P)/365]
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	
Unmitigated Emission Factor, Ef =	6.29	1.60	lb/mile
Mitigated Emission Factor, Eext =	4.13	1.05	lb/mile
Dust Control Efficiency =	50%	50%	

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	2.05	0.52	1.35	0.34	0.67	0.17
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	2.05	0.52	1.35	0.34	0.67	0.17
Aspalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.108	0.028	0.071	0.018	0.036	0.009
Aspalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.108	0.028	0.071	0.018	0.036	0.009
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.007	0.002	0.005	0.001	0.002	0.001
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.007	0.002	0.005	0.001	0.002	0.001
Aggregate/RAP Loader Full	Front-end loader (3 CY)	2.79	0.71	1.83	0.47	0.92	0.23
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	2.79	0.71	1.83	0.47	0.92	0.23
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	1.98	0.50	1.30	0.33	0.65	0.17
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	1.98	0.50	1.30	0.33	0.65	0.17
	Totals	**13.87**	**3.54**	**9.12**	**2.32**	**4.56**	**1.16**

Methodology

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

Abbreviations

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

Appendix A: Emissions Calculations
Limited Emissions
Fugitive Dust Emissions - Paved Roads

Company Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Permit Number: T017-25207-03118
Reviewer: Stephanie Wilkerson

Paved Roads at Industrial Site

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

Annual Asphalt Production Limitation =	1,314,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	1,248,300	tons/yr
Maximum Asphalt Cement/Binder Throughput =	65,700	tons/yr
Waste Oil Usage =	1,330,000	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per day (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	23.0	22.0	45.00	5.7E+04	2.6E+06	1154	0.219	12401.3
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	23.0	0	23.00	5.7E+04	1.3E+06	1154	0.219	12401.3
Aspalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	26.0	22.0	48.00	3.0E+03	1.4E+05	1154	0.219	652.7
Aspalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	26.0	0	26.00	3.0E+03	7.8E+04	1154	0.219	652.7
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	26.0	22.0	48.00	2.0E+02	9.8E+03	1154	0.219	44.7
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	26.0	0	26.00	2.0E+02	5.3E+03	1154	0.219	44.7
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.0	19.00	3.1E+05	5.9E+06	286	0.054	16904.1
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	3.1E+05	4.7E+06	286	0.054	16904.1
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	23.0	24.0	47.00	5.5E+04	2.6E+06	1154	0.219	11966.2
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	23.0	0	23.00	5.5E+04	1.3E+06	1154	0.219	11966.2
	Total				**8.5E+05**	**1.9E+07**			**8.4E+04**

Average Vehicle Weight Per Trip =	21.7	tons/trip
Average Miles Per Trip =	0.098	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	
where k =	0.082	0.016	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	21.7	21.7	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-
sL =	0.6	0.6	g/m^2 = Ubitiguous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summe

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	
Unmitigated Emission Factor, Ef =	0.73	0.14	lb/mile
Mitigated Emission Factor, Eext =	0.67	0.13	lb/mile
Dust Control Efficiency =	50%	50%	

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	4.53	0.88	4.14	0.81	2.07	0.40
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	4.53	0.88	4.14	0.81	2.07	0.40
Aspalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.238	0.046	0.218	0.042	0.109	2.1E-02
Aspalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.238	0.046	0.218	0.042	0.109	2.1E-02
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	1.6E-02	3.2E-03	1.5E-02	2.9E-03	7.5E-03	1.5E-03
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	1.6E-02	3.2E-03	1.5E-02	2.9E-03	7.5E-03	1.5E-03
Aggregate/RAP Loader Full	Front-end loader (3 CY)	6.17	1.20	5.64	1.10	2.82	0.55
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	6.17	1.20	5.64	1.10	2.82	0.55
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	4.37	0.85	3.99	0.78	2.00	0.39
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	4.37	0.85	3.99	0.78	2.00	0.39
	Totals	**30.63**	**5.96**	**28.01**	**5.45**	**14.00**	**2.73**

Methodology

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

Abbreviations

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

Appendix A: Emissions Calculations
Cold Mix Asphalt Production and Stockpiles

Company Name: Central Paving, Inc.
Source Address: 2403 South County Road 150 East, Logansport, Indiana 46947-8008
Permit Number: T017-25207-03118
Reviewer: Stephanie Wilkerson

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

Cold Mix Asphalt VOC Usage Limitation = 215 tons/yr

Volatile Organic Compounds

	Maximum weight % of VOC solvent in binder	Weight % VOC solvent in binder that evaporates	VOC Solvent Usage Limitation (tons/yr)	Limited PTE of VOC (tons/yr)
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	307.1	215.0
Worst Case Limited PTE of VOC =				**215.0**

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	0.33%	
Worst Case Single HAP Content of VOC solvent (weight %)* =	0.3%	Naphthalene
Limited PTE of Total HAPs (tons/yr) =	**0.70**	
Limited PTE of Single HAP (tons/yr) =	**0.67**	**Naphthalene**

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% Xylenes**	**0.31% Naphthalene**	**0.50% Xylenes**	**0.23% Xylenes**	**0.07% Chrysene**

Methodology

Limited PTE of VOC (tons/yr) = [Weight % VOC solvent in binder that evaporates] * [VOC Solvent Usage Limitation (tons/yr)]
Limited PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]
Limited PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]

*Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Composition of Petroleum Mixtures. The Association for Environmental Health and Science. Available on the Internet at:

Abbreviations

VOC = Volatile Organic Compounds
PTE = Potential to Emit