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: July 26, 2012

RE: Tri-County Asphalt / 125-31073-00035

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

Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures
FNPER.dot12/03/07

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Federally Enforceable State Operating Permit Renewal
OFFICE OF AIR QUALITY

Tri-County Asphalt
822 N. CR 800 East
Otwell, Indiana 47564

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

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

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

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

Operation Permit No.: F125-31073-00035	
Issued by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: July 26, 2012 Expiration Date: July 26, 2022

TABLE OF CONTENTS

A. SOURCE SUMMARY 5
A.1 General Information [326 IAC 2-8-3(b)]
A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]
A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]
A.4 FESOP Applicability [326 IAC 2-8-2]

B. GENERAL CONDITIONS 8
B.1 Definitions [326 IAC 2-8-1]
B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]
B.3 Term of Conditions [326 IAC 2-1.1-9.5]
B.4 Enforceability [326 IAC 2-8-6] [IC 13-17-12]
B.5 Severability [326 IAC 2-8-4(4)]
B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]
B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]
B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]
B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]
B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]
B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]
B.12 Emergency Provisions [326 IAC 2-8-12]
B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]
B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]
B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]
B.16 Permit Renewal [326 IAC 2-8-3(h)]
B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]
B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]
B.19 Source Modification Requirement [326 IAC 2-8-11.1]
B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2] [IC 13-30-3-1]
B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]
B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16] [326 IAC 2-1.1-7]
B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

C. SOURCE OPERATION CONDITIONS 17

Emission Limitations and Standards [326 IAC 2-8-4(1)]
C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]
C.2 Overall Source Limit [326 IAC 2-8]
C.3 Opacity [326 IAC 5-1]
C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]
C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]
C.6 Fugitive Dust Emissions [326 IAC 6-4]
C.7 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]
C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

Testing Requirements [326 IAC 2-8-4(3)]
C.9 Performance Testing [326 IAC 3-6]

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

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

Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]
C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]
C.15 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]
C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4] [326 IAC 2-8-5]

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]
C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]
C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

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

D.1. EMISSIONS UNIT OPERATION CONDITIONS 24

Emission Limitations and Standards [326 IAC 2-8-4(1)]
D.1.1 PSD Minor Limit [326 IAC 2-2]]
D.1.2 FESOP Limits: PM10, PM2.5, and CO [326 IAC 2-8-4][326 IAC 2-2]
D.1.3 FESOP Limits: SO2, VOCs, and HAPs [326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-4.1] [326 IAC 8-1-6]
D.1.4 Particulate Emission Limits [326 IAC 6-2]
D.1.5 Sulfur Dioxide (SO2) [326 IAC 7-1.1-1] [326 IAC 7-2-1]
D.1.6 Volatile Organic Compounds (VOC) [326 IAC 8-5-2]
D.1.7 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

Compliance Determination Requirements
D.1.8 Particulate Control
D.1.9 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]
D.1.10 Sulfur Dioxide (SO2) Emissions and Sulfur Content
D.1.11 Hydrogen Chloride (HCl) Emissions and Ash, Chlorine, and Lead Content
D.1.12 Multiple Fuel Usage

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]
D.1.13 Visible Emissions Notations
D.1.14 Parametric Monitoring
D.1.15 Broken or Failed Bag Detection

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]
D.1.16 Record Keeping Requirements
D.1.17 Reporting Requirements

E.1. NSPS REQUIREMENTS - Hot-Mix Asphalt Plant 31

New Source Performance Standards (NSPS) Requirements [326 IAC 2-8-4(1)]
E.1.1 General Provisions Relating to the New Source Performance Standards (NSPS) for Hot-mix Asphalt Facilities (40 CFR 60, Subpart I), [326 IAC 12] [40 CFR Part 60, Subpart A]
E.1.2 NSPS Subpart I Requirements - Standards of Performance for Hot-mix Asphalt Facilities [40 CFR Part 60, Subpart I] [326 IAC 12-1]
E.1.3 Testing Requirements [40 CFR Part 60, Subpart I] [326 IAC 12-1] [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

E.2. NESHAPs REQUIREMENTS - Gasoline Dispensing Facilities 33

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

E.2.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

E.2.2 National Emission Standards for Hazardous Air Pollutants (NESHAPs): Area Source Standards for Source Category: Gasoline Dispensing Facilities [40 CFR 63, Subpart CCCCCC][326 IAC 20]

Certification Form 34
Emergency Occurrence Form 35
FESOP Quarterly Report Forms 37
Quarterly Deviation and Compliance Monitoring Report Form 40
Fugitive Particulate Emissions Control Plan ..... Attachment A
NSPS Subpart I - Standards of Performance for Hot-mix Asphalt Facilities ..... Attachment B
NESHAP Subpart CCCCCC (6C)- Standards of Performance for Gasoline Dispensing Facilities ... Attachment C

SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary batch-mix, hot-mix asphalt plant. This source does not process recycled asphalt pavement (RAP), blast furnace slag, electric arc furnace steel slag, or asbestos-free recycled shingles in its aggregate mix. Additionally, it does not crush any recycled asphalt pavement (RAP), and/or grind any kind of recycled asphalt shingles (RAS), asbestos-free or otherwise, or produce and/or manufacture cold-mix asphalt, on-site.

Source Address:	822 N. CR 800 East, Otwell, Indiana 47564
General Source Phone Number:	(812) 354-1281
SIC Code:	2951 (Asphalt Paving Mixtures and Blocks)
County Location:	Pike, Jefferson Township
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

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

(1) One (1) aggregate rotary dryer, identified as B-1, constructed in 2001, equipped with one (1) 70.0 million British thermal units per hour (MMBtu/hr) dryer burner, firing natural gas, No. 2 distillate oil, and waste oil as available, equipped with a baghouse for particulate matter control, and exhausting through Stack EC-1;

(2) One (1) hot-mix batch mixer, constructed in 1998, with a maximum throughput capacity of 120 tons of raw material per hour, equipped with a baghouse for particulate matter control, and exhausting through Stack EC-1. This source does not process recycled asphalt pavement (RAP), blast furnace slag, electric arc furnace steel mill slag, or recycled asphalt shingles (RAS), asbestos-free or otherwise, in their aggregate mix;

(3) One (1) hot-mix asphalt batch tower, consisting of the following:

(A) four (4) hot bins, each with a maximum holding capacity of 40 tons; and

(B) one (1) bucket elevator;

(C) eight (8) screens; and

(D) three (3) belt conveyors.

(4) Raw material storage piles, with a total maximum storage capacity of 2,000 tons, including:

(A) Outdoor limestone storage piles, having a maximum height of twelve (12) feet and a maximum storage capacity of 1,360 tons, or 0.16 acres;

(B) Outdoor natural sand storage piles, having a maximum height of twelve (12) feet and a maximum storage capacity of 400 tons, or 0.04 acres; and

(B) Outdoor natural sand storage piles, having a maximum height of twelve (12) feet and a maximum storage capacity of 400 tons, or 0.04 acres.

(5) One (1) asphalt storage silo, constructed in 1998, with a maximum storage capacity of 150 tons.

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

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

This stationary source also includes the following insignificant activities:

(a) One (1) 1.75 million British thermal units per hour (MMBtu/hr) hot oil heater, constructed in 1998, firing natural gas and No. 2 distillate oil as available, uncontrolled and exhausting through Stack S-2; [326 IAC 6-2]

(b) cold-mix (stockpile mix) storage piles, having a maximum height of three (3) feet and a maximum storage capacity of 50 tons, or 0.02 acres; [326 IAC 8-5-2]

(c) Two (2) liquid asphalt storage tanks, identified as AC-1 and AC-2, constructed in 1998, with a maximum storage capacity of 10,000 gallons, each.

(d) One (1) waste oil storage tank, identified as T005, constructed in 2005, with a maximum storage capacity of 10,000 gallons, uncontrolled and exhausting to the atmosphere;

(e) One (1) gasoline oil storage tank, identified as T1, constructed in 2001, with a maximum storage capacity of 300 gallons, uncontrolled and exhausting to the atmosphere;

(f) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons;

Under 40 CFR 63, Subpart CCCCCC: National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities, the gasoline fuel transfer and dispensing operation is considered an affected facility.

(g) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.

(h) Vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids;

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

(j) Baghouse maintenance operations, including replacement or repair of electrostatic precipitators, bags in baghouses, and/or filters in other air filtration equipment;

(k) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]

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

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

SECTION B GENERAL CONDITIONS

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

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

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

(a) This permit, F125-31073-00035, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

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

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

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

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

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

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

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

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

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

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

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

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

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

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

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

(a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

(1) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

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

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

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

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and

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

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

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

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

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

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

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

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

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

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.

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

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

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

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

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

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Southwest Regional Office phone: (812) 380-2305; fax: (812) 380-2304**.**
Southeast Regional Office phone: (812) 358-2027; fax: (812) 358-2058**.**

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

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

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

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

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

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

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

(a) All terms and conditions of permits established prior to F125-31073-00035 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

(b) All previous registrations and permits are superseded by this permit.

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

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

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.16 Permit Renewal [326 IAC 2-8-3(h)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

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

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

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

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

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

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

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

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

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

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

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any approval required by 326 IAC 2-8-11.1 has been obtained;

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

(4) The Permittee notifies the:

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

and

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

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

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b)(1) and (c). The Permittee shall make such records available, upon reasonable request, for public review.

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

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

(c) Alternative Operating Scenarios [326 IAC 2-8-15(c)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.

(d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.19 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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

(a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

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

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

B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

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

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

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

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

B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ no later than thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM) and greenhouse gases (GHGs), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(4) The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO2 equivalent emissions (CO2e) per twelve (12) consecutive month period.

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

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

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

C.3 Opacity [326 IAC 5-1]

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

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

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

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

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

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

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

C.6 Fugitive Dust Emissions [326 IAC 6-4]

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

C.7 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the attached plan as in Attachment A.

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

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

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

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

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

(A) Asbestos removal or demolitions start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

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

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

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

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

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

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

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

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

(a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

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

C.15 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

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

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

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

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

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

(1) monitoring results;

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

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

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

(e) The Permittee shall record the reasonable response steps taken.

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline

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

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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

(a) Records of all required monitoring data, reports, and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application.

(1) Support information includes the following:

(A) All calibration and maintenance records.

(B) All original strip chart recordings for continuous monitoring instrumentation.

(C) Copies of all reports required by the FESOP.

(2) Records of required monitoring information include the following:

(A) The date, place, as defined in this permit, and time of sampling or measurements.

(B) The dates analyses were performed.

(C) The company or entity that performed the analyses.

(D) The analytical techniques or methods used.

(E) The results of such analyses.

(F) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

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

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to

an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

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

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

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

Stratospheric Ozone Protection

C.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 applicable standards for recycling and emissions reduction.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Hot-mix Asphalt Plant

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

(1) One (1) aggregate rotary dryer, identified as B-1, constructed in 2001, equipped with one (1) 70.0 million British thermal units per hour (MMBtu/hr) dryer burner, firing natural gas, No. 2 distillate oil, and waste oil as available, equipped with a baghouse for particulate matter control, and exhausting through Stack EC-1;

(2) One (1) hot-mix batch mixer, constructed in 1998, with a maximum throughput capacity of 120 tons of raw material per hour, equipped with a baghouse for particulate matter control, and exhausting through Stack EC-1. This source does not process recycled asphalt pavement (RAP), blast furnace slag, electric arc furnace steel mill slag, or recycled asphalt shingles (RAS), asbestos-free or otherwise, in their aggregate mix;

(3) One (1) hot-mix asphalt batch tower, consisting of the following:

(A) four (4) hot bins, each with a maximum holding capacity of 40 tons; and

(B) one (1) bucket elevator;

(C) eight (8) screens; and

(D) three (3) belt conveyors.

(4) Raw material storage piles, with a total maximum storage capacity of 2,000 tons, including:

(A) Outdoor limestone storage piles, having a maximum height of twelve (12) feet and a maximum storage capacity of 1,360 tons, or 0.16 acres;

(B) Outdoor natural sand storage piles, having a maximum height of twelve (12) feet and a maximum storage capacity of 400 tons, or 0.04 acres; and

(B) Outdoor natural sand storage piles, having a maximum height of twelve (12) feet and a maximum storage capacity of 400 tons, or 0.04 acres.

(5) One (1) asphalt storage silo, constructed in 1998, with a maximum storage capacity of 150 tons.

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

Insignificant Activities: Boilers

(a) One (1) 1.75 million British thermal units per hour (MMBtu/hr) hot oil heater, constructed in 1998, firing natural gas and No. 2 distillate oil as available, uncontrolled and exhausting through Stack S-2; [326 IAC 6-2]

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

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

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

In order to render 326 IAC 2-2 not applicable;

(a) The amount of asphalt processed shall not exceed 488,251 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The PM emissions from the batch mixer shall not exceed 0.914 pounds per ton of asphalt processed.

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

D.1.2 FESOP Limits: PM10, PM2.5, and CO [326 IAC 2-8-4][326 IAC 2-2]

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

(a) The amount of asphalt processed shall not exceed 488,251 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The PM10 emissions from the batch mixer shall not exceed 0.373 pounds per ton of asphalt processed.

(c) The PM2.5 emissions from the batch mixer shall not exceed 0.392 pounds of PM2.5 per ton of asphalt produced.

(d) The CO emissions from the batch mixer shall not exceed 0.40 pounds per ton of asphalt processed.

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

D.1.3 FESOP Limits: SO2, VOCs, and HAPs [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-4.1][326 IAC 8-1-6]

Pursuant to 326 IAC 2-8-4, and in order to render 326 IAC 2-2, 326 IAC 2-4.1, and 326 IAC 8-1-6 not applicable, the Permittee shall comply with the following:

(a) Fuel Specifications

(1) The sulfur content of the No. 2 distillate fuel oil shall not exceed 0.50% by weight.

(2) The sulfur content of the waste oil shall not exceed 0.75% by weight.

(3) The waste oil combusted in the dryer burner shall not contain more than 1.02% ash, 0.40% chlorine, and 0.01% lead.

(4) The HCl emissions shall not exceed 26.4 pounds of HCl per 1,000 gallons of waste oil burned.

(b) Single Fuel Usage Limitations:

When combusting only one type of fuel per twelve (12) consecutive month period in the aggregate dryer burner, the usage of fuel shall be limited as follows:

(1) Natural gas usage shall not exceed 613 million cubic feet (MMCF) per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) No. 2 fuel oil usage shall not exceed 2,679,232 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(3) Waste oil usage shall not exceed 750,345 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month; and

Note: The source is only permitted to burn the above-mentioned fuels.

(c) Multiple Fuel Usage Limitation:
When combusting more than one fuel per twelve (12) consecutive month period in the aggregate dryer burner emissions from the dryer shall be limited as follows:

(1) SO_2 emissions shall not exceed 95.11 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) HCl emissions shall not exceed 9.90 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

(e) Cold-Mix Asphalt Usage Limitation
Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD), 326 IAC 8-1-6 (Best Available Control Technologies (BACT)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAPs)) not applicable, the Permittee shall not produce and/or manufacture cold-mix asphalt onsite.

(f) Asphalt Shingle Usage Limitation
Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAPs)) not applicable, the Permittee shall not grind recycled asphalt shingles on-site or use asphalt shingles as an aggregate additive in its hot-mix asphalt operations.

Compliance with these limits, combined with the potential to emit SO2, VOCs, and HAPs from all other emission units at this source, shall limit the source-wide total potential to emit of SO2 and VOCs to less than 100 tons per twelve (12) consecutive month period, each, any single HAP to less than ten (10) tons per twelve (12) consecutive month period, and total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable.

D.1.4 Particulate Emission Limits [326 IAC 6-2]

Pursuant to 326 IAC 6-2-4, the particulate emissions from the hot oil heater shall not exceed six tenths (0.6) pounds of particulate matter per MMBtu heat input.

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

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

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

(2) The sulfur dioxide (SO2) emissions from the aggregate dryer burner shall not exceed one and six tenths (1.6) pounds per MMBtu heat input when using residual oil.

Note: No. 2 fuel oil is considered distillate oil, and waste oil is considered residual oil.

(b) Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

D.1.6 Volatile Organic Compounds (VOC) [326 IAC 8-5-2]

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

(a) Penetrating prime coating

(b) Stockpile storage

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

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

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

Compliance Determination Requirements

D.1.8 Particulate Control

(a) In order to comply with Conditions D.1.1(b), D.1.2(b), and D.1.2(c), the baghouse for particulate control shall be in operation and control emissions from the dryer/mixer at all times when the dryer/mixer is in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

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

In order to demonstrate compliance with Conditions D.1.1(b), D.1.2(b), and D.1.2(c), the Permittee shall perform PM, PM10, and PM2.5 testing of the aggregate dryer and batch mixer (dryer/mixer) baghouse stack (EC-1) exhaust not later than five (5) years from the most recent valid compliance demonstration, utilizing methods approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable particulate matter.

D.1.10 Sulfur Dioxide (SO_2) Emissions and Sulfur Content

Compliance with the fuel limitations established in Conditions D.1.3(a)(1), D.1.3(a)(2), and D.1.5, shall be determined utilizing one of the following options. Pursuant to 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements) and 326 IAC 3-7-4 (Fuel oil sampling; analysis methods), compliance shall be demonstrated on a thirty (30) day calendar-month average.

(a) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or

(b) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

(1) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

(2) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

(c) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the aggregate dryer burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to any of the methods specified in (1) or (2) above shall not be refuted by evidence of compliance pursuant to the other method.

D.1.11 Hydrogen Chloride (HCl) Emissions and Ash, Chlorine, and Lead Content

The Permittee shall demonstrate compliance with the waste oil ash, chlorine, and lead content limits established in Condition D.1.3(a)(3), by providing a vendor analysis of each fuel delivery accompanied by a vendor certification.

D.1.12 Multiple Fuel Usage

In order to comply with the Condition D.1.3(c) when combusting more than one fuel per twelve (12) consecutive month period in the aggregate dryer burner, the Permittee shall limit fuel usage according to the following formulas:

(a) Sulfur Dioxide (SO2) Emission Calculation

$$S = \frac{G(E_G) + O(E_O) + W(E_W)}{2{,}000 \text{ lbs/ton}}$$

where:
S = tons of sulfur dioxide emissions for a 12-month consecutive period;
G = million cubic feet of natural gas used in the last 12 months;
O = gallons of No. 2 fuel oil used in the last 12 months;
W = gallons of waste oil used in the last 12 months;
E_G = 0.60 lb/million cubic feet of natural gas;
E_O = 71.0 lb/1000 gallons of No. 2 fuel oil; and
E_W = 110.3 lb/1000 gallons of waste oil.

(b) Hydrogen Chloride (HCL) Emission Calculation

$$HCL = \frac{W(E_W)}{2000 \text{ lbs/ton}}$$

where:
HCl = tons of hydrogen chloride emissions for a 12-month consecutive period
W = gallons of waste oil used in the last 12 months.
E_W = 26.4 lbs/1000 gallons of waste oil.

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

D.1.13 Visible Emissions Notations

(a) Visible emission notations from the conveyors, screens, material transfer points, and dryer/mixer stack (EC-1) exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

(e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. An abnormal visible emission notation is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.1.14 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouse used in conjunction with the dryer/mixer, at least once per day when the dryer/mixer is in operation. When, for any one reading, the pressure drop across the baghouse is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 3.0 and 6.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

The instrument 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 or replaced at least once every six (6) months, or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer specifications, if used.

D.1.15 Broken or Failed Bag Detection

In the event that bag failure has been observed:

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

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

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

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

D.1.16 Record Keeping Requirements

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

(b) To document the compliance status with Conditions D.1.3 and D.1.5, the Permittee shall maintain records in accordance with (1) through (10) below. Records maintained for (1) through (10) below shall be taken monthly and shall be complete and sufficient to establish compliance with the limits established in Conditions D.1.3 and D.1.5.

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

(2) Actual fuel usage, sulfur content, heat content, and equivalent sulfur dioxide emission rates for each fuel used at the source since the last compliance determination period;

(3) Actual waste oil usage, ash, chlorine, and lead content, and equivalent hydrogen chloride emission rate for waste oil used at the source since the last compliance determination period;

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

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

(i) Fuel supplier certifications;

(ii) The name of the fuel supplier; and

(iii) A statement from the fuel supplier that certifies the sulfur content of the No. 2 and waste oil, and the ash, chlorine, and lead content of waste oil.

(d) To document the compliance status with Condition D.1.12, the Permittee shall maintain records once per day of the visible emission notations. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

(e) To document the compliance status with Condition D.1.13, the Permittee shall maintain records once per day of the pressure drop during normal operation. The Permittee shall include in its daily record when the pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g., the process did not operate that day).

(f) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

D.1.17 Reporting Requirements

A quarterly summary of the information to document compliance status with Conditions D.1.1(a), D.1.2(a), and D.1.3, shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee’s obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1)by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

SECTION E.1 NSPS REQUIREMENTS

Emissions Unit Description [326 IAC 2-8-4(10)]: Hot-mix Asphalt Plant

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

(1) One (1) aggregate rotary dryer, identified as B-1, constructed in 2001, equipped with one (1) 70.0 million British thermal units per hour (MMBtu/hr) dryer burner, firing natural gas, No. 2 distillate oil, and waste oil as available, equipped with a baghouse for particulate matter control, and exhausting through Stack EC-1;

(2) One (1) hot-mix batch mixer, constructed in 1998, with a maximum throughput capacity of 120 tons of raw material per hour, equipped with a baghouse for particulate matter control, and exhausting through Stack EC-1. This source does not process recycled asphalt pavement (RAP), blast furnace slag, electric arc furnace steel mill slag, or recycled asphalt shingles (RAS), asbestos-free or otherwise, in their aggregate mix;

(3) One (1) hot-mix asphalt batch tower, consisting of the following:

(A) four (4) hot bins, each with a maximum holding capacity of 40 tons; and

(B) one (1) bucket elevator;

(C) eight (8) screens; and

(D) three (3) belt conveyors.

(4) Raw material storage piles, with a total maximum storage capacity of 2,000 tons, including:

(A) Outdoor limestone storage piles, having a maximum height of twelve (12) feet and a maximum storage capacity of 1,360 tons, or 0.16 acres;

(B) Outdoor natural sand storage piles, having a maximum height of twelve (12) feet and a maximum storage capacity of 400 tons, or 0.04 acres; and

(B) Outdoor natural sand storage piles, having a maximum height of twelve (12) feet and a maximum storage capacity of 400 tons, or 0.04 acres.

(5) One (1) asphalt storage silo, constructed in 1998, with a maximum storage capacity of 150 tons.

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

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

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

E.1.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

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

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

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

E.1.2 New Source Performance Standards (NSPS) for Hot-mix Asphalt Facilities [40 CFR Part 60, Subpart I] [326 IAC 12]

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

(a) 40 CFR 60.90

(b) 40 CFR 60.91

(c) 40 CFR 60.92

(d) 40 CFR 60.93

E.1.3 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

The Permittee shall perform the stack testing required under NSPS 40 CFR 60, Subpart I, utilizing methods as approved by the Commissioner to document compliance with Condition E.1.2. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

SECTION E.2 NESHAP REQUIREMENTS

Emissions Unit Description: Gasoline Dispensing Facilities

(f) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons;

Under 40 CFR 63, Subpart CCCCCC: National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities, the gasoline fuel transfer and dispensing operation is considered an affected facility.

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

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

E.2.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63.11130, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, as specified in Table 3 of 40 CFR Part 63, Subpart CCCCCC in accordance with schedule in 40 CFR 63 Subpart CCCCCC

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

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

E.2.2 National Emission Standards for Hazardous Air Pollutants (NESHAPs): Area Source Standards for Source Category: Gasoline Dispensing Facilities [40 CFR 63, Subpart CCCCCC] [326 IAC 20]

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

The gasoline fuel transfer and dispensing operation is therefore subject to the following portions of Subpart CCCCCC (6C) (included as Attachment C of this permit), beginning on January 10, 2011:

(1) 40 CFR 63. 11110;
(2) 40 CFR 63. 11111(a), (b), (e), (f);
(3) 40 CFR 63. 11112(a), (d);
(4) 40 CFR 63. 11113(b), (c);
(5) 40 CFR 63. 11116;
(6) 40 CFR 63. 11130;
(7) 40 CFR 63. 11131;
(8) 40 CFR 63. 11132; and
(9) Table 3

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

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Tri-County Asphalt
Source Address: 822 N. CR 800 East, Otwell, Indiana 47564
FESOP Permit No.: F125-31073-00035

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

Please check what document is being certified:

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

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Signature:
Printed Name:
Title/Position:
Date:

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

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) EMERGENCY OCCURRENCE REPORT

Source Name: Tri-County Asphalt
Source Address: 822 N. CR 800 East, Otwell, Indiana 47564
FESOP Permit No.: F125-31073-00035

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

Form Completed by:_____

Title / Position:_____

Date:_____

Phone: _____

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

FESOP Quarterly Report

Source Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
FESOP No.: F125-31073-00035

Facility: Batch Mixer

Parameter: **Hot-mix Asphalt Production**

Limit: The amount of hot-mix asphalt produced in the dryer/burner shall not exceed 488,251 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER:_____ YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	Hot-mix Asphalt Produced This Month (tons)	**Hot-mix Asphalt Produced Previous 11 Months (tons)**	**12 Month Total Hot-mix Asphalt Produced (tons)**
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

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

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

FESOP Quarterly Report

Source Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
FESOP No.: F125-31073-00035

Facility: Aggregate Dryer Burner

Parameter: **Fuel & Slag Usage / SO2 & HCL emissions**

Emission Limits: *Sulfur dioxide (SO_2)* emissions shall not exceed 95.11 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.11(a).

Hydrogen Chloride (HCL) emissions shall not exceed 9.90 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.11(b).

Fuel & Slag Limits: When combusting only one type of fuel per twelve (12) consecutive month period in the aggregate dryer burner, fuel usage shall not exceed the following:

Fuel Type (Units)	**Fuel Usage Limit (per 12 consecutive month period)**
Natural gas (million cubic feet (MMCF))	613
No. 2 Distillate Fuel Oil (gallons)	2,679,232
Waste Oil (gallons)	750,345

FESOP Quarterly Report - Fuel & Slag Usage / SO2 & HCL emissions

QUARTER: _____ YEAR: _____

Month	Fuel Types (units)	Column 1	Column 2	Column 1 + Column 2	Equation Results	
		Usage This Month	Usage Previous 11 Months	Usage 12 Month Total	Sulfur Dioxide (SO2) Emissions (tons per 12 months)	Hydrogen Chloride (HCl) Emissions (tons per 12 months)
Month 1	Natural gas (MMCF)					
	No. 2 Fuel Oil (gallons)					
	Waste Fuel Oil (gallons)					
Month 2	Natural gas (MMCF)					
	No. 2 Fuel Oil (gallons)					
	Waste Fuel Oil (gallons)					
Month 3	Natural gas (MMCF)					
	No. 2 Fuel Oil (gallons)					
	Waste Fuel Oil (gallons)					

☐ No deviation occurred in this reporting period. Submitted by: _____ Date: _____

☐ Deviation/s occurred in this reporting period. Title / Position: _____ Phone: _____

Deviation has been reported on: _____ Signature: _____

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

Source Name: Tri-County Asphalt
Source Address: 822 N. CR 800 East, Otwell, Indiana 47564
FESOP Permit No.: F125-31073-00035

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

Page 1 of 2

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

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

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

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

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

Form Completed by:_____

Title / Position:_____

Date:_____

Phone: _____

FEDERALLY ENFORCEABLE
STATE OPERATING PERMIT RENEWAL

OFFICE OF AIR QUALITY

Tri-County Asphalt
822 N. CR 800 E,
Otwell, Indiana 47564

Attachment A

HOT-MIX ASPHALT CONCRETE PLANT

FUGITIVE PARTICULATE MATTER EMISSIONS CONTROL PLAN

Permit No.: F125-31073-00035

A. Asphalt Plant

1. General

a. The materials used in the asphalt plant that are most likely to cause the plant to emit fugitive dust are crushed limestone and natural sand.

b. This material is transported from other Certified Aggreate Producers and arrives at Tri County on trucks that have tarps over the material. Tarps are removed and the material is dumped on the appropriate stockpiles that are in close proximity to the bins of the asphalt plant where the material will be loaded by a front end loader in order to charge each bin which will convey the material into asphalt production.

c. The asphalt plant and stockpile area are located within a 7' chain link fence surrounding the Tri County Asphalt Plant property.

i. The plant and stockpile area are located in rural Pike County and are bounded to the North by State Road 56 and there are no other homes, residences, or businesses on the west, south, or east for nearly one half mile.

ii. the fugitive dust will most likely fall within the plant and stockpile area which is near the center of the Tri County Asphalt property.

2. Monitoring

a. The Asphalt Plant operator, the front-end loader operator, and the Plant Foreman are responsible to work together in monitoring the asphalt plant, stockpiles and surrounding area for all fugitive dust emissions.

i. The Asphalt Plant Operator

(1) will monitor the area of the drum drier and the burner of the asphalt plant;

(2) will monitor the baghouse for proper operation and all signs of fugitive dust emissions throughout the asphalt production process.

ii. The Front-End Loader Operator

(1) will monitor the haul roads in the stockpile for fugitive dust emissions.

(2) will monitor area near the asphalt plant loading bins for fugitive dust emissions.

iii. The Plant Foreman

(1) will monitor the elevator tower and screening area of the asphalt plant for fugitive dust emissions;

(2) will monitor asphalt truck approach roads for fugitive dust emissions.

iv. Monitoring will consist of routine observation of each person's area of responsibility for unusual or unusually high dust emissions that poses a threat to leave the property boundaries of the plant area.

3. Standard Preventive Measures

a. The Asphalt Plant Operator will operate the baghouse at all times that the asphalt plant is in operation

b. The Front-End Loader Operator

i. will empty the baghouse discharge truck when full to prevent spillage.

c. The Plant Foreman

i. will ensure that haul roads in the area of the asphalt plant are properly dampened so as to minimize airborne dust generation by any vehicles.

4 Corrective Actions.

a. The Asphalt Plant Operator will apply immediate corrective actions.

i. If excessive fugitive dust is observed in the area of the drum drier or burner,

ii. check the baghouse for proper operation and adjust accordingly until the dust is under control. If the baghouse fails to function properly, discontinue operations until the problem is fixed and the baghouse is fully operational and fugitive dust is under control.

iii. Report all corrective actions to the plant foreman, supervisors and management.

b. The Front-End Loader Operator

i. If fugitive dust is observed on the haul roads or the area of the asphalt plant the loader operator is to notify the plant foreman and the water truck will be used to dampen all roads until the dust is under control.

ii. If the discharge truck becomes full, notify the asphalt plant operator, discontinue loading the asphalt plant, and unload the discharge truck.

iii. Report all actions to the plant foreman.

c. The Plant Foreman

i. If fugitive dust is observed in the elevator tower or the screening area of the asphalt plant, notify the asphalt plant operator to check for proper operation of the baghouse.

ii. If fugitive dust is observed on the asphalt truck approach roads or any of the haul roads, increase the frequency of the water truck passes to increase the moisture in the road surface material.

iii. Report all corrective actions to the plant management and supervisors.

5. Emergency Situations

a. Report all events or incidents to supervisors and managers.

i. In the event that any of the corrective actions fail to reduce fugitive dust to the degree that escape of the fugitive dust from the plant property is imminent, notify the asphalt plant operator, the plant foreman, and the plant manager and all supervisors and the plant is to cease operations immediately.

b. The Asphalt Plant Operator

i. will not begin operations again until the fugitive dust emissions are under control and the threat of the dust leaving the property has been eliminated.

B. Crushed Stone Stockpile area, Paved and Unpaved Roads and Surrounding Area

1. Fugitive particulate matter (dust) emissions from paved roads, unpaved roads, and parking lots and surrounding area shall be controlled by one or more of the following measures on an as needed basis:

a. Unpaved roads, paved roads and parking lots will be treated with water.

2. Fugitive particulate matter (dust) emissions from material (sand, limestone, and occasionally a cold mix stockpile which is also trucked in under same requirements as aggregate and sand) will be controlled by one or more of the following measures on an as needed basis

a. maintaining minimum size and number of storage piles;

b. treating around the storage pile area with water on an as needed basis; and/or

c. treating the storage piles with water on an as needed basis.

3. Fugitive particulate matter (dust) emissions from the transferring of materials (sand, limestone, and cold-mix) within the plant property shall be controlled by one of the following measures on an as needed basis:

a. locating storage piles as close as possible to feed bins; except for cold mix which will not be incorporated into any production but loaded on trucks as it is sold.

b. limiting transfer points to three foot drops or less.

c. applying water to the materials on an as needed basis.

4. Fugitive particulate matter (dust) emissions from transporting of materials (sand, limestone, and cold-mix) onto Tri County Asphalt property shall be controlled by one of the following measures:

a. tarping the materials hauling vehicles;

b. insuring tailgates are tight and do not leak;

c. applying water to the materials on an as needed basis;

d. maintaining a 10 MPH speed limit in the yard.

5. Fugitive particulate matter (dust) emissions from the loading and unloading of materials (sand, limestone, and cold-mix shall be controlled by one of the following measures on an as needed basis:

a. limiting free fall distance;

b. limiting the rate of discharge of the materials; and/or

c. applying water to the materials on an as needed basis.

6. Fugitive particulate matter (dust) emissions from material (sand, limestone, and cold-mix) and equipment, feed bins, conveyors, transfer points, screens, and/or crushers shall be controlled by the following measures on an as needed basis:

a. limiting transfer points to three foot drops or less.

b. enclosing the conveyors, transfer points, screens, and/or crushers; and/or

c. applying water to the materials on an as needed basis.

C. Plan Implementation

1. The effective date of this plan was December 13, 1996.

2. Date of most recent update: November 3, 2011.

DEFINITIONS:

An “as-needed basis” means the frequency or quantity of application necessary to minimize visible particulate matter emissions.

REFERENCE:

The Indiana Administrative Code, Title 326 Air Pollution Control Board, Article 6. Particulate Rules, weblink: http://www.in.gov/legislative/iac/T03260/A00060.PDF? . See page 12 for Rule 5. Fugitive Particulate Matter Emission Limitations.

FEDERALLY ENFORCEABLE
STATE OPERATING PERMIT RENEWAL

OFFICE OF AIR QUALITY

Tri-County Asphalt
822 N. CR 800 E,
Otwell, Indiana 47564

Attachment B

Title 40: Protection of Environment

PART 60—NEW SOURCE PERFORMANCE STANDARDS

SUBPART I - STANDARDS OF PERFORMANCE
FOR HOT MIX ASPHALT FACILITIES

Permit No.: F125-31073-00035

40 CFR 60, SUBPART I — STANDARDS OF PERFORMANCE FOR HOT MIX ASPHALT FACILITIES

§ 60.90 Applicability and designation of affected facility.

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

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

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

§ 60.91 Definitions.

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

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

[51 FR 12325, Apr. 10, 1986]

§ 60.92 Standard for particulate matter.

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

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

(2) Exhibit 20 percent opacity, or greater.

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

§ 60.93 Test methods and procedures.

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

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

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

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

[54 FR 6667, Feb. 14, 1989]

Reference

The US EPA Electronic Code of Federal Regulations - 40 CFR 60, Subpart I: Standards of Performance for Hot Mix Asphalt Facilities weblink:
http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=875648a88dd2168ac2096fe26e3e4c98&rgn=div6&view=text&node=40:6.0.1.1.1.20&idno=40

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STATE OPERATING PERMIT RENEWAL

OFFICE OF AIR QUALITY

Tri-County Asphalt
822 N. CR 800 E,
Otwell, Indiana 47564

Attachment C

Title 40: Protection of Environment

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

Subpart CCCCCC - NESHAPs for Source Category: Gasoline Dispensing Facilities

Permit No.: F125-31073-00035

Subpart CCCCCC—National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

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

What This Subpart Covers

§ 63.11110 What is the purpose of this subpart?

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

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

(a) The affected source to which this subpart applies is each GDF that is located at an area source. The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank.

(b) If your GDF has a monthly throughput of less than 10,000 gallons of gasoline, you must comply with the requirements in §63.11116.

(c) If your GDF has a monthly throughput of 10,000 gallons of gasoline or more, you must comply with the requirements in §63.11117.

(d) If your GDF has a monthly throughput of 100,000 gallons of gasoline or more, you must comply with the requirements in §63.11118.

(e) An affected source shall, upon request by the Administrator, demonstrate that their monthly throughput is less than the 10,000-gallon or the 100,000-gallon threshold level, as applicable. For new or reconstructed affected sources, as specified in §63.11112(b) and (c), recordkeeping to document monthly throughput must begin upon startup of the affected source. For existing sources, as specified in §63.11112(d), recordkeeping to document monthly throughput must begin on January 10, 2008. For existing sources that are subject to this subpart only because they load gasoline into fuel tanks other than those in motor vehicles, as defined in §63.11132, recordkeeping to document monthly throughput must begin on January 24, 2011. Records required under this paragraph shall be kept for a period of 5 years.

(f) If you are an owner or operator of affected sources, as defined in paragraph (a) of this section, you are not required to obtain a permit under 40 CFR part 70 or 40 CFR part 71 as a result of being subject to this subpart. However, you must still apply for and obtain a permit under 40 CFR part 70 or 40 CFR part 71 if you meet one or more of the applicability criteria found in 40 CFR 70.3(a) and (b) or 40 CFR 71.3(a) and (b).

(g) The loading of aviation gasoline into storage tanks at airports, and the subsequent transfer of aviation gasoline within the airport, is not subject to this subpart.

(h) Monthly throughput is the total volume of gasoline loaded into, or dispensed from, all the gasoline storage tanks located at a single affected GDF. If an area source has two or more GDF at separate locations within the area source, each GDF is treated as a separate affected source.

(i) If your affected source's throughput ever exceeds an applicable throughput threshold, the affected source will remain subject to the requirements for sources above the threshold, even if the affected source throughput later falls below the applicable throughput threshold.

(j) The dispensing of gasoline from a fixed gasoline storage tank at a GDF into a portable gasoline tank for the on-site delivery and subsequent dispensing of the gasoline into the fuel tank of a motor vehicle or other gasoline-fueled engine or equipment used within the area source is only subject to §63.11116 of this subpart.

(k) For any affected source subject to the provisions of this subpart and another Federal rule, you may elect to comply only with the more stringent provisions of the applicable subparts. You must consider all provisions of the rules, including monitoring, recordkeeping, and reporting. You must identify the affected source and provisions with which you will comply in your Notification of Compliance Status required under §63.11124. You also must demonstrate in your Notification of Compliance Status that each provision with which you will comply is at least as stringent as the otherwise applicable requirements in this subpart. You are responsible for making accurate determinations concerning the more stringent provisions, and noncompliance with this rule is not excused if it is later determined that your determination was in error, and, as a result, you are violating this subpart. Compliance with this rule is your responsibility and the Notification of Compliance Status does not alter or affect that responsibility.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4181, Jan. 24, 2011]

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

(a) The emission sources to which this subpart applies are gasoline storage tanks and associated equipment components in vapor or liquid gasoline service at new, reconstructed, or existing GDF that meet the criteria specified in §63.11111. Pressure/Vacuum vents on gasoline storage tanks and the equipment necessary to unload product from cargo tanks into the storage tanks at GDF are covered emission sources. The equipment used for the refueling of motor vehicles is not covered by this subpart.

(b) An affected source is a new affected source if you commenced construction on the affected source after November 9, 2006, and you meet the applicability criteria in §63.11111 at the time you commenced operation.

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

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

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

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

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

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

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

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

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

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

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

(e) The initial compliance demonstration test required under §63.11120(a)(1) and (2) must be conducted as specified in paragraphs (e)(1) and (2) of this section.

(1) If you have a new or reconstructed affected source, you must conduct the initial compliance test upon installation of the complete vapor balance system.

(2) If you have an existing affected source, you must conduct the initial compliance test as specified in paragraphs (e)(2)(i) or (e)(2)(ii) of this section.

(i) For vapor balance systems installed on or before December 15, 2009, you must test no later than 180 days after the applicable compliance date specified in paragraphs (b) or (c) of this section.

(ii) For vapor balance systems installed after December 15, 2009, you must test upon installation of the complete vapor balance system.

(f) If your GDF is subject to the control requirements in this subpart only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in §63.11132, you must comply with the standards in this subpart as specified in paragraphs (f)(1) or (f)(2) of this section.

(1) If your GDF is an existing facility, you must comply by January 24, 2014.

(2) If your GDF is a new or reconstructed facility, you must comply by the dates specified in paragraphs (f)(2)(i) and (ii) of this section.

(i) If you start up your GDF after December 15, 2009, but before January 24, 2011, you must comply no later than January 24, 2011.

(ii) If you start up your GDF after January 24, 2011, you must comply upon startup of your GDF.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 35944, June 25, 2008; 76 FR 4181, Jan. 24, 2011]

Emission Limitations and Management Practices

§ 63.11115 What are my general duties to minimize emissions?

Each owner or operator of an affected source under this subpart must comply with the requirements of paragraphs (a) and (b) of this section.

(a) You must, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

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

[76 FR 4182, Jan. 24, 2011]

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

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

(1) Minimize gasoline spills;

(2) Clean up spills as expeditiously as practicable;

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

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

(b) You are not required to submit notifications or reports as specified in §63.11125, §63.11126, or subpart A of this part, but you must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

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

(d) Portable gasoline containers that meet the requirements of 40 CFR part 59, subpart F, are considered acceptable for compliance with paragraph (a)(3) of this section.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4182, Jan. 24, 2011]

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

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

(b) Except as specified in paragraph (c) of this section, you must only load gasoline into storage tanks at your facility by utilizing submerged filling, as defined in §63.11132, and as specified in paragraphs (b)(1), (b)(2), or (b)(3) of this section. The applicable distances in paragraphs (b)(1) and (2) shall be measured from the point in the opening of the submerged fill pipe that is the greatest distance from the bottom of the storage tank.

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

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

(3) Submerged fill pipes not meeting the specifications of paragraphs (b)(1) or (b)(2) of this section are allowed if the owner or operator can demonstrate that the liquid level in the tank is always above the entire opening of the fill pipe. Documentation providing such demonstration must be made available for inspection by the Administrator's delegated representative during the course of a site visit.

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

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

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

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

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008; 76 FR 4182, Jan. 24, 2011]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Testing and Monitoring Requirements

§ 63.11120 What testing and monitoring requirements must I meet?

(a) Each owner or operator, at the time of installation, as specified in §63.11113(e), of a vapor balance system required under §63.11118(b)(1), and every 3 years thereafter, must comply with the requirements in paragraphs (a)(1) and (2) of this section.

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

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

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

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

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

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

(iii) Bay Area Air Quality Management District Source Test Procedure ST–30—Static Pressure Integrity Test—Underground Storage Tanks, adopted November 30, 1983, and amended December 21, 1994 (incorporated by reference, *see* §63.14).

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

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

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

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

(c) Conduct of performance tests. Performance tests conducted for this subpart shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance (*i.e.,* performance based on normal operating conditions) of the affected source. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(d) Owners and operators of gasoline cargo tanks subject to the provisions of Table 2 to this subpart must conduct annual certification testing according to the vapor tightness testing requirements found in §63.11092(f).

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4182, Jan. 24, 2011]

Notifications, Records, and Reports

§ 63.11124 What notifications must I submit and when?

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

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in §63.11117, unless you meet the requirements in paragraph (a)(3) of this section. If your affected source is subject to the control requirements in §63.11117 only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in §63.11132, you must submit the Initial Notification by May 24, 2011. The Initial Notification must contain the information specified in paragraphs (a)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in §63.13.

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

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

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

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in §63.13, within 60 days of the applicable compliance date specified in §63.11113, unless you meet the requirements in paragraph (a)(3) of this section. The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of this subpart, and must indicate whether the facilities' monthly throughput is calculated based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (a)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (a)(1) of this section.

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

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

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in §63.11118. If your affected source is subject to the control requirements in §63.11118 only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in §63.11132, you must submit the Initial Notification by May 24, 2011. The Initial Notification must contain the information specified in paragraphs (b)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in §63.13.

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

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

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

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in §63.13, in accordance with the schedule specified in §63.9(h). The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of this subpart, and must indicate whether the facility's throughput is determined based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (b)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (b)(1) of this section.

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

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

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

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

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

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

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

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008; 76 FR 4182, Jan. 24, 2011]

§ 63.11125 What are my recordkeeping requirements?

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

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

(c) Each owner or operator of a gasoline cargo tank subject to the management practices in Table 2 to this subpart must keep records documenting vapor tightness testing for a period of 5 years. Documentation must include each of the items specified in §63.11094(b)(2)(i) through (viii). Records

of vapor tightness testing must be retained as specified in either paragraph (c)(1) or paragraph (c)(2) of this section.

(1) The owner or operator must keep all vapor tightness testing records with the cargo tank.

(2) As an alternative to keeping all records with the cargo tank, the owner or operator may comply with the requirements of paragraphs (c)(2)(i) and (ii) of this section.

(i) The owner or operator may keep records of only the most recent vapor tightness test with the cargo tank, and keep records for the previous 4 years at their office or another central location.

(ii) Vapor tightness testing records that are kept at a location other than with the cargo tank must be instantly available (*e.g.,* via e-mail or facsimile) to the Administrator's delegated representative during the course of a site visit or within a mutually agreeable time frame. Such records must be an exact duplicate image of the original paper copy record with certifying signatures.

(d) Each owner or operator of an affected source under this subpart shall keep records as specified in paragraphs (d)(1) and (2) of this section.

(1) Records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment) or the air pollution control and monitoring equipment.

(2) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.11115(a), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4183, Jan. 24, 2011]

§ 63.11126 What are my reporting requirements?

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

(b) Each owner or operator of an affected source under this subpart shall report, by March 15 of each year, the number, duration, and a brief description of each type of malfunction which occurred during the previous calendar year and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.11115(a), including actions taken to correct a malfunction. No report is necessary for a calendar year in which no malfunctions occurred.

[76 FR 4183, Jan. 24, 2011]

Other Requirements and Information

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

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

§ 63.11131 Who implements and enforces this subpart?

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

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

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

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

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

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

§ 63.11132 What definitions apply to this subpart?

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

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

Gasoline means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater, which is used as a fuel for internal combustion engines.

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

Gasoline dispensing facility (GDF) means any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine used solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on- and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline-fueled engines and equipment.

Monthly throughput means the total volume of gasoline that is loaded into, or dispensed from, all gasoline storage tanks at each GDF during a month. Monthly throughput is calculated by summing the volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the current day, plus the total volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the previous 364 days, and then dividing that sum by 12.

Motor vehicle means any self-propelled vehicle designed for transporting persons or property on a street or highway.

Nonroad engine means an internal combustion engine (including the fuel system) that is not used in a motor vehicle or a vehicle used solely for competition, or that is not subject to standards promulgated under section 7411 of this title or section 7521 of this title.

Nonroad vehicle means a vehicle that is powered by a nonroad engine, and that is not a motor vehicle or a vehicle used solely for competition.

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

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

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

Vapor-tight gasoline cargo tank means a gasoline cargo tank which has demonstrated within the 12 preceding months that it meets the annual certification test requirements in §63.11092(f) of this part.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4183, Jan. 24, 2011]

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

If you own or operate	Then you must
1. A new, reconstructed, or existing GDF subject to §63.11118	Install and operate a vapor balance system on your gasoline storage tanks that meets the design criteria in paragraphs (a) through (h).
	(a) All vapor connections and lines on the storage tank shall be equipped with closures that seal upon disconnect.
	(b) The vapor line from the gasoline storage tank to the gasoline cargo tank shall be vapor-tight, as defined in §63.11132.
	(c) The vapor balance system shall be designed such that the pressure in the tank truck does not exceed 18 inches water pressure or 5.9 inches water vacuum during product transfer.
	(d) The vapor recovery and product adaptors, and the method of connection with the delivery elbow, shall be designed so as to prevent the over-tightening or loosening of fittings during normal delivery operations.
	(e) If a gauge well separate from the fill tube is used, it shall be provided with a submerged drop tube that extends the same distance from the bottom of the storage tank as specified in §63.11117(b).
	(f) Liquid fill connections for all systems shall be equipped with vapor-tight caps.
	(g) Pressure/vacuum (PV) vent valves shall be installed on the storage tank vent pipes. The pressure specifications for PV vent valves shall be: a positive pressure setting of 2.5 to 6.0 inches of water and a negative pressure setting of 6.0 to 10.0 inches of water. The total leak rate of all PV vent valves at an affected facility, including connections, shall not exceed 0.17 cubic foot per hour at a pressure of 2.0 inches of water and 0.63 cubic foot per hour at a vacuum of 4 inches of water.
	(h) The vapor balance system shall be capable of meeting the static pressure performance requirement of the following equation:
	$Pf = 2e^{-500.887/v}$
	Where:
	Pf = Minimum allowable final pressure, inches of water.

If you own or operate	Then you must
	v = Total ullage affected by the test, gallons.
	e = Dimensionless constant equal to approximately 2.718.
	2 = The initial pressure, inches water.
2. A new or reconstructed GDF, or any storage tank(s) constructed after November 9, 2006, at an existing affected facility subject to §63.11118	Equip your gasoline storage tanks with a dual-point vapor balance system, as defined in §63.11132, and comply with the requirements of item 1 in this Table.

[1]The management practices specified in this Table are not applicable if you are complying with the requirements in §63.11118(b)(2), except that if you are complying with the requirements in §63.11118(b)(2)(i)(B), you must operate using management practices at least as stringent as those listed in this Table.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 35944, June 25, 2008; 76 FR 4184, Jan. 24, 2011]

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

If you own or operate	Then you must
A gasoline cargo tank	Not unload gasoline into a storage tank at a GDF subject to the control requirements in this subpart unless the following conditions are met:
	(i) All hoses in the vapor balance system are properly connected,
	(ii) The adapters or couplers that attach to the vapor line on the storage tank have closures that seal upon disconnect,
	(iii) All vapor return hoses, couplers, and adapters used in the gasoline delivery are vapor-tight,
	(iv) All tank truck vapor return equipment is compatible in size and forms a vapor-tight connection with the vapor balance equipment on the GDF storage tank, and
	(v) All hatches on the tank truck are closed and securely fastened.
	(vi) The filling of storage tanks at GDF shall be limited to unloading from vapor-tight gasoline cargo tanks. Documentation that the cargo tank has met the specifications of EPA Method 27 shall be carried with the cargo tank, as specified in §63.11125(c).

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4184, Jan. 24, 2011]

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

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.1	Applicability	Initial applicability determination; applicability after standard established; permit requirements; extensions, notifications	Yes, specific requirements given in §63.11111.
§63.1(c)(2)	Title V Permit	Requirements for obtaining a title V permit from the applicable permitting authority	Yes, §63.11111(f) of subpart CCCCCC exempts identified area sources from the obligation to obtain title V operating permits.
§63.2	Definitions	Definitions for part 63 standards	Yes, additional definitions in §63.11132.
§63.3	Units and Abbreviations	Units and abbreviations for part 63 standards	Yes.
§63.4	Prohibited Activities and Circumvention	Prohibited activities; Circumvention, severability	Yes.
§63.5	Construction/Reconstruction	Applicability; applications; approvals	Yes, except that these notifications are not required for facilities subject to §63.11116.
§63.6(a)	Compliance with Standards/Operation & Maintenance—Applicability	General Provisions apply unless compliance extension; General Provisions apply to area sources that become major	Yes.
§63.6(b)(1)–(4)	Compliance Dates for New and Reconstructed Sources	Standards apply at effective date; 3 years after effective date; upon startup; 10 years after	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
		construction or reconstruction commences for CAA section 112(f)	
§63.6(b)(5)	Notification	Must notify if commenced construction or reconstruction after proposal	Yes.
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major	Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source	No.
§63.6(c)(1)–(2)	Compliance Dates for Existing Sources	Comply according to date in this subpart, which must be no later than 3 years after effective date; for CAA section 112(f) standards, comply within 90 days of effective date unless compliance extension	No, §63.11113 specifies the compliance dates.
§63.6(c)(3)–(4)	[Reserved]		
§63.6(c)(5)	Compliance Dates for Existing Area Sources That Become Major	Area sources That become major must comply with major source standards by date indicated in this subpart or by equivalent time period (e.g., 3 years)	No.
§63.6(d)	[Reserved]		
63.6(e)(1)(i)	General duty to minimize emissions	Operate to minimize emissions at all times; information Administrator will use to determine if operation and maintenance requirements were met.	No. *See* §63.11115 for general duty requirement.
63.6(e)(1)(ii)	Requirement to correct malfunctions ASAP	Owner or operator must correct malfunctions as soon as possible.	No.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.6(e)(2)	[Reserved]		
§63.6(e)(3)	Startup, Shutdown, and Malfunction (SSM) Plan	Requirement for SSM plan; content of SSM plan; actions during SSM	No.
§63.6(f)(1)	Compliance Except During SSM	You must comply with emission standards at all times except during SSM	No.
§63.6(f)(2)–(3)	Methods for Determining Compliance	Compliance based on performance test, operation and maintenance plans, records, inspection	Yes.
§63.6(g)(1)–(3)	Alternative Standard	Procedures for getting an alternative standard	Yes.
§63.6(h)(1)	Compliance with Opacity/Visible Emission (VE) Standards	You must comply with opacity/VE standards at all times except during SSM	No.
§63.6(h)(2)(i)	Determining Compliance with Opacity/VE Standards	If standard does not State test method, use EPA Method 9 for opacity in appendix A of part 60 of this chapter and EPA Method 22 for VE in appendix A of part 60 of this chapter	No.
§63.6(h)(2)(ii)	[Reserved]		
§63.6(h)(2)(iii)	Using Previous Tests To Demonstrate Compliance With Opacity/VE Standards	Criteria for when previous opacity/VE testing can be used to show compliance with this subpart	No.
§63.6(h)(3)	[Reserved]		
§63.6(h)(4)	Notification of Opacity/VE Observation Date	Must notify Administrator of anticipated date of observation	No.
§63.6(h)(5)(i), (iii)–(v)	Conducting Opacity/VE Observations	Dates and schedule for conducting opacity/VE observations	No.
§63.6(h)(5)(ii)	Opacity Test Duration and Averaging Times	Must have at least 3 hours of observation with 30 6-minute averages	No.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.6(h)(6)	Records of Conditions During Opacity/VE Observations	Must keep records available and allow Administrator to inspect	No.
§63.6(h)(7)(i)	Report Continuous Opacity Monitoring System (COMS) Monitoring Data From Performance Test	Must submit COMS data with other performance test data	No.
§63.6(h)(7)(ii)	Using COMS Instead of EPA Method 9	Can submit COMS data instead of EPA Method 9 results even if rule requires EPA Method 9 in appendix A of part 60 of this chapter, but must notify Administrator before performance test	No.
§63.6(h)(7)(iii)	Averaging Time for COMS During Performance Test	To determine compliance, must reduce COMS data to 6-minute averages	No.
§63.6(h)(7)(iv)	COMS Requirements	Owner/operator must demonstrate that COMS performance evaluations are conducted according to §63.8(e); COMS are properly maintained and operated according to §63.8(c) and data quality as §63.8(d)	No.
§63.6(h)(7)(v)	Determining Compliance with Opacity/VE Standards	COMS is probable but not conclusive evidence of compliance with opacity standard, even if EPA Method 9 observation shows otherwise. Requirements for COMS to be probable evidence-proper maintenance, meeting Performance Specification 1 in appendix B of part 60 of this chapter, and data have not been altered	No.
§63.6(h)(8)	Determining Compliance with Opacity/VE Standards	Administrator will use all COMS, EPA Method 9 (in	No.

Citation	Subject	Brief description	Applies to subpart CCCCCC
		appendix A of part 60 of this chapter), and EPA Method 22 (in appendix A of part 60 of this chapter) results, as well as information about operation and maintenance to determine compliance	
§63.6(h)(9)	Adjusted Opacity Standard	Procedures for Administrator to adjust an opacity standard	No.
§63.6(i)(1)–(14)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension	Yes.
§63.6(j)	Presidential Compliance Exemption	President may exempt any source from requirement to comply with this subpart	Yes.
§63.7(a)(2)	Performance Test Dates	Dates for conducting initial performance testing; must conduct 180 days after compliance date	Yes.
§63.7(a)(3)	CAA Section 114 Authority	Administrator may require a performance test under CAA section 114 at any time	Yes.
§63.7(b)(1)	Notification of Performance Test	Must notify Administrator 60 days before the test	Yes.
§63.7(b)(2)	Notification of Re-scheduling	If have to reschedule performance test, must notify Administrator of rescheduled date as soon as practicable and without delay	Yes.
§63.7(c)	Quality Assurance (QA)/Test Plan	Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with; test plan approval procedures; performance audit requirements; internal and external QA procedures for testing	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.7(d)	Testing Facilities	Requirements for testing facilities	Yes.
63.7(e)(1)	Conditions for Conducting Performance Tests	Performance test must be conducted under representative conditions	No, §63.11120(c) specifies conditions for conducting performance tests.
§63.7(e)(2)	Conditions for Conducting Performance Tests	Must conduct according to this subpart and EPA test methods unless Administrator approves alternative	Yes.
§63.7(e)(3)	Test Run Duration	Must have three test runs of at least 1 hour each; compliance is based on arithmetic mean of three runs; conditions when data from an additional test run can be used	Yes.
§63.7(f)	Alternative Test Method	Procedures by which Administrator can grant approval to use an intermediate or major change, or alternative to a test method	Yes.
§63.7(g)	Performance Test Data Analysis	Must include raw data in performance test report; must submit performance test data 60 days after end of test with the Notification of Compliance Status; keep data for 5 years	Yes.
§63.7(h)	Waiver of Tests	Procedures for Administrator to waive performance test	Yes.
§63.8(a)(1)	Applicability of Monitoring Requirements	Subject to all monitoring requirements in standard	Yes.
§63.8(a)(2)	Performance Specifications	Performance Specifications in appendix B of 40 CFR part 60 apply	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring of Flares	Monitoring requirements for flares in §63.11 apply	Yes.
§63.8(b)(1)	Monitoring	Must conduct monitoring according to standard unless Administrator approves alternative	Yes.
§63.8(b)(2)–(3)	Multiple Effluents and Multiple Monitoring Systems	Specific requirements for installing monitoring systems; must install on each affected source or after combined with another affected source before it is released to the atmosphere provided the monitoring is sufficient to demonstrate compliance with the standard; if more than one monitoring system on an emission point, must report all monitoring system results, unless one monitoring system is a backup	No.
§63.8(c)(1)	Monitoring System Operation and Maintenance	Maintain monitoring system in a manner consistent with good air pollution control practices	No.
§63.8(c)(1)(i)–(iii)	Operation and Maintenance of Continuous Monitoring Systems (CMS)	Must maintain and operate each CMS as specified in §63.6(e)(1); must keep parts for routine repairs readily available; must develop a written SSM plan for CMS, as specified in §63.6(e)(3)	No.
§63.8(c)(2)–(8)	CMS Requirements	Must install to get representative emission or parameter measurements; must verify operational status before or at performance test	No.
§63.8(d)	CMS Quality Control	Requirements for CMS quality control, including calibration, etc.; must keep quality control	No.

Citation	Subject	Brief description	Applies to subpart CCCCCC
		plan on record for 5 years; keep old versions for 5 years after revisions	
§63.8(e)	CMS Performance Evaluation	Notification, performance evaluation test plan, reports	No.
§63.8(f)(1)–(5)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring	No.
§63.8(f)(6)	Alternative to Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for continuous emissions monitoring system (CEMS)	No.
§63.8(g)	Data Reduction	COMS 6-minute averages calculated over at least 36 evenly spaced data points; CEMS 1 hour averages computed over at least 4 equally spaced data points; data that cannot be used in average	No.
§63.9(a)	Notification Requirements	Applicability and State delegation	Yes.
§63.9(b)(1)–(2), (4)–(5)	Initial Notifications	Submit notification within 120 days after effective date; notification of intent to construct/reconstruct, notification of commencement of construction/reconstruction, notification of startup; contents of each	Yes.
§63.9(c)	Request for Compliance Extension	Can request if cannot comply by date or if installed best available control technology or lowest achievable emission rate	Yes.
§63.9(d)	Notification of Special Compliance Requirements for New Sources	For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§63.9(e)	Notification of Performance Test	Notify Administrator 60 days prior	Yes.
§63.9(f)	Notification of VE/Opacity Test	Notify Administrator 30 days prior	No.
§63.9(g)	Additional Notifications when Using CMS	Notification of performance evaluation; notification about use of COMS data; notification that exceeded criterion for relative accuracy alternative	Yes, however, there are no opacity standards.
§63.9(h)(1)–(6)	Notification of Compliance Status	Contents due 60 days after end of performance test or other compliance demonstration, except for opacity/VE, which are due 30 days after; when to submit to Federal vs. State authority	Yes, however, there are no opacity standards.
§63.9(i)	Adjustment of Submittal Deadlines	Procedures for Administrator to approve change when notifications must be submitted	Yes.
§63.9(j)	Change in Previous Information	Must submit within 15 days after the change	Yes.
§63.10(a)	Recordkeeping/Reporting	Applies to all, unless compliance extension; when to submit to Federal vs. State authority; procedures for owners of more than one source	Yes.
§63.10(b)(1)	Recordkeeping/Reporting	General requirements; keep all records readily available; keep for 5 years	Yes.
§63.10(b)(2)(i)	Records related to SSM	Recordkeeping of occurrence and duration of startups and shutdowns	No.
§63.10(b)(2)(ii)	Records related to SSM	Recordkeeping of malfunctions	No. *See* §63.11125(d) for recordkeeping of (1)

Citation	Subject	Brief description	Applies to subpart CCCCCC
			occurrence and duration and (2) actions taken during malfunction.
§63.10(b)(2)(iii)	Maintenance records	Recordkeeping of maintenance on air pollution control and monitoring equipment	Yes.
§63.10(b)(2)(iv)	Records Related to SSM	Actions taken to minimize emissions during SSM	No.
§63.10(b)(2)(v)	Records Related to SSM	Actions taken to minimize emissions during SSM	No.
§63.10(b)(2)(vi)–(xi)	CMS Records	Malfunctions, inoperative, out-of-control periods	No.
§63.10(b)(2)(xii)	Records	Records when under waiver	Yes.
§63.10(b)(2)(xiii)	Records	Records when using alternative to relative accuracy test	Yes.
§63.10(b)(2)(xiv)	Records	All documentation supporting Initial Notification and Notification of Compliance Status	Yes.
§63.10(b)(3)	Records	Applicability determinations	Yes.
§63.10(c)	Records	Additional records for CMS	No.
§63.10(d)(1)	General Reporting Requirements	Requirement to report	Yes.
§63.10(d)(2)	Report of Performance Test Results	When to submit to Federal or State authority	Yes.
§63.10(d)(3)	Reporting Opacity or VE Observations	What to report and when	No.
§63.10(d)(4)	Progress Reports	Must submit progress reports on schedule if under compliance extension	Yes.
§63.10(d)(5)	SSM Reports	Contents and submission	No. *See* §63.11126(b) for malfunction

Citation	Subject	Brief description	Applies to subpart CCCCCC
			reporting requirements.
§63.10(e)(1)–(2)	Additional CMS Reports	Must report results for each CEMS on a unit; written copy of CMS performance evaluation; two-three copies of COMS performance evaluation	No.
§63.10(e)(3)(i)–(iii)	Reports	Schedule for reporting excess emissions	No.
§63.10(e)(3)(iv)–(v)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in §§63.8(c)(7)–(8) and 63.10(c)(5)–(13)	No.
§63.10(e)(3)(iv)–(v)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a	No, §63.11130(K) specifies excess emission events for this subpart.

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

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4184, Jan. 24, 2011]

Resources

EPA Gasoline Dispensing Facilities (GDF) Brochure, weblink: http://www.epa.gov/ttn/atw/area/gdfb.pdf

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

Reference

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

Indiana Department of Environmental Management
Office of Air Quality

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

Source Background and Description

Source Name:	Tri-County Asphalt
Source Location:	822 N. CR 800 E, Otwell, Indiana 47564
County:	Pike, Jefferson Township
SIC Code:	2951 (Asphalt Paving Mixtures and Blocks)
Permit Renewal No.:	F125-31073-00035
Permit Reviewer:	Hannah L. Desrosiers

The Office of Air Quality (OAQ) has reviewed an operating permit renewal application from Tri-County Asphalt relating to the continued operation of a stationary batch-mix, hot-mix asphalt production plant.

History

On October 27, 2011, Tri-County Asphalt submitted an application to the OAQ requesting to renew its operating permit. Tri-County Asphalt has indicated that they do not intend to process recycled asphalt pavement (RAP), blast furnace slag, electric arc furnace steel slag, or asbestos-free recycled shingles in their aggregate mix, or crush any recycled asphalt pavement (RAP), and/or grind any kind of recycled asphalt shingles (RAS), asbestos-free or otherwise, on-site. Finally, while Tri-County Asphalt does maintain a maximum of 0.2 acres of cold-mix (stockpile mix) storage piles, it does not produce cold-mix asphalt onsite. Tri-County Asphalt was issued its second FESOP Renewal, No.: F125-23894-00035, on December 5, 2007

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

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

(1) One (1) aggregate rotary dryer, identified as B-1, constructed in 2001, equipped with one (1) 70.0 million British thermal units per hour (MMBtu/hr) dryer burner, firing natural gas, No. 2 distillate oil, and waste oil as available, equipped with a baghouse for particulate matter control, and exhausting through Stack EC-1;

(2) One (1) hot-mix batch mixer, constructed in 1998, with a maximum throughput capacity of 120 tons of raw material per hour, equipped with a baghouse for particulate matter control, and exhausting through Stack EC-1. This source does not process recycled asphalt pavement (RAP), blast furnace slag, electric arc furnace steel mill slag, or recycled asphalt shingles (RAS), asbestos-free or otherwise, in their aggregate mix;

(3) One (1) hot-mix asphalt batch tower, consisting of the following:

(A) four (4) hot bins, each with a maximum holding capacity of 40 tons; and

(B) one (1) bucket elevator;

(C) eight (8) screens; and

(D) three (3) belt conveyors.

(4) Raw material storage piles, with a total maximum storage capacity of 2,000 tons, including:

(A) Outdoor limestone storage piles, having a maximum height of twelve (12) feet and a maximum storage capacity of 1,360 tons, or 0.16 acres;

(B) Outdoor natural sand storage piles, having a maximum height of twelve (12) feet and a maximum storage capacity of 400 tons, or 0.04 acres; and

(B) Outdoor natural sand storage piles, having a maximum height of twelve (12) feet and a maximum storage capacity of 400 tons, or 0.04 acres.

(5) One (1) asphalt storage silo, constructed in 1998, with a maximum storage capacity of 150 tons.

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

Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit

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

Emission Units and Pollution Control Equipment Removed From the Source

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

Insignificant Activities

The source also consists of the following insignificant activities:

(a) One (1) 1.75 million British thermal units per hour (MMBtu/hr) hot oil heater, constructed in 1998, firing natural gas and No. 2 distillate oil as available, uncontrolled and exhausting through Stack S-2; [326 IAC 6-2]

(b) cold-mix (stockpile mix) storage piles, having a maximum height of three (3) feet and a maximum storage capacity of 50 tons, or 0.02 acres; [326 IAC 8-5-2]

(c) Two (2) liquid asphalt storage tanks, identified as AC-1 and AC-2, constructed in 1998, with a maximum storage capacity of 10,000 gallons, each.

(d) One (1) waste oil storage tank, identified as T005, constructed in 2005, with a maximum storage capacity of 10,000 gallons, uncontrolled and exhausting to the atmosphere;

(e) One (1) gasoline oil storage tank, identified as T1, constructed in 2001, with a maximum storage capacity of 300 gallons, uncontrolled and exhausting to the atmosphere;

(f) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons;

(g) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.

(h) Vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids;

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

(j) Baghouse maintenance operations, including replacement or repair of electrostatic precipitators, bags in baghouses, and/or filters in other air filtration equipment;

(k) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]

Existing Approvals

The source was issued FESOP Renewal No.: F125-23894-00035, on December 5, 2007. The source has since received Administrative Amendment No.: F125-30429-00035, issued on May 24, 2011.

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.

Enforcement Issue

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

Emission Calculations

See Appendices A.1 and A.2 of this TSD for detailed emission calculations.

County Attainment Status

The source is located in Pike County, Jefferson Township. The following attainment status designations are applicable to Pike County, Jefferson Township:

Pollutant	Designation
SO2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O3[(1)]	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard.
PM10	Unclassifiable effective November 15, 1990.
PM2.5[(2)]	Unclassifiable or attainment effective October 27, 2011, for the Washington Township for PM2.5. The remainder of Pike County is unclassifiable or attainment effective April 5, 2005, for PM2.5.
NO2	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.
[(2)] In Pike County, only Washington Township has been classified as nonattainment for PM2.5. This source is located in Jefferson Township.

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) 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 NO_x emissions are considered when evaluating the rule applicability relating to ozone. Pike County, Jefferson Township, has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) PM2.5

Pike County, Jefferson Township, has been classified as attainment for $PM_{2.5}$. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011, the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct $PM_{2.5}$ and SO_2 emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants

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

Fugitive Emissions

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

Unrestricted Potential Emissions

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

Pollutant	tons/year
PM	16,874.72
PM10[(1)]	2,382.02
PM2.5	148.80
SO2	245.33
NOx	64.17
VOC	28.70
CO	212.40
GHGs as CO_2e	51,029.58
Total HAPs [(2)]	60.66
Maximum (Worst Case) HAP	57.82 (hydrogen chloride)

NOTES

(1) Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

(2) HAPs include acenaphthene, acetaldehyde, benzene, beryllium, bis(2-ethylhexyl)phthalate, dichlorobenzene, ethylbenzene, fluorene, formaldehyde, HCl, hexane, 2-methylnaphthalene, naphthalene, polycyclic organic matter, phenanthrene, phenol, quinone, toluene, total PAH HAPs, xylene, and arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium compounds.

(3) Appendix A.1 of this TSD, reflects the unrestricted, uncontrolled, potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM10, PM2.5, SO2, and CO is equal to or greater than 100 tons per year. However, the Permittee has agreed to limit the source's PM10, PM2.5, SO2, and CO emissions to less than Title V levels, therefore the Permittee will be issued a FESOP Renewal.

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

(c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of GHGs is less than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year.

(d) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. However, the Permittee has agreed to limit the source's single HAP emissions and total HAP emissions below Title V levels. Therefore, the Permittee will be issued a FESOP Renewal.

Potential to Emit After Issuance

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

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Process/ Emission Unit	Potential To Emit of the Entire Source after Issuance of Renewal (tons/year)									
	PM	PM_{10}*	$PM_{2.5}$*	SO_2	NO_x	VOC	CO	GHGs** as CO_2e	Total HAPs	Worst Single HAP
Ducted Emissions										
Dryer Fuel Combustion (worst case) (1)	29.49	19.52	19.52	95.11	30.66	1.69	25.75	37,066.78	10.85	9.90 (HCL)
Dryer/Mixer and Batch Tower (Process) (2)	223.09	91.07	95.69	21.48	29.30	8.79	97.65	9,070.58	1.90	0.66 (formaldehyde)
Dryer/Mixer Slag Processing (3)	0	0	0	0	0	0	0	0	0	N/A
Hot Oil Heater Fuel Combustion/Process (worst case)	0.11	0.18	0.18	3.89	1.10	0.04	0.64	1,533.00	0.02	0.014 (hexane)
Diesel-Fired Generator < 600 HP	0	0	0	0	0	0	0	0	0	N/A
Diesel-Fired Generator > 600 HP	0	0	0	0	0	0	0	0	0	N/A
Worst Case Emissions*	**223.20**	**91.25**	**95.87**	**99.00**	**31.76**	**8.83**	**98.29**	**38,599.78**	**10.87**	**9.90 (HCL)**
Fugitive Emissions										
Asphalt Load-Out, Silo Filling, On-Site Yard (3)	0.27	0.27	0.27	0	0	4.18	0.70	0	0.07	0.02 (formaldehyde)
Material Storage Piles	0.10	0.03	0.03	0	0	0	0	0	0	N/A
Material Processing and Handling (3)	1.58	0.75	0.11	0	0	0	0	0	0	N/A
Material Crushing, Screening, and Conveying (3)	6.49	2.27	2.27	0	0	0	0	0	0	N/A
Unpaved and Paved Roads (worst case) (1)	17.36	4.42	0.44	0	0	0	0	0	0	N/A
Cold Mix Asphalt Production (4)	0	0	0	0	0	0	0	0	0	N/A
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0.17	0	0	0.19	0.07 (xylenes)
Volatile Organic Liquid Storage Vessels ***	0	0	0	0	0	negl.	0	0	negl.	negl.
Total Fugitive Emissions	**25.80**	**7.75**	**3.13**	**0**	**0**	**4.34**	**0.70**	**0**	**0.26**	**0.07 (xylenes)**
Total Limited/ Controlled Emissions	**249.00**	**99.00**	**99.00**	**99.00**	**31.76**	**13.18**	**99.00**	**38,599.78**	**11.13**	**9.90 (HCL)**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

negl = negligible N/A = Not applicable HCL = hydrogen chloride

* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". Additionally, US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

** The 100,000 CO2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

*** Fugitive emissions from each of the volatile organic liquid storage tanks were calculated using the EPA Tanks 4.0.9d program and were determined to be negligible.

(1) Limited PTE based upon annual production and fuel usage limits to comply with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).

(2) Limited PTE based upon annual production limit and lb/ton emission limits to comply with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).

(3) Limited PTE based upon annual production limit to comply with 326 IAC 2-2 (PSD) & 326 IAC 2-8 (FESOP).

(4) Limited PTE based upon maximum annual VOC usage limit to comply with 326 IAC 2-8 (FESOP).

(a) FESOP Status

This existing source is not a Title V major stationary source, because the potential to emit criteria pollutants from the entire source will be limited to less than the Title V major source threshold

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

(1) In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), PM10, PM2.5, and CO emissions from the batch mixer process shall be limited as follows:

(A) The amount of hot-mix asphalt processed shall not exceed 488,251 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a change from 487,600 tons of asphalt per twelve (12) consecutive month period. This is a Title I change.*

(B) The PM10 emissions from the batch mixer shall not exceed 0.373 pounds per ton of asphalt processed. *This is a change from 21.63 pounds per hour of asphalt processed. This is a Title I change*.

(C) The PM2.5 emissions from the batch mixer shall not exceed 0.392 pounds per ton of asphalt processed. *This is a new requirement for this source. This is a Title I change*.

(D) The CO emissions from the batch mixer shall not exceed 0.40 pounds per ton of asphalt processed. *This is an existing requirement for this source.*

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

(2) Pursuant to 326 IAC 2-8, the Permittee shall continue to control fugitive PM, PM10, and PM2.5 emissions from the asphalt load-out and on-site yard, material screening, and conveying, material processing and handling, material storage piles, and paved and unpaved roads according to the fugitive dust plan, included as Attachment A to the permit. *This is an existing requirement for this source.*

(3) Pursuant to 326 IAC 2-8-4, the SO2, VOC, and HAP emissions from the aggregate dryer and batch mixer (dryer/mixer) shall be limited as follows:

(A) <u>Fuel Specifications</u>

(i) The sulfur content of the No. 2 distillate fuel oil shall not exceed 0.50% by weight. *This is a new requirement for this source. This is a Title I change*.

(ii) The sulfur content of the waste oil shall not exceed 0.75% by weight. *This is a new requirement for this source. This is a Title I change*.

(ii) The chlorine content of the waste oil shall not exceed 0.40% by weight. *This is an existing requirement for this source*.

(iv) The waste oil shall not contain more than 1.02% ash and 0.01% lead, by weight. *This is a new requirement for this source. This is a Title I change.*

(v) The HCl emissions shall not exceed 26.4 pounds of HCl per 1,000 gallons of waste oil burned. *This is a new requirement for this source. This is a Title I change.*

(B) Single Fuel Usage Limitations:
When combusting only one type of fuel per twelve (12) consecutive month period in the aggregate dryer burner, the usage of fuel shall be limited as follows:

(i) Natural gas usage shall not exceed 613 million cubic feet (MMCF) per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a new requirement for this source. This is a Title I change;*

(ii) No. 2 distillate fuel oil usage shall not exceed 2,679,232 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a change from 2,734,648 gallons per twelve (12) consecutive month period in the hot oil heater and aggregate dryer burner. This is a Title I change*; and

(iii) Waste oil usage shall not exceed 750,345 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a change from 712,121 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. . This is also a change from the equivalency of 1.0 gallon of waste oil per every 2.96 gallons of No. 2 fuel oil, based on SO2 emissions. This is a Title I change.*

Note: The source is only permitted to burn the above-mentioned fuels in the aggregate dryer burner. IDEM has determined that it is not necessary to limit fuel usage in the hot oil heater.

(C) Multiple Fuel Usage Limitation:
When combusting more than one fuel per twelve (12) consecutive month period in the aggregate dryer burner, emissions shall be limited as follows:

(i) SO2 emissions shall not exceed 95.11 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a new requirement for this source. This is a Title I change*;

The Permittee shall limit fuel usage in the aggregate dryer burner according to the following formula: *This is a change from determining fuel usage by equivalency.*

$$S = \frac{G(E_G) + O(E_O) + W(E_W)}{2{,}000 \text{ lbs/ton}}$$

where:
S = tons of sulfur dioxide emissions for a 12-month consecutive period;
G = million cubic feet of natural gas used in the last 12 months;
O = gallons of No. 2 fuel oil used in the last 12 months;
W = gallons of waste oil used in the last 12 months;
E_G = 0.60 lb/million cubic feet of natural gas;
E_O = 71.0 lb/1000 gallons of No. 2 fuel oil; and
E_W = 110.3 lb/1000 gallons of waste oil.

(ii) The unlimited PTE NOx from this source is less than 100 tons per year. Therefore, a NOx emissions limit is not required to allow for compliance with FESOP.

(iii) HCl emissions shall not exceed 9.90 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a new requirement for this source. This is a Title I change.*

The Permittee shall limit fuel usage in the aggregate dryer burner according to the following formula:

$$HCL = \frac{W(E_W)}{2000 \text{ lbs/ton}}$$

where:
HCl = tons of hydrogen chloride emissions for a 12-month consecutive period
W = gallons of waste oil used in the last 12 months.
E_W = 26.4 lbs/1000 gallons of waste oil.

(iv) The unlimited PTE Green House Gasses (CO2e) from this source is less than 100,000 tons per year. Therefore, a CO2e emissions limit is not required to allow for compliance with FESOP.

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

Note: Recent testing performed on similar operations at another asphalt plant facility has shown that slag is responsible for higher SO2 emissions than were previously accounted for in standard asphalt plant emission calculations. Therefore, since Tri-County Asphalt has indicated that it does not intend to process slag in the aggregate mix, a new condition prohibiting the use of slag in the aggregate mix has been added to the permit to ensure compliance with the one hundred (100) ton per year FESOP threshold for SO2, and make the requirements of 326 IAC 2-7 Title V (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable;;

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

(5) Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD), 326 IAC 8-1-6 (Best Available Control Technologies (BACT)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAPs)) not applicable, the Permittee shall not produce and/or manufacture cold-mix asphalt onsite. *This is a new requirement for this source. This is a Title I change.*

Note: Cold-mix asphalt production/manufacture is a potential source of VOC and HAP emissions. The source has confirmed that is does not want the flexibility to produce/manufacture cold-mix asphalt on-site. Therefore, a new condition prohibiting the production/manufacture of cold-mix asphalt been added to the permit;

Compliance with this requirement, combined with the potential to emit VOCs and HAPs from all other emission units at this source, shall limit the source-wide total potential to emit VOCs to less than 100 tons per 12 consecutive month period, any single HAP to less than ten (10) tons per twelve (12) consecutive month period, and total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable.

(6) Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAPs)) not applicable, the Permittee shall not grind recycled asphalt shingles on-site or use asphalt shingles as an aggregate additive in its hot-mix asphalt operations. *This is a new requirement for this source. This is a Title I change.*

Note: Post consumer waste asphalt shingles are a potential source of asbestos and particulate emissions. The source has confirmed that is does not want the flexibility to grind recycled asphalt shingles on-site or process recycled shingles in their aggregate mix. Therefore, a new condition prohibiting the grinding and/or use of asphalt shingles in the aggregate mix has been added to the permit;

Compliance with this requirement, combined with the potential to emit HAPs from all other emission units at this source, shall limit the source-wide total potential to emit of any single HAP to less than ten (10) tons per twelve (12) consecutive month period, and total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable.

(b) <u>PSD Minor Source</u>

This existing source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit PM is limited to less than 250 tons per year, the potential to emit all other attainment regulated criteria pollutants are less than 250 tons per year, the potential to emit greenhouse gases (GHGs) is less than the PSD subject to regulation threshold of one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

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

(A) The amount of hot-mix asphalt processed shall not exceed 488,251 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a change from 487,600 tons of asphalt per twelve (12) consecutive month period. This is a Title I change.*

(2) PM emissions from the batch mixer shall not exceed 0.914 pounds per ton of asphalt processed. *This is a change from 51.46 pounds per hour of asphalt processed. This is a Title I change.*

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

(c) Emission Offset Minor Status
All counties in Indiana have been classified as attainment or unclassifiable in Indiana for all criteria pollutants, except PM2.5. Therefore, the requirements of 326 IAC 2-3 (Emission Offset) do not apply and are not included in the permit.

Federal Rule Applicability

New Source Performance Standards (NSPS)

(a) 40 CFR 60, Subpart I - Standards for Hot-mix Asphalt Facilities
The existing stationary batch-mix, hot-mix asphalt plant, constructed in 1998, is still subject to the New Source Performance Standard, 40 CFR 60, Subpart I (326 IAC 12), because it was constructed after June 11, 1973 and continues to meet the definition of a hot-mix asphalt facility pursuant to the rule. *This is an existing requirement for this source.*

The units subject to this rule include the following:

(1) Dryers

(2) Systems for screening, handling, storing, and weighing hot aggregate

(3) Systems for loading, transferring, and storing mineral filler

(4) Systems for mixing hot-mix asphalt

(5) The loading, transfer, and storage systems associated with emission control systems

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

The source will comply with this rule by using a baghouse to limit particulate matter emissions from the dryer/mixer to less than four hundredths (0.04) gr/dscf, and by applying the management techniques outlined in the Fugitive Dust Plan (included as Attachment A of the permit).

The hot-mix asphalt facilities are still subject to the following portions of 40 CFR 60, Subpart I (included as Attachment B of the permit):

(1) 40 CFR 60.90.

(2) 40 CFR 60.91.

(3) 40 CFR 60.92.

(4) 40 CFR 60.93.

Note: this NSPS includes testing requirements applicable to this source.

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

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

(1) The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc (326 IAC 12), are not included in the permit for the aggregate rotary dryer, identified as B-1, because the dryer burner is a direct-fired process unit and not a steam generating unit, as defined in 40 CFR 60.41c.

(2) The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc (326 IAC 12), are not included in the permit for the 1.75 MMBtu/hr hot oil heater, because although the unit combusts fuel to heat a transfer media, the maximum design heat input capacity is less than ten (10) MMBtu/hr.

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

(1) The requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels, 40 CFR 60, Subpart Kb (326 IAC 12), are not included in the permit for the two (2) existing 10,000 gallon liquid asphalt storage tanks (AC-1 and AC-2), or the 10,000 gallon waste oil storage tank (T005), because although each tank was constructed after the rule applicability date of July 23, 1984, each tank has a maximum storage capacity of less than seventy-five cubic meters (75 m^3) (19,813 gallons) and the liquid stored in each tank has a maximum true vapor pressure of less than fifteen kiloPascals (15.0 kPa).

(2) The requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels, 40 CFR 60, Subpart Kb (326 IAC 12), are not included in the permit for the 300 gallon gasoline storage tank, because although the tank was constructed after the rule applicability date of July 23, 1984 and the liquid stored in the tank has a maximum true vapor pressure of greater than fifteen kiloPascals (15.0 kPa), the tank has a maximum storage capacity of less than seventy-five cubic meters (75 m^3) (19,813 gallons).

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

The requirements of the New Source Performance Standard for Asphalt Processing and Asphalt Roofing Manufacture, 40 CFR 60, Subpart UU (2U) (326 IAC 12), are not included in the permit, because the existing stationary batch-mix, hot-mix asphalt plant, still does not meet the definition of an asphalt processing plant, since it does not blow asphalt, or an asphalt roofing plant because it does not produce asphalt roofing products, and pursuant to 40 CFR 60.101(a) the stationary drum hot-mix asphalt plant is not a petroleum refinery because it is not engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of petroleum or through redistillation, cracking or reforming of unfinished petroleum derivatives.

(e) 40 CFR 60, Subpart OOO - Standards for Nonmetallic Mineral Processing Plants

The requirements of the New Source Performance Standard for Nonmetallic Mineral Processing Plants (40 CFR 60, Subpart OOO) (326 IAC 12), are not included in the permit, since the source still does not perform any crushing or grinding of any kind of nonmetallic minerals, including Recycled Asphalt Pavement (RAP), Recycled Asphalt Shingles (RAS), onsite.

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

The requirements of the New Source Performance Standard for Calciners and Dryers in Mineral Industries, 40 CFR 60, Subpart UUU (3U) (326 IAC 12), are not included in the permit, because the existing stationary batch-mix, hot-mix asphalt plant, still does not meet the definition of a mineral processing plant, meaning that it does not process or produce any of the following minerals, their concentrates or any mixture of which the majority (>50 percent) is any of the following minerals or a combination of these minerals: alumina, ball clay, bentonite, diatomite, feldspar, fire clay, fuller's earth, gypsum, industrial sand, kaolin, lightweight aggregate, magnesium compounds, perlite, roofing granules, talc, titanium dioxide, and vermiculite.

(g) 40 CFR 60, Subpart IIII - NSPS for Stationary Compression Ignition Internal Combustion Engines

The requirements of the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart IIII (326 IAC 12), are not included in the permit, since this existing source still does not include any stationary compression ignition (CI) internal combustion engine(s) (ICE), as defined in 40 CFR 60.4219.

(h) 40 CFR 60, Subpart JJJJ - NSPS for Stationary Spark Ignition Internal Combustion Engines
The requirements of the New Source Performance Standard for Stationary Spark Ignition Internal Combustion Engines, 40 CFR 60, Subpart JJJJ (326 IAC 12), are not included in the permit, since this existing source still does not include any stationary compression ignition (CI) internal combustion engine(s) (ICE), as defined in 40 CFR 60.4248.

(i) There are no other New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(a) 40 CFR 63, Subpart DDDDD - NESHAPs for Industrial, Commercial, and Institutional Boilers and Process Heaters
The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD (5D) (326 IAC 20), are not included in the permit, since this source is not a major source of HAPs, and is not located at nor is a part of a major source of HAP emissions.

(b) 40 CFR 63, Subpart ZZZZ - NESHAP for Stationary Reciprocating Internal Combustion Engines
The requirements of the New Source Performance Standard for Stationary Reciprocating Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ (326 IAC 20-82), are not included in the permit, since this existing source still does not include any stationary compression ignition (CI) internal combustion engine(s) (ICE), as defined in 40 CFR 63.6675.

(c) 40 CFR 63, Subpart LLLLL - NESHAPs for Asphalt Processing and Asphalt Roofing Manufacturing
The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63, Subpart LLLLL (5L) (326 IAC 20-71), are not included in the permit, because the stationary batch-mix, hot-mix asphalt plant, still does not meet the definition of an asphalt processing plant or an asphalt roofing manufacturing facility, since neither unit engages in the preparation of asphalt flux or asphalt roofing materials. Additionally, this existing source is not a major source of HAPs, and is not located at nor is it a part of a major source of HAP emissions.

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

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

(1)	40 CFR 63.11110;	(6)	40 CFR 63.11130;
(2)	40 CFR 63.11111(a), (b), (e), (f);	(7)	40 CFR 63.11131;
(3)	40 CFR 63.11112(a), (d);	(8)	40 CFR 63.11132; and
(4)	40 CFR 63.11113(b), (c);	(9)	Table 3
(5)	40 CFR 63.11116;		

Note: There are no testing requirements applicable to this existing source for this NESHAP.

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

(e) 40 CFR 63, Subpart JJJJJJ - NESHAPs for Industrial, Commercial, and Institutional Boilers Area Sources
The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJJ (6J), are not included in the permit for the No. 2 distillate fuel oil fired hot oil heater, because although this existing source is an area source of hazardous air pollutants (HAP), as defined in §63.2, and the hot oil heater fires No. 2 distillate fuel oil, it does not meet the definition of a boiler, as defined in §63.11237, since heat transfer oil and not water is used as the indirect heating media.

(f) 40 CFR 63, Subpart AAAAAAA - NESHAP for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing
The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63, Subpart AAAAAAA (7A) (326 IAC 20), are not included in the permit, because although the portable drum mix asphalt plant is an area source of hazardous air pollutant (HAP) emissions, as defined in §63.2, it does not meet the definition of an asphalt processing operation or an asphalt roofing manufacturing operation, as defined in §63.11566, since it does not engage in the preparation of asphalt flux or asphalt roofing materials.

(g) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

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

State Rule Applicability - Entire Source

(a) 326 IAC 1-7 (Stack Height)
The requirements of 326 IAC 1-7 (Stack Height) are not included in the permit because although the unlimited and uncontrolled PM10 and SO2 emissions from this existing source, are each greater than one hundred (100) tons per year, asphalt concrete plants are still specifically exempted under 326 IAC 1-7-5(c).

(b) 326 IAC 2-1.1-5 (Nonattainment New Source Review)
Pike County, Jefferson Township, is classified as attainment or unclassifiable in Indiana for all regulated NSR pollutants. Therefore, pursuant to 326 IAC 2-1.1-5, the Nonattainment New Source Review requirements do not apply, and are not included in the permit.

(c) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
PSD applicability is discussed under the "PTE of the Entire Source after Issuance of the FESOP" section above.

(d) 326 IAC 2-3 (Emission Offset)
Emission Offset applicability is discussed under the "PTE of the Entire Source after Issuance of the FESOP" section above.

(e) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit HAPs, from the existing hot-mix asphalt production operation, is still greater than ten (10) tons per year for any single HAP and greater than twenty-five (25) tons per year of a combination of HAPs. However, the source has agreed to continue to limit potential HAPs emissions from these facilities to less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) still do not apply, see the "Potential to Emit after Issuance" section above, and are not included in the in the permit.

(f) 326 IAC 2-6 (Emission Reporting)
This source is still not subject to 326 IAC 2-6 (Emission Reporting) because it is not required to have an operating permit pursuant to 326 IAC 2-7 (Part 70); it is not located in Lake, Porter, or LaPorte County, and its potential to emit lead is less than five (5) tons per year. Therefore, pursuant to 326 IAC 2-6-1(b), the source is still only subject to additional information requests as provided for in 326 IAC 2-6-5.

(g) 326 IAC 2-8-4 (FESOP)
FESOP applicability is discussed under the "PTE of the Entire Source after Issuance of the FESOP" section above.

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

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

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

(i) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
The source is still subject to the requirements of 326 IAC 6-4, because the asphalt load-out, silo filling, and on-site yard, material storage piles, material processing and handling, material screening, and conveying, and paved and unpaved roads, each, continue to have the potential to emit fugitive particulate emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the existing source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

(j) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is still subject to the requirements of 326 IAC 6-5, because the asphalt load-out, silo filling, and on-site yard, material storage piles, material processing and handling, material crushing, screening, and conveying, and paved and unpaved roads were constructed after December 13, 1985, and continue to have potential fugitive particulate emissions greater than twenty-five (25) tons per year. Therefore, pursuant to 326 IAC 6-5, fugitive particulate matter emissions shall continue to be controlled according to the Fugitive Particulate Emissions Control Plan, which is included as Attachment A to the permit.

(k) 326 IAC 6.5 PM Limitations Except Lake County
This source is not subject to 326 IAC 6.5 because it is not located in any one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

(l) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.

(m) 326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

State Rule Applicability – Individual Facilities

Batch-Mix Hot-Mix Asphalt Plant

(a) 326 IAC 1-6-3 (Preventive Maintenance Plan)
Any person responsible for operating any facility required to obtain a permit under the Federally Enforceable State Operating Permit (FESOP) Program, 326 IAC 2-8, shall prepare and maintain a preventive maintenance plan in accordance with 326 IAC 1-6-3(a), whenever a control device is required for compliance with any applicable emission limitations and/or air pollution control regulations. The batch dryer and batch mixer each still requires the use of a control device to limit the particulate emissions of PM, PM10 and PM2.5 to less than PSD and TV thresholds. Therefore a PMP is still required for these units and their associated control devices.

(b) 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)
The existing dryer burner is still not a source of indirect heating, as defined in 326 IAC 1-2-19 "Combustion for Indirect Heating". Therefore, the requirements of 326 IAC 6-2 still do not apply, and are not included in the permit.

(c) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
The existing batch-mix, hot-mix asphalt plant is still subject to 40 CFR 60, Subpart I (Standards of Performance for Hot-mix Asphalt Facilities), incorporated by reference through 326 IAC 12. Therefore, pursuant to 326 IAC 6-3-1(c)(5), the existing batch-mix, hot-mix asphalt plant is still not subject to the requirements of 326 IAC 6-3 because it is subject to the more stringent particulate limit established in 326 IAC 12.

(d) 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)
The existing dryer burner is still subject to 326 IAC 7-1.1 because the potential to emit SO2 from the dryer is equal to or greater than twenty-five (25) tons/year, or ten (10) pounds/hour. Therefore, pursuant to this rule, sulfur dioxide emissions from the dryer burner shall continue to be limited to:

(A) Five-tenths (0.5) pounds per million Btu heat input for distillate oil combustion.

(B) One and six tenths (1.6) pounds per million Btu heat input for residual oils.

Note: No. 2 fuel oil is considered distillate oil, waste oil is considered residual oil.

(e) 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements)
Pursuant to 326 IAC 7-2-1(c), the source shall continue to submit reports of calendar month average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate (pounds SO2 per MMBtu), to the OAQ upon request.

(f) 326 IAC 8-1-6 (VOC rules: General Reduction Requirements for New Facilities)
The unlimited potential to emit VOCs from the existing batch-mix batch mixer is still less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 still do not apply, and are not included in the permit.

See Appendix A for the detailed calculations.

(g) 326 IAC 8-6-1 (Organic Solvent Emission Limitations)
The potential to emit VOCs from the entire source are less than 100 tons per year, and the potential to emit VOCs from the batch-mix batch mixer are less than 25 tons per year. Therefore, the requirements of 326 IAC 8-6-1 (Organic Solvent Emission Limitations) still do not apply and are not included in the permit.

(h) There are no other 326 IAC 8 Rules that are applicable to the stationary drum hot-mix asphalt plant.

(i) 326 IAC 9-1 (Carbon Monoxide Emission Limits)
This existing stationary, hot-mix asphalt production operation is still not one of the source types listed in 326 IAC 9-1-2. Therefore, the requirements of 326 IAC 9-1 do not apply and are not included in the permit.

(j) 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category)
The existing 70.0 MMBtu/hr aggregate dryer burner still does not meet the definition of an affected facility, as defined in 326 IAC 10-3-1(a), because it still has a maximum a heat input of less than two hundred fifty million (250,000,000) British thermal units per hour (MMBtu/hr); therefore, it is still not subject to this rule and the requirements are not included in the permit.

Hot Oil Heating Systems

(a) 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)
The existing hot oil heater, constructed in 1998 and having a maximum rated heat input capacity of 1.75 MMBtu/hr, is subject to 326 IAC 6-2-4 because it was constructed after the rule applicability date of September 21, 1983, and meets the definition of an indirect heating unit, as defined in 326 IAC 1-2-19, since it combusts fuel to produce usable heat that is to be transferred through a heat-conducting materials barrier or by a heat storage medium to a material to be heated so that the material being heated is not contacted by, and adds no substance to the products of combustion.

Pursuant to 326 IAC 6-2-4(a), for a total source maximum operating capacity rating of less than ten (10) MMBtu/hr, the pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input shall not exceed six tenths (0.6) pounds per MMBtu (lb/MMBtu).

Therefore, particulate emissions from the hot oil heater shall continue to not exceed six tenths (0.6) pounds per MMBtu heat input. *This is a new requirement for this source. This is a Title I change.*

Based on Appendix A and AP-42, the potential PM emission rate is 1.9 pounds per million cubic feet of natural gas, or 0.0019 pounds per million British thermal units. Therefore, the hot oil heater can comply with this limit.

See Appendix A for the detailed calculations.

(b) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
The hot oil heating system does not meet the definition of a "manufacturing process", as defined in 326 IAC 6-3-1.5(2), therefore, the hot oil heater is exempt from the requirements of 326 IAC 6-3, and the requirements are not included in the permit.

(c) 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)
The unlimited potential to emit SO2 from the 1.75 MMBtu/hr hot oil heater, is still less than twenty-five (25) tons/year, or ten (10) pounds/hour. Therefore, the requirements of 326 IAC 7-1.1 still do not apply and are not included in the permit.

See Appendix A for the detailed calculations.

(d) 326 IAC 9-1 (Carbon Monoxide Emission Limits)
The 1.75 MMBtu/hr hot oil heater, is still not one of the source types listed in 326 IAC 9-1-2. Therefore, the requirements of 326 IAC 9-1 (Carbon Monoxide Emission Limits) still do not apply and are not included in the permit.

(e) 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category)
The 1.75 MMBtu/hr hot oil heater, still does not meet the definition of an affected facility, as defined in 326 IAC 10-3-1(a), because the heater still has a maximum a heat input of less than two hundred fifty million (250,000,000) British thermal units per hour (MMBtu). Therefore, the requirements of 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category) still do not apply and are not included in the permit.

Cold-Mix Asphalt Storage

(a) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The existing cold-mix asphalt storage piles are still subject to the requirements of 326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving); therefore, the requirements of 326 IAC 8-1-6 BACT still do not apply to the cold-mix asphalt storage piles and are not included in the permit.

See Appendix A for the detailed calculations.

(b) 326 IAC 8-5-2 (Asphalt paving rules)
Any paving application made after January 1, 1980, is subject to the requirements of 326 IAC 8-5-2. Pursuant to this rule, no person shall cause or allow the use of cutback asphalt or asphalt emulsion containing more than seven percent (7%) oil distillate by volume of emulsion for any paving application except the following purposes:

(a) penetrating prime coating;

(b) stockpile storage; and

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

(c) 326 IAC 8-6-1 (Organic Solvent Emission Limitations)
The existing cold-mix asphalt storage piles are still subject to the requirements of 326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving). Therefore, the requirements of 326 IAC 8-6-1 (Organic Solvent Emission Limitations) still do not apply and are not included in the permit.

See Appendix A for the detailed calculations.

(d) There are no other 326 IAC 8 Rules that are applicable to the cold-mix asphalt production operation.

Storage Tanks

(a) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The potential to emit VOCs from the existing liquid asphalt storage tanks, identified as AC-1 and AC-2, the existing waste oil storage tank, identified as T005, and the existing gasoline storage tank, identified as T1, is still less than twenty-five (25) tons per year, each. Therefore, the requirements of 326 IAC 8-1-6 still do not apply and are not included in the in the permit.

See Appendix A for the detailed calculations.

(b) 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)
The existing liquid asphalt storage tanks, identified as AC-1 and AC-2, the existing waste oil storage tank, identified as T005, and the existing gasoline storage tank, identified as T1, continue

to have a maximum storage capacity of less than thirty-nine thousand (39,000) gallons, each. Therefore, the requirements of 326 IAC 8-4-3 still do not apply to any of these tanks and are not included in the permit.

(c) 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
The existing liquid asphalt storage tanks, identified as AC-1 and AC-2, the existing waste oil storage tank, identified as T005, and the existing gasoline storage tank, identified as T1, are each not subject to the requirements of this rule because the source is not located in Clark, Floyd, Lake, or Porter Counties.

(d) There are no other 326 IAC 8 Rules that are applicable to the existing storage tanks.

Compliance Determination and Monitoring Requirements

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

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

The compliance determination, testing, and monitoring requirements applicable to this source are as follows:

Compliance Determination & Testing Requirements

(a) The existing batch-mix aggregate dryer and batch mixer (dryer/mixer) continue to have applicable compliance determination requirements as specified below:

(1) In order to comply with the PM, PM10, and PM2.5 limitations in the permit, the baghouse shall continue to be in operation and control emissions at all times when the dryer/mixer is in operation.

(2) The annual hot-mix asphalt production rate will be used to verify compliance with the PSD PM emission limitation, the FESOP PM10, PM2.5, and CO emission limitations.

(3) The fuel oil characteristics (i.e., sulfur content) and usage rates will be used to verify compliance with the SO2 emission limitation.

(4) The waste oil characteristics (i.e., ash, chlorine, and lead content) and usage rates will be used to verify compliance with the FESOP PM, PM10, PM2.5, and HAP limitations.

Testing Requirements

The testing requirements applicable to this source are as follows:

Emission Unit	Control Device	Pollutant	Timeframe for Testing	Frequency of Testing
Dryer/mixer	Baghouse	PM/PM10/PM2.5	Within 5 years of last valid test *	Once every five (5) years

* Required for compliance with 40 CFR 60, Subpart I, 326 IAC 2-8 (FESOP). The last valid batch-mix dryer/mixer stack test for PM and PM10 occurred on June 12, 2008. The source was in compliance at that time.

Compliance Monitoring Requirements

The existing existing aggregate dryer and batch mixer baghouse stack exhaust, and the material processing and handling, screening, conveying, and material transfer points continue to have applicable compliance monitoring conditions as specified below:

Emission Unit & Control Device	Parameter	Frequency	Range	Excursions and Exceedances
Dryer/mixer baghouse stack exhaust (EC-1),	Visible Emissions	Once per day	normal/abnormal	Response Steps
	Pressure Drop	Once per day	3.0 to 6.0 inches	Response Steps
	Bags in baghouse	As needed	normal/abnormal	Response Steps
Conveyors, screens, and material transfer points	Visible Emissions	Once per day	normal/abnormal	Response Steps

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

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on October 27, 2011.

The operation of this source shall be subject to the conditions of the attached proposed FESOP Renewal F125-31073-00035. The staff recommends to the Commissioner that this FESOP Renewal be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Ms. Hannah Desrosiers at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5374 or toll free at 1-800-451-6027 extension 4-5374.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Appendix A.1: Unlimited Emissions Calculations
Entire Source - Batch Mix

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

Asphalt Plant Maximum Capacity - Batch Mix

Maximum Hourly Asphalt Production =	120	ton/hr								
Maximum Annual Asphalt Production =	1,051,200	ton/yr								
Maximum Annual Blast Furnace Slag Usage =	0	ton/yr	0	% sulfur						
Maximum Annual Steel Slag Usage =	0	ton/yr	0	% sulfur						
Maximum Dryer Fuel Input Rate =	70.0	MMBtu/hr								
Natural Gas Usage =	613	MMCF/yr								
No. 2 Fuel Oil Usage =	4,380,000	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Usage =	0	gal/yr, and	0	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and	0	% sulfur						
Propane Usage =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Butane Usage =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Used/Waste Oil Usage =	4,380,000	gal/yr, and	0.75	% sulfur	1.02	% ash	0.400	% chlorine,	0.010	% lead
Diesel Fuel Usage - Generator < 600 HP =	0	gal/yr,and								
Diesel Fuel Usage - Generator > 600 HP =	0	gal/yr	0.00	% sulfur						
Unlimited PM Dryer/Mixer Emission Factor =	32.0	lb/ton of asphalt production								
Unlimited PM10 Dryer/Mixer Emission Factor =	4.5	lb/ton of asphalt production								
Unlimited PM2.5 Dryer/Mixer Emission Factor =	0.27	lb/ton of asphalt production								
Unlimited VOC Dryer/Mixer Emission Factor =	0.036	lb/ton of asphalt production								
Unlimited CO Dryer/Mixer Emission Factor =	0.4	lb/ton of asphalt production								
Unlimited Blast Furnace Slag SO2 Dryer/Mixer Emission Factor =	0	lb/ton of slag processed								
Unlimited Steel Slag SO2 Dryer/Mixer Emission Factor =	0	lb/ton of slag processed								

Unlimited/Uncontrolled Emissions

	Unlimited/Uncontrolled Potential to Emit (tons/year)										
	Criteria Pollutants							Greenhouse Gas Pollutants	Hazardous Air Pollutants		
Process Description	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**CO_2e**	**Total HAPs**	**Worst Case HAP**	
Ducted Emissions											
Dryer Fuel Combustion (worst case)	142.96	113.92	113.92	241.45	43.80	2.19	25.75	49,496.58	60.30	57.82	(hydrogen chloride)
Dryer/Mixer and Batch Tower (Process)	16,819.20	2,365.20	141.91	46.25	63.07	18.92	210.24	19,528.88	4.08	1.42	(formaldehyde)
Dryer/Mixer Slag Processing (worst case)	0	0	0	0	0	0	0	0	0	0	
Hot Oil Heater Fuel Combustion/Process (worst case)	0.11	0.18	0.18	3.89	1.10	0.04	0.64	1,533.00	0.018	0.014	(hexane)
Diesel-Fired Generator < 600 HP	0	0	0	0	0	0	0	0	0	0	
Diesel-Fired Generator > 600 HP	0	0	0	0	0	0	0	0	0	0	
Worst Case Emissions*	**16,819.31**	**2,365.38**	**142.09**	**245.33**	**64.17**	**18.96**	**210.88**	**51,029.58**	**60.31**	**57.82**	**(hydrogen chloride)**
Fugitive Emissions											
Asphalt Load-Out, Silo Filling, On-Site Yard	0.58	0.58	0.58	0	0	9.00	1.51	0	0.15	0.05	(formaldehyde)
Material Storage Piles	0.10	0.03	0.03	0	0	0	0	0	0	0	
Material Processing and Handling	3.40	1.61	0.24	0	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	13.98	4.89	4.89	0	0	0	0	0	0	0	
Unpaved and Paved Roads (worst case)	37.36	9.52	0.95	0	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	0	0	0	0	0	0	
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0.74	0	0	0.19	0.07	(xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	0	negl	0	
Total Fugitive Emissions	**55.41**	**16.64**	**6.71**	**0**	**0**	**9.74**	**1.51**	**0**	**0.34**	**0.07**	(xylenes)
Totals Unlimited/Uncontrolled PTE	**16,874.72**	**2,382.02**	**148.80**	**245.33**	**64.17**	**28.70**	**212.40**	**51,029.58**	**60.66**	**57.82**	**(hydrogen chloride)**

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

*Worst Case Emissions (tons/yr) = Worst Case Emissions from Dryer Fuel Combustion and Dryer/Mixer + Worst Case Emissions From Dryer/Mixer Slag Processing + Worst Case Emissions from Hot Oil Heater Fuel Combustion and Hot Oil Heating System + Diesel-Fired Generator < 600 HP + Diesel-Fired Generator > 600 HP
Fuel component percentages provided by the source.

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

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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

Maximum Capacity

Maximum Fuel Input Rate =	70	MMBtu/hr								
Natural Gas Usage =	613	MMCF/yr								
No. 2 Fuel Oil Usage =	4,380,000	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Usage =	0	gal/yr, and	0	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and	0	% sulfur						
Propane Usage =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Butane Usage =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Used/Waste Oil Usage =	4,380,000	gal/yr, and	0.75	% sulfur	1.02	% ash	0.400	% chlorine,	0.010	% lead

Unlimited/Uncontrolled Emissions

	Emission Factor (units)							Unlimited/Uncontrolled Potential to Emit (tons/yr)							
Criteria Pollutant	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/ Waste Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/ Waste Oil (tons/yr)	**Worse Case Fuel (tons/yr)**
PM	1.9	2.0	7.0	3.22	0.5	0.6	65.3	0.58	4.38	0	0	0	0	142.96	**142.96**
PM10/PM2.5	7.6	3.3	8.3	4.72	0.5	0.6	52.02	2.33	7.23	0	0	0	0	113.92	**113.92**
SO2	0.6	71.0	0	0	0	0	110.3	0.18	155.49	0	0	0	0	241.45	**241.45**
NOx	100	20.0	20.0	55.0	13.0	15.0	19.0	30.66	43.80	0	0	0	0	41.61	**43.80**
VOC	5.5	0.20	0.20	0.28	1.00	1.10	1.0	1.69	0.44	0	0	0	0	2.19	**2.19**
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	25.75	10.95	0	0	0	0	10.95	**25.75**
Hazardous Air Pollutant															
HCl							26.4							57.82	**57.82**
Antimony			5.25E-03	5.25E-03			negl			0	0			negl	**0.0E+00**
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03			1.1E-01	6.1E-05	1.23E-03	0	0			2.41E-01	**0.24**
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05			negl	3.7E-06	9.20E-04	0	0			negl	**9.2E-04**
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04			9.3E-03	3.4E-04	9.20E-04	0	0			2.04E-02	**0.02**
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02	4.3E-04	9.20E-04	0	0			4.38E-02	**0.04**
Cobalt	8.4E-05		6.02E-03	6.02E-03			2.1E-04	2.6E-05		0	0			4.60E-04	**4.6E-04**
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03			0.55	1.5E-04	2.76E-03	0	0			1.2E+00	**1.20**
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03			6.8E-02	1.2E-04	1.84E-03	0	0			1.49E-01	**0.15**
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04				8.0E-05	9.20E-04	0	0				**9.2E-04**
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02	6.4E-04	9.20E-04	0	0			2.41E-02	**0.024**
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl	7.4E-06	4.60E-03	0	0			negl	**4.6E-03**
1.1.1-Trichloroethane			2.36E-04	2.36E-04						0	0				**0.0E+00**
1,3-Butadiene															**0.0E+00**
Acetaldehyde															**0.0E+00**
Acrolein															**0.0E+00**
Benzene	2.1E-03		2.14E-04	2.14E-04				6.4E-04		0	0				**6.4E-04**
Bis(2-ethylhexyl)phthalate							2.2E-03							4.82E-03	**4.8E-03**
Dichlorobenzene	1.2E-03						8.0E-07	3.7E-04						1.75E-06	**3.7E-04**
Ethylbenzene			6.36E-05	6.36E-05						0	0				**0.0E+00**
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				2.3E-02	1.34E-01	0	0				**0.13**
Hexane	1.8E+00							0.55							**0.55**
Phenol							2.4E-03							5.26E-03	**5.3E-03**
Toluene	3.4E-03		6.20E-03	6.20E-03				1.0E-03		0	0				**1.0E-03**
Total PAH Haps	negl		1.13E-03	1.13E-03			3.9E-02	negl		0	0			8.56E-02	**0.09**
Polycyclic Organic Matter		3.30E-03							7.23E-03						**7.2E-03**
Xylene			1.09E-04	1.09E-04						0	0				**0.0E+00**
							Total HAPs	**0.58**	**0.16**	**0**	**0**	**0**	**0**	**59.59**	**60.30**

Methodology

Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Propane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0905 MMBtu]
Butane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0974 MMBtu]
Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
Sources of AP-42 Emission Factors for fuel combustion:
Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
No. 2, No.4, and No.6 Fuel Oil: AP-42 Chapter 1.3 (dated 5/10), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11
Propane and Butane: AP-42 Chapter 1.5 (dated 7/08), Tables 1.5-1 (assuming PM = PM10)
Waste Oil: AP-42 Chapter 1.11 (dated 10/96), Tables 1.11-1, 1.11-2, 1.11-3, 1.11-4, and 1.11-5

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

Abbreviations

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

Appendix A.1: Unlimited Emissions Calculations
Greenhouse Gas (CO2e) Emissions from the
Dryer/Mixer Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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

Maximum Capacity

Maximum Fuel Input Rate =	70	MMBtu/hr								
Natural Gas Usage =	613	MMCF/yr								
No. 2 Fuel Oil Usage =	4,380,000	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Usage =	0	gal/yr, and	0	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and	0	% sulfur						
Propane Usage =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Butane Usage =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Used/Waste Oil Usage =	4,380,000	gal/yr, and	0.75	% sulfur	1.02	% ash	0.400	% chlorine,	0.010	% lead

Unlimited/Uncontrolled Emissions

	Emission Factor (units)						
CO2e Fraction	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/Waste Oil (lb/kgal)
CO2	120,161.84	22,501.41	24,153.46	24,835.04	12,500.00	14,506.73	22,024.15
CH4	2.49	0.91	0.97	1.00	0.60	0.67	0.89
N2O	2.2	0.26	0.19	0.53	0.9	0.9	0.18

Global Warming Potentials (GWP)		
Name	Chemical Formula	Global warming potential
Carbon dioxide	CO_2	1
Methane	CH_4	21
Nitrous oxide	N_2O	310

	Unlimited/Uncontrolled Potential to Emit (tons/yr)						
CO2e Fraction	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/ Waste Oil (tons/yr)
CO2	36,841.62	49,278.09	0	0	0	0	48,232.90
CH4	0.76	2.00	0	0	0	0	1.96
N2O	0.67	0.57	0	0	0	0	0.39
Total	36,843.06	49,280.66	0	0	0	0	48,235.25
CO2e Equivalent Emissions (tons/yr)	37,066.78	49,496.58	0	0	0	0	48,396.16

CO2e for Worst Case Fuel* (tons/yr)
49,496.58

Methodology
Fuel Usage from TSD Appendix A.1, page 1 of 14.
Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
Fuel Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Propane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0915 MMBtu]
Butane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.102 MMBtu]
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)
Natural Gas: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2
No. 2, No. 4, and Residual (No. 5 or No. 6) Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 5/10), Table 1.3-8
Propane: Emission Factor for CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, has been converted from kg/mmBtu to lb/kgal. Emission Factors for CO2 and N2O from AP-42 Chapter 1.5 (dated 7/08), Table 1.5-1
Butane: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.5 (dated 7/08), Table 1.5-1
Waste Oil: Emission Factors for CO2, CH4, and N2O from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal.

Emission Factor (EF) Conversions
Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Natural Gas (MMBtu/scf) * Conversion Factor (1,000,000 scf/MMCF)]
Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of the Fuel Oil (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]

Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (310).

Abbreviations
PTE = Potential to Emit
CO2 = Carbon Dioxide
CH4 = Methane
N2O = Nitrogen Dioxide

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

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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

Maximum Hourly Asphalt Production =	120	ton/hr
Maximum Annual Asphalt Production =	1,051,200	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	No. 2 Fuel Oil	Waste Oil	Natural Gas	No. 2 Fuel Oil	Waste Oil	**Worse Case PTE**
PM*	32	32	32	16,819.20	16,819.20	16,819.20	**16,819.20**
PM10*	4.5	4.5	4.5	2,365.20	2,365.20	2,365.20	**2,365.20**
PM2.5*	0.27	0.27	0.27	141.91	141.91	141.91	**141.91**
SO2**	0.0046	0.088	0.088	2.42	46.25	46.25	**46.25**
NOx**	0.025	0.12	0.12	13.14	63.07	63.07	**63.07**
VOC**	0.0082	0.0082	0.036	4.31	4.31	18.92	**18.92**
CO***	0.4	0.4	0.4	210.24	210.24	210.24	**210.24**
Hazardous Air Pollutant							
Arsenic	4.60E-07	4.60E-07	4.60E-07	2.42E-04	2.42E-04	2.42E-04	**2.42E-04**
Beryllium	1.50E-07	1.50E-07	1.50E-07	7.88E-05	7.88E-05	7.88E-05	**7.88E-05**
Cadmium	6.10E-07	6.10E-07	6.10E-07	3.21E-04	3.21E-04	3.21E-04	**3.21E-04**
Chromium	5.70E-07	5.70E-07	5.70E-07	3.00E-04	3.00E-04	3.00E-04	**3.00E-04**
Lead	8.90E-07	8.90E-07	1.00E-05	4.68E-04	4.68E-04	5.26E-03	**5.26E-03**
Manganese	6.90E-06	6.90E-06	6.90E-06	3.63E-03	3.63E-03	3.63E-03	**3.63E-03**
Mercury	4.10E-07	4.10E-07	4.10E-07	2.15E-04	2.15E-04	2.15E-04	**2.15E-04**
Nickel	3.00E-06	3.00E-06	3.00E-06	1.58E-03	1.58E-03	1.58E-03	**1.58E-03**
Selenium	4.90E-07	4.90E-07	4.90E-07	2.58E-04	2.58E-04	2.58E-04	**2.58E-04**
Acetaldehyde	3.20E-04	3.20E-04	3.20E-04	0.17		0.17	**0.17**
Benzene	2.80E-04	2.80E-04	2.80E-04	0.15	0.15	0.15	**0.15**
Ethylbenzene	2.20E-03	2.20E-03	2.20E-03	1.16	1.16	1.16	**1.16**
Formaldehyde	7.40E-04	7.40E-04	7.40E-04	0.39	0.39	0.39	**0.39**
Quinone	2.70E-04	2.70E-04	2.70E-04	0.14		0.14	**0.14**
Toluene	1.00E-03	1.00E-03	1.00E-03	0.53	0.53	0.53	**0.53**
Total PAH Haps	1.10E-04	1.10E-04	2.30E-04	0.06	0.06	0.12	**0.12**
Xylene	2.70E-03	2.70E-03	2.70E-03	1.42	1.42	1.42	**1.42**
						Total HAPs	**4.08**
						Worst Single HAP	**1.42** **(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 11.1-1, 11.1-2, 11.1-5, 11.1-6, 11.1-19, and 11.1-11
Natural gas, No. 2 fuel oil, and waste oil represent the worst possible emissions scenario. AP-42 did not provide emission factors for any other fuels.

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

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

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

Abbreviations

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

Appendix A.1: Unlimited Emissions Calculations
Greenhouse Gas (CO2e) Emissions from the
Batch-Mix Plant (Dryer/Mixer) Process Emissions

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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

Maximum Hourly Asphalt Production =	120	ton/hr
Maximum Annual Asphalt Production =	1,051,200	ton/yr

	Emission Factor (lb/ton) Batch-Mix Plant (dryer/mixer)				Unlimited/Uncontrolled Potential to Emit (tons/yr) Batch-Mix Plant (dryer/mixer)			
Criteria Pollutant	Natural Gas	No. 2 Fuel Oil	Waste Oil	Global Warming Potentials (GWP)	Natural Gas	No. 2 Fuel Oil	Waste Oil	**CO2e for Worst Case Fuel (tons/yr)**
CO2	37	37	37	1	19,447.20	19,447.20	19,447.20	
CH4	0.0074	0.0074	0.0074	21	3.89	3.89	3.89	
N2O				310	0	0	0	
				Total	19,451.09	19,451.09	19,451.09	**19,528.88**
				CO2e Equivalent Emissions (tons/yr)	19,528.88	19,528.88	19,528.88	

Methodology
Natural gas, No. 2 fuel oil, and waste oil represent the worst possible emissions scenario. AP-42 did not provide emission factors for any other fuels.
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-7 and 11.1-8
There are no emission factors for N20 available in either the 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no N2O emission anticipated from this process.

Unlimited/Uncontrolled Potential to Emit (tons/yr) = (Maximum Annual Asphalt Production (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (310).

Abbreviations
CO2 = Carbon Dioxide CH4 = Methane N2O = Nitrogen Dioxide PTE = Potential to Emit

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

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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

Maximum Annual Blast Furnace Slag Usage =	0	ton/yr	0	% sulfur
Maximum Annual Steel Slag Usage =	0	ton/yr	0	% sulfur

Type of Slag	SO2 Emission Factor (lb/ton)	Unlimited Potential to Emit SO2 (tons/yr)
Blast Furnace Slag*	0.00	0.0
Steel Slag**	0.0000	0.0

Methodology
The maximum annual slag usage was provided by the source.

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

** Testing results for steel slag, obtained June 2009 from E & B Paving, Inc. facility located in Huntington, IN. The testing results showed a steel slag emission factor of 0.0007 lb/ton from slag containing 0.33% sulfur content.

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

Abbreviations
SO2 = Sulfur Dioxide

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

Company Name: Tri-County Asphalt
Source Location: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

Maximum Hot Oil Heater Fuel Input Rate =	1.75	MMBtu/hr		
Natural Gas Usage =	15	MMCF/yr		
No. 2 Fuel Oil Usage =	109,500	gal/yr, and	0.50	% sulfur

Unlimited/Uncontrolled Emissions

	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
	Hot Oil Heater		Hot Oil Heater		
Criteria Pollutant	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	**Worse Case Fuel (tons/yr)**
PM	1.9	2.0	0.015	0.110	**0.11**
PM10/PM2.5	7.6	3.3	0.058	0.181	**0.18**
SO2	0.6	71.0	0.005	3.887	**3.89**
NOx	100	20.0	0.767	1.095	**1.10**
VOC	5.5	0.20	0.042	0.011	**0.04**
CO	84	5.0	0.644	0.274	**0.64**
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	1.5E-06	3.07E-05	**3.1E-05**
Beryllium	1.2E-05	4.2E-04	9.2E-08	2.30E-05	**2.3E-05**
Cadmium	1.1E-03	4.2E-04	8.4E-06	2.30E-05	**2.3E-05**
Chromium	1.4E-03	4.2E-04	1.1E-05	2.30E-05	**2.3E-05**
Cobalt	8.4E-05		6.4E-07		**6.4E-07**
Lead	5.0E-04	1.3E-03	3.8E-06	6.90E-05	**6.9E-05**
Manganese	3.8E-04	8.4E-04	2.9E-06	4.60E-05	**4.6E-05**
Mercury	2.6E-04	4.2E-04	2.0E-06	2.30E-05	**2.3E-05**
Nickel	2.1E-03	4.2E-04	1.6E-05	2.30E-05	**2.3E-05**
Selenium	2.4E-05	2.1E-03	1.8E-07	1.15E-04	**1.1E-04**
Benzene	2.1E-03		1.6E-05		**1.6E-05**
Dichlorobenzene	1.2E-03		9.2E-06		**9.2E-06**
Ethylbenzene					**0.0E+00**
Formaldehyde	7.5E-02	6.10E-02	5.7E-04	3.34E-03	**3.3E-03**
Hexane	1.8E+00		0.01		**1.4E-02**
Phenol					**0.0E+00**
Toluene	3.4E-03		2.6E-05		**2.6E-05**
Total PAH Haps	negl		negl		**0.0E+00**
Polycyclic Organic Matter		3.30E-03		1.81E-04	**1.8E-04**
		Total HAPs =	**1.4E-02**	**3.9E-03**	**0.018**
		Worst Single HAP =	**1.4E-02 (Hexane)**	**3.3E-03 (Formaldehyde)**	**1.4E-02 (Hexane)**

Methodology
Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
Sources of AP-42 Emission Factors for fuel combustion:
Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
No. 2 Fuel Oil: AP-42 Chapter 1.3 (dated 5/10), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11

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

Appendix A.1: Unlimited Emissions Calculations
Greenhouse Gas (CO2e) Emissions from
Hot Oil Heater Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

Maximum Hot Oil Heater Fuel Input Rate =	1.75	MMBtu/hr		
Natural Gas Usage =	15	MMCF/yr		
No. 2 Fuel Oil Usage =	109,500	gal/yr,	0.50	% sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units) Natural Gas (lb/MMCF)	Emission Factor (units) No. 2 Fuel Oil (lb/kgal)	Global Warming Potentials (GWP)	Unlimited/Uncontrolled Potential to Emit (tons/yr) Natural Gas (tons/yr)	Unlimited/Uncontrolled Potential to Emit (tons/yr) No. 2 Fuel Oil (tons/yr)
CO2	120,161.84	22,501.41	1	921.04	1,231.95
CH4	2.49	0.91	21	0.02	0.05
N2O	2.2	0.26	310	0.02	0.01
				921.08	1,232.02
CO2e Equivalent Emissions (tons/yr)				926.67	1,237.41

Worse Case CO2e Emissions (tons/yr)
1,237.41

Methodology

Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
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]
Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)

Natural Gas: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2

No. 2 Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 5/10), Table 1.3-8

Emission Factor (EF) Conversions

Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Natural Gas (MMBtu/scf) * Conversion Factor (1,000,000 scf/MMCF)]

Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of the Fuel Oil (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]

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

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

Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (310).

Abbreviations

CO2 = Carbon Dioxide
CH4 = Methane
N2O = Nitrogen Dioxide
PTE = Potential to Emit

Appendix A.1: Unlimited Emissions Calculations
Hot Oil Heating System - Process Emissions

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

The following calculations determine the unlimited/uncontrolled emissions from the combustion of natural gas and No. 2 fuel oil in the hot oil heating system, which is used to heat a specially designed transfer oil. The hot transfer oil is then pumped through a piping system that passes through the asphalt cement storage tanks, in order to keep the asphalt cement at the correct temperature.

Maximum Fuel Input Rate To Hot Oil Heater =	1.75	MMBtu/hr
Natural Gas Usage =	15	MMCF/yr, and
No. 2 Fuel Oil Usage =	109,500	gal/yr

	Emission Factors		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
Criteria Pollutant	Natural Gas (lb/ft3)	No. 2 Fuel Oil (lb/gal)	Natural Gas	No. 2 Fuel Oil	**Worse Case PTE**
VOC	2.60E-08	2.65E-05	1.99E-04	0.001	**0.001**
CO	8.90E-06	0.0012	0.068	0.066	**0.068**
Greenhouse Gas as CO2e*					
CO2	0.20	28.00	1533.00	1533.00	**1533.00**
Hazardous Air Pollutant					
Formaldehyde	2.60E-08	3.50E-06	1.99E-04	1.92E-04	**1.99E-04**
Acenaphthene		5.30E-07		2.90E-05	**2.90E-05**
Acenaphthylene		2.00E-07		1.10E-05	**1.10E-05**
Anthracene		1.80E-07		9.86E-06	**9.86E-06**
Benzo(b)fluoranthene		1.00E-07		5.48E-06	**5.48E-06**
Fluoranthene		4.40E-08		2.41E-06	**2.41E-06**
Fluorene		3.20E-08		1.75E-06	**1.75E-06**
Naphthalene		1.70E-05		9.31E-04	**9.31E-04**
Phenanthrene		4.90E-06		2.68E-04	**2.68E-04**
Pyrene		3.20E-08		1.75E-06	**1.75E-06**
				Total HAPs	**1.46E-03**
				Worst Single HAP	**9.31E-04** **(Naphthalene)**

Methodology
Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
No. 2 Fuel Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Natural Gas: Potential to Emit (tons/yr) = (Natural Gas Usage (MMCF/yr))*(Emission Factor (lb/CF))*(1000000 CF/MMCF)*(ton/2000 lbs)
No. 2 Fuel Oil: Potential to Emit (tons/yr) = (No. 2 Fuel Oil Usage (gals/yr))*(Emission Factor (lb/gal))*(ton/2000 lbs)
Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 (ton/yr) x CO2 GWP (1)
1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Table 11.1-13

*Note: There are no emission factors for CH4 and N20 available in either 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no CH4 and N2O emission anticipated from this process.

Abbreviations
CO = Carbon Monoxide VOC = Volatile Organic Compound CO2 = Carbon Dioxide

Appendix A.1: Unlimited Emissions Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

Output Horsepower Rating (hp)	0
Maximum Hours Operated per Year	0
Potential Throughput (hp-hr/yr)	0
Maximum Diesel Fuel Usage (gal/yr)	0

	Pollutant						
	PM[2]	PM10[2]	direct PM2.5[2]	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Emission Factor in lb/kgal[1]	43.07	43.07	43.07	40.13	606.85	49.22	130.77
Potential Emission in tons/yr	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[1] The AP-42 Chapter 3.3-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[1]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[2]PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs[3]
Emission Factor in lb/MMBtu	9.33E-04	4.09E-04	2.85E-04	3.91E-05	1.18E-03	7.67E-04	9.25E-05	1.68E-04
Emission Factor in lb/kgal[4]	1.28E-01	5.60E-02	3.91E-02	5.36E-03	1.62E-01	1.05E-01	1.27E-02	2.30E-02
Potential Emission in tons/yr	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

[3]PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

[4]The AP-42 Chapter 3.3-1 emission factors in lb/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[4]Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Potential Emission of Total HAPs (tons/yr)	**0.00E+00**
Potential Emission of Worst Case HAPs (tons/yr)	**0.00E+00**

Green House Gas Emissions (GHG)

	Pollutant		
	CO2[5]	CH4[6]	N2O[6]
Emission Factor in lb/hp-hr	1.15	NA	NA
Emission Factor in kg/MMBtu	NA	0.003	0.0006
Emission Factor in lb/kgal	22,512.07	0.91	0.18
Potential Emission in tons/yr	0.00	0.000	0.000

[5]The AP-42 Chapter 3.3-1 emission factor in lb/hp-hr was converted to lb/kgal emission factor using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[5]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[6]The 40 CFR 98 Subpart C emission factors in kg/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[6]Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) * 2.20462 (lb/kg) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Summed Potential Emissions in tons/yr	**0.00**
CO2e Total in tons/yr	**0.00**

Methodology

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Maximum Diesel Fuel Usage (gal/yr) = Potential Throughput (hp-hr/yr) * 7000 (Btu/hp-hr) * 1/19300 (lb/Btu) * 1/7.1 (gal/lb)

Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2 and have been converted to lb/kgal

CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2 and have been converted to lb/kgal

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Potential Emissions (tons/yr) = [Maximum Diesel Fuel Usage (gal/yr) x Emission Factor (lb/kgal)] / (1,000 ga/kgal) / (2,000 lb/ton)

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A.1: Unlimited Emissions Calculations
Large Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (>600 HP)

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

Output Horsepower Rating (hp)	0
Maximum Hours Operated per Year	0
Potential Throughput (hp-hr/yr)	0
Maximum Diesel Fuel Usage (gal/yr)	0

Sulfur Content (S) of Fuel (% by weight) 0.00

	Pollutant						
	PM	PM10[2]	direct PM2.5[2]	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	7.00E-04			0.00E+00 *(.00809S)*	2.40E-02	7.05E-04	5.50E-03
Emission Factor in lb/MMBtu		0.0573	0.0573				
Emission Factor in lb/kgal[1]	13.70	7.85	7.85	0.00	469.82	13.80	107.67
Potential Emission in tons/yr	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[1] The AP-42 Chapter 3.4-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.
[1]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[2]Emission factors in lb/kgal were converted from the AP-42 Chapter 3.4-1 emission factors in lb/MMBtu using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[2]Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs[3]
Emission Factor in lb/MMBtu	7.76E-04	2.81E-04	1.93E-04	7.89E-05	2.52E-05	7.88E-06	2.12E-04
Emission Factor in lb/kgal[4]	1.06E-01	3.85E-02	2.64E-02	1.08E-02	3.45E-03	1.08E-03	2.91E-02
Potential Emission in tons/yr	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

[3]PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

[4]Emission factors in lb/kgal were converted from the AP-42 Chapter 3.4-1 emission factors in lb/MMBtu using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[4]Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Potential Emission of Total HAPs (tons/yr)	**0.00E+00**
Potential Emission of Worst Case HAPs (tons/yr)	**0.00E+00**

Green House Gas Emissions (GHG)

	Pollutant		
	CO2[5]	CH4[5,6]	N2O[7]
Emission Factor in lb/hp-hr	1.16	6.35E-05	NA
Emission Factor in kg/MMBtu	NA	NA	0.0006
Emission Factor in lb/kgal	22,707.83	1.24	0.18
Potential Emission in tons/yr	0.00	0.00	0.00

[5] The AP-42 Chapter 3.4-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.
[5]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[6]According to AP-42, Table 3.4-1, TOC (as CH4) is 9% methane by weight. As a result, the lb/hp-hr emission factor for TOC (as CH4) in AP-42 has been multiplied by 9% to determine the portion that is emitted as methane.
[7]The 40 CFR 98 Subpart C emission factors in kg/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[7]Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) * 2.20462 (lb/kg) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Summed Potential Emissions in tons/yr	**0.00**
CO2e Total in tons/yr	**0.00**

Methodology

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Maximum Diesel Fuel Usage (gal/yr) = Potential Throughput (hp-hr/yr) * 7000 (Btu/hp-hr) * 1/19300 (lb/Btu) * 1/7.1 (gal/lb)
Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4 and have been converted to lb/kgal.
N2O Emission Factor from 40 CFR 98 Subpart C Table C-2 and have been converted to lb/kgal.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Potential Emissions (tons/yr) = [Maximum Diesel Fuel Usage (gal/yr) x Emission Factor (lb/kgal)] / (1,000 ga/kgal) / (2,000 lb/ton)
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

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

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.5	
Maximum Annual Asphalt Production =	1,051,200	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	0.27	0.31	NA	**0.58**
Organic PM	3.4E-04	2.5E-04	NA	0.18	0.133	NA	**0.31**
TOC	0.004	0.012	0.001	2.19	6.41	0.578	**9.2**
CO	0.001	0.001	3.5E-04	0.71	0.620	0.185	**1.51**

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

PM/HAPs	**0.013**	**0.015**	**0**	**0.028**
VOC/HAPs	**0.032**	**0.081**	**0.009**	**0.122**
non-VOC/HAPs	**1.7E-04**	**1.7E-05**	**4.5E-05**	**2.3E-04**
non-VOC/non-HAPs	**0.16**	**0.09**	**0.04**	**0.29**

Total VOCs	**2.05**	**6.41**	**0.5**	**9.0**
Total HAPs	**0.05**	**0.10**	**0.009**	**0.15**
			Worst Single HAP	**0.047 (formaldehyde)**

Methodology
The asphalt temperature and volatility factor were provided by the source.
Unlimited/Uncontrolled Potential to Emit (tons/yr) = (Maximum Annual Asphalt Production (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-14, 11.1-15, and 11.1-16
Plant Load-Out Emission Factor Equations (AP-42 Table 11.1-14)::
Total PM/PM10/PM2.5 Ef = 0.000181 + 0.00141(-V)e^((0.0251)(T+460)-20.43)
Organic PM Ef = 0.00141(-V)e^((0.0251)(T+460)-20.43)
TOC Ef = 0.0172(-V)e^((0.0251)(T+460)-20.43)
CO Ef = 0.00558(-V)e^((0.0251)(T+460)-20.43)
Silo Filling Emission Factor Equations (AP-42 Table 11.1-14):
PM/PM10 Ef = 0.000332 + 0.00105(-V)e^((0.0251)(T+460)-20.43)
Organic PM Ef = 0.00105(-V)e^((0.0251)(T+460)-20.43)
TOC Ef = 0.0504(-V)e^((0.0251)(T+460)-20.43)
CO Ef = 0.00488(-V)e^((0.0251)(T+460)-20.43)
On Site Yard CO emissions estimated by multiplying the TOC emissions by 0.32
*No emission factors available for PM10 or PM2.5, therefore IDEM assumes PM10 and PM2.5 are equivalent to Total PM.

Abbreviations
TOC = Total Organic Compounds
CO = Carbon Monoxide
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound

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

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

Organic Particulate-Based Compounds (Table 11.1-15)

					Speciation Profile		Unlimited/Uncontrolled Potential to Emit (tons/yr)			
Pollutant	**CASRN**	**Category**	**HAP Type**	**Source**	**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%	4.7E-04	6.3E-04	NA	1.1E-03
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	5.0E-05	1.9E-05	NA	6.9E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	1.3E-04	1.7E-04	NA	3.0E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	3.4E-05	7.5E-05	NA	1.1E-04
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	1.4E-05	0	NA	1.4E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	3.9E-06	0	NA	3.9E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	3.4E-06	0	NA	3.4E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	4.1E-06	0	NA	4.1E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	1.4E-05	1.3E-05	NA	2.7E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	1.8E-04	2.8E-04	NA	4.6E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	6.6E-07	0	NA	6.6E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	9.0E-05		NA	9.0E-05
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	1.4E-03	1.3E-03	NA	2.7E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	8.4E-07	0	NA	8.4E-07
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	4.3E-03	7.0E-03	NA	0.011
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	2.2E-03	2.4E-03	NA	4.7E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	3.9E-05	4.0E-05	NA	7.9E-05
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	1.5E-03	2.4E-03	NA	3.9E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	2.7E-04	5.9E-04	NA	8.6E-04
Total PAH HAPs							**0.011**	**0.015**	**NA**	**0.026**
Other semi-volatile HAPs										
Phenol		PM/HAP	---	Organic PM	1.18%	0	2.1E-03	0	0	2.1E-03

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

Methodology

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

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

Abbreviations

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

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

Organic Volatile-Based Compounds (Table 11.1-16)

					Speciation Profile		Unlimited/Uncontrolled Potential to Emit (tons/yr)			
Pollutant	**CASRN**	**Category**	**HAP Type**	**Source**	**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%	**2.05**	**6.41**	**0.54**	**9.00**
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	1.4E-01	1.7E-02	3.8E-02	0.196
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	1.0E-03	3.5E-03	2.7E-04	0.005
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	1.6E-02	7.0E-02	4.1E-03	0.090
Total non-VOC/non-HAPS					7.30%	1.40%	**0.160**	**0.090**	**0.042**	**0.29**
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	1.1E-03	2.0E-03	3.0E-04	3.5E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	2.1E-04	3.1E-04	5.6E-05	5.8E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	1.1E-03	2.5E-03	2.8E-04	3.9E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	2.8E-04	1.0E-03	7.5E-05	1.4E-03
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	4.6E-06	2.6E-04	1.2E-06	2.6E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	3.3E-04	1.5E-03	8.7E-05	1.9E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	2.4E-03	0	6.4E-04	3.0E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	6.1E-03	2.4E-03	1.6E-03	0.010
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	1.9E-03	4.4E-02	5.1E-04	0.047
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	3.3E-03	6.4E-03	8.7E-04	0.011
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	3.9E-05	2.0E-05	1.0E-05	7.0E-05
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	1.7E-05	0	1.7E-05
MTBE	1634-04-4	VOC/HAP	---	TOC	0	0	0	0	0	0
Styrene	100-42-5	VOC/HAP	---	TOC	0.0073%	0.0054%	1.6E-04	3.5E-04	4.2E-05	5.5E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	1.7E-04	0	4.5E-05	2.1E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	4.6E-03	4.0E-03	1.2E-03	0.010
1,1,1-Trichloroethane	71-55-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichloroethene	79-01-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichlorofluoromethane	75-69-4	VOC/HAP	---	TOC	0.0013%	0	2.8E-05	0	7.5E-06	3.6E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	9.0E-03	1.3E-02	2.4E-03	0.024
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	1.7E-03	3.7E-03	4.6E-04	5.9E-03
Total volatile organic HAPs					1.50%	1.30%	**0.033**	**0.083**	**0.009**	**0.125**

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

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

Appendix A.1: Unlimited Emissions Calculations
Material Storage Piles

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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/PM2.5 (tons/yr)
Sand	2.6	3.01	0.08	0.044	0.015
Limestone	1.6	1.85	0.16	0.054	0.019
RAP	0.5	0.58	0	0	0
Gravel	1.6	1.85	0	0	0
Shingles	0.5	0.58	0	0	0
Slag	3.8	4.40	0	0	0
			Totals	**0.10**	**0.03**

Methodology
PTE of PM (tons/yr) = (Emission Factor (lb/acre/day)) * (Maximum Pile Size (acres)) * (ton/2000 lbs) * (8760 hours/yr)
PTE of PM10/PM2.5 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%
*Silt content values obtained from AP-42 Table 13.2.4-1 (dated 1/95)
**Maximum anticipated pile size (acres) provided by the source.
PM2.5 = PM10
Abbreviations
RAP - recycled asphalt pavement
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PTE = Potential to Emit

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

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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

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

Maximum Annual Asphalt Production =	1,051,200	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	998,640	tons/yr

Type of Activity	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM10 (tons/yr)	Unlimited/Uncontrolled PTE of PM2.5 (tons/yr)
Truck unloading of materials into storage piles	1.13	0.54	0.08
Front-end loader dumping of materials into feeder bins	1.13	0.54	0.08
Conveyor dropping material into dryer/mixer or batch tower	1.13	0.54	0.08
Total (tons/yr)	**3.40**	**1.61**	**0.24**

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

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

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM10 (lbs/ton)*	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM10/PM2.5 (tons/yr)**
Crushing	0.0054	0.0024	0	0
Screening	0.025	0.0087	12.48	4.34
Conveying	0.003	0.0011	1.50	0.55
Unlimited Potential to Emit (tons/yr) =			**13.98**	**4.89**

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

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

Appendix A.1: Unlimited Emissions Calculations
Unpaved Roads

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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 =	1,051,200	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	998,640	tons/yr
Maximum Asphalt Cement/Binder Throughput =	52,560	tons/yr
Maximum No. 2 Fuel Oil Usage =	4,380,000	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)	17.0	22.4	39.4	4.5E+04	1.8E+06	300	0.057	2533.1
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	4.5E+04	7.6E+05	300	0.057	2533.1
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	1.5E+03	7.0E+04	300	0.057	83.0
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	1.5E+03	1.8E+04	300	0.057	83.0
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	4.6E+02	2.0E+04	300	0.057	26.3
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	4.6E+02	5.6E+03	300	0.057	26.3
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	2.4E+05	4.6E+06	300	0.057	13509.7
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	2.4E+05	3.6E+06	300	0.057	13509.7
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.0	4.4E+04	1.8E+06	300	0.057	2488.6
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.0	4.4E+04	7.4E+05	300	0.057	2488.6
	Total				**6.6E+05**	**1.3E+07**			**3.7E+04**

Average Vehicle Weight Per Trip =	20.3	tons/trip
Average Miles Per Trip =	0.057	miles/trip

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

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
W =	20.3	20.3	20.3	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, 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	PM2.5	
Unmitigated Emission Factor, Ef =	6.10	1.55	0.16	lb/mile
Mitigated Emission Factor, Eext =	4.01	1.02	0.10	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	7.72	1.97	0.20	5.08	1.29	0.13	2.54	0.65	0.06
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	7.72	1.97	0.20	5.08	1.29	0.13	2.54	0.65	0.06
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.253	0.064	6.44E-03	0.166	0.042	4.24E-03	0.083	0.021	2.12E-03
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.253	0.064	6.44E-03	0.166	0.042	4.24E-03	0.083	0.021	2.12E-03
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.080	0.020	2.04E-03	0.053	0.013	1.34E-03	0.026	0.007	6.71E-04
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.080	0.020	2.04E-03	0.053	0.013	1.34E-03	0.026	0.007	6.71E-04
Aggregate/RAP Loader Full	Front-end loader (3 CY)	41.17	10.49	1.05	27.07	6.90	0.69	13.54	3.45	0.35
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	41.17	10.49	1.05	27.07	6.90	0.69	13.54	3.45	0.35
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	7.58	1.93	0.19	4.99	1.27	0.13	2.49	0.64	0.06
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	7.58	1.93	0.19	4.99	1.27	0.13	2.49	0.64	0.06
	Totals	**113.63**	**28.96**	**2.90**	**74.71**	**19.04**	**1.90**	**37.36**	**9.52**	**0.95**

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

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

Appendix A.1: Unlimited Emissions Calculations
Paved Roads

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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 =	1,051,200	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	998,640	tons/yr
Maximum Asphalt Cement/Binder Throughput =	52,560	tons/yr
Maximum No. 2 Fuel Oil Usage =	4,380,000	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)	17.0	22.4	39.40	4.5E+04	1.8E+06	300	0.057	2533.1
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.00	4.5E+04	7.6E+05	300	0.057	2533.1
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.00	1.5E+03	7.0E+04	300	0.057	83.0
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	1.5E+03	1.8E+04	300	0.057	83.0
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.00	4.6E+02	2.0E+04	300	0.057	26.3
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	4.6E+02	5.6E+03	300	0.057	26.3
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.20	2.4E+05	4.6E+06	300	0.057	13509.7
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	2.4E+05	3.6E+06	300	0.057	13509.7
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.00	4.4E+04	1.8E+06	300	0.057	2488.6
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.00	4.4E+04	7.4E+05	300	0.057	2488.6
	Total				**6.6E+05**	**1.3E+07**			**3.7E+04**

Average Vehicle Weight Per Trip =	20.3	tons/trip
Average Miles Per Trip =	0.057	miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	20.3	20.3	20.3	tons = average vehicle weight (provided by source)
sL =	0.6	0.6	0.6	g/m^2 = Ubitiguous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months)

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

where p =	125	days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N =	365	days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.15	0.03	0.01	lb/mile
Mitigated Emission Factor, Eext =	0.14	0.03	0.01	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	0.19	0.04	0.01	0.17	0.03	0.01	0.09	0.02	0.00
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.19	0.04	0.01	0.17	0.03	0.01	0.09	0.02	0.00
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.006	0.001	3.0E-04	0.006	0.001	2.8E-04	0.003	5.6E-04	1.4E-04
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.006	0.001	3.0E-04	0.006	0.001	2.8E-04	0.003	5.6E-04	1.4E-04
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	2.0E-03	3.9E-04	9.6E-05	1.8E-03	3.6E-04	8.8E-05	8.9E-04	1.8E-04	4.4E-05
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	2.0E-03	3.9E-04	9.6E-05	1.8E-03	3.6E-04	8.8E-05	8.9E-04	1.8E-04	4.4E-05
Aggregate/RAP Loader Full	Front-end loader (3 CY)	1.00	0.20	0.05	0.92	0.18	0.05	0.46	0.09	0.02
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	1.00	0.20	0.05	0.92	0.18	0.05	0.46	0.09	0.02
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.19	0.04	0.01	0.17	0.03	0.01	0.08	0.02	0.00
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.19	0.04	0.01	0.17	0.03	0.01	0.08	0.02	0.00
	Totals	**2.77**	**0.55**	**0.14**	**2.54**	**0.51**	**0.12**	**1.27**	**0.25**	**0.06**

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

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

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

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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 =	0	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Asphalt Cement/Binder Throughput =	0	tons/yr

Volatile Organic Compounds

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

Hazardous Air Pollutants

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

Hazardous Air Pollutant (HAP) Content (% by weight) For Various Petroleum Solvents[1]

		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.

Abbreviations
VOC = Volatile Organic Compounds
PTE = Potential to Emit

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

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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

Gasoline Throughput =	1,300	gallons/day
=	474.5	kgal/yr

Volatile Organic Compounds

Emission Source	Emission Factor (lb/kgal of throughput)	PTE of VOC (tons/yr)*
Filling storage tank (balanced submerged filling)	0.3	0.07
Tank breathing and emptying	1.0	0.24
Vehicle refueling (displaced losses - controlled)	1.1	0.26
Spillage	0.7	0.17
Total		**0.74**

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%	
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0%	Xylenes
Limited PTE of Total HAPs (tons/yr) =	**0.19**	
Limited PTE of Single HAP (tons/yr) =	**0.07**	**Xylenes**

Methodology
The gasoline throughput was provided by the source.
Gasoline Throughput (kgal/yr) = [Gasoline Throughput (lbs/day)] * [365 days/yr] * [kgal/1000 gal]
PTE of VOC (tons/yr) = [Gasoline Throughput (kgal/yr)] * [Emission Factor (lb/kgal)] * [ton/2000 lb]
PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]
PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]

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

Abbreviations
VOC = Volatile Organic Compounds
PTE = Potential to Emit

Appendix A.2: Limited Emissions Summary
Entire Source - Batch Mix

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

Asphalt Plant Limitations - Batch Mix

Maximum Hourly Asphalt Production =	120	ton/hr								
Annual Asphalt Production Limitation =	488,251	ton/yr								
Blast Furnace Slag Usage Limitation =	0	ton/yr	0	% sulfur						
Steel Slag Usage Limitation =	0	ton/yr	0	% sulfur						
Maximum Dryer Fuel Input Rate =	70	MMBtu/hr								
Natural Gas Limitation =	613	MMCF/yr								
No. 2 Fuel Oil Limitation =	2,679,232	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Limitation =	0	gal/yr, and	0	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and	0	% sulfur						
Propane Limitation =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Butane Limitation =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Used/Waste Oil Limitation =	750,345	gal/yr, and	0.75	% sulfur	1.02	% ash	0.400	% chlorine,	0.010	% lead
Diesel Fuel Limitation - Generator < 600 HP =	0	gal/yr,and								
Diesel Fuel Limitation - Generator > 600 HP =	0	gal/yr	0	% sulfur						

PM Dryer/Mixer Limitation =	0.914	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation =	0.373	lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation =	0.392	lb/ton of asphalt production
VOC Dryer/Mixer Limitation =	0.036	lb/ton of asphalt production
CO Dryer/Mixer Limitation =	0.40	lb/ton of asphalt production
Blast Furnace Slag SO2 Dryer/Mixer Limitation =	0	lb/ton of slag processed
Steel Slag SO2 Dryer/Mixer Limitation =	0	lb/ton of slag processed
Cold Mix Asphalt VOC Limitation =	0	tons/yr
HCl Limitation =	26.40	lb/kgal

Limited/Controlled Emissions

	Limited/Controlled Potential Emissions (tons/year)										
	Criteria Pollutants							Greenhouse Gas Pollutants	Hazardous Air Pollutants		
Process Description	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**CO_2e**	**Total HAPs**	**Worst Case HAP**	
Ducted Emissions											
Dryer Fuel Combustion (worst case)	24.49	19.52	19.52	95.11	30.66	1.69	25.75	37,066.78	10.85	9.90	(hydrogen chloride)
Dryer/Mixer and Batch Tower (Process)	223.09	91.07	95.69	21.48	29.30	8.79	97.65	9,070.58	1.90	0.66	(xylene)
Dryer/Mixer Slag Processing	0	0	0	0	0	0	0	0	0	0	
Hot Oil Heater Fuel Combustion/Process (worst case)	0.11	0.18	0.18	3.89	1.10	0.04	0.64	1,533.00	0.02	0.014	(hexane)
Diesel-Fired Generator < 600 HP	0	0	0	0	0	0	0	0	0	0	
Diesel-Fired Generator > 600 HP	0	0	0	0	0	0	0	0	0	0	
Worst Case Emissions*	**223.20**	**91.25**	**95.87**	**99.00**	**31.76**	**8.83**	**98.29**	**38,599.78**	**10.87**	**9.90**	**(hydrogen chloride)**
Fugitive Emissions											
Asphalt Load-Out, Silo Filling, On-Site Yard	0.27	0.27	0.27	0	0	4.18	0.70	0	0.07	0.02	(formaldehyde)
Material Storage Piles	0.10	0.03	0.03	0	0	0	0	0	0	0	
Material Processing and Handling	1.58	0.75	0.11	0	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	6.49	2.27	2.27	0	0	0	0	0	0	0	
Unpaved and Paved Roads (worst case)	17.36	4.42	0.44	0	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	0	0	0	0	0	0	
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0.17	0	0	0.19	0.07	(xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	0	negl	negl	
Total Fugitive Emissions	**25.80**	**7.75**	**3.13**	**0**	**0**	**4.35**	**0.70**	**0**	**0.26**	**0.07**	(xylenes)
Totals Limited/Controlled Emissions	**249.00**	**99.00**	**99.00**	**99.00**	**31.76**	**13.18**	**99.00**	**38,599.78**	**11.13**	**9.90**	**(hydrogen chloride)**

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

*Worst Case Emissions (tons/yr) = Worst Case Emissions from Dryer Fuel Combustion and Dryer/Mixer + Dryer/Mixer Slag Processing + Worst Case Emissions from Hot Oil Heater Fuel Combustion and Hot Oil Heating System + Diesel-Fired Generator < 600 HP + Diesel-Fired Generator > 600 HP
Fuel component percentages provided by the source.

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

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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

Fuel Limitations

Maximum Fuel Input Rate =	70	MMBtu/hr								
Natural Gas Limitation =	613	MMCF/yr								
No. 2 Fuel Oil Limitation =	2,679,232	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Limitation =	0	gal/yr, and	0	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and	0	% sulfur						
Propane Limitation =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Butane Limitation =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Used/Waste Oil Limitation =	750,345	gal/yr, and	0.75	% sulfur	1.02	% ash	0.400	% chlorine,	0.010	% lead

Limited Emissions

	Emission Factor (units)							Limited Potential to Emit (tons/yr)							
Criteria Pollutant	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/ Waste Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/ Waste Oil (tons/yr)	**Worst Case Fuel (tons/yr)**
PM	1.9	2.0	7.0	3.22	0.5	0.6	65.3	0.58	2.68	0	0	0	0	24.49	**24.49**
PM10/PM2.5	7.6	3.3	8.3	4.72	0.5	0.6	52.02	2.33	4.42	0	0	0	0	19.52	**19.52**
SO2	0.6	71.0	0	0	0	0	110.3	0.18	95.11	0	0	0	0	41.36	**95.11**
NOx	100	20.0	20.0	55.0	13.0	15.0	19.0	30.66	26.79	0	0	0	0	7.13	**30.66**
VOC	5.5	0.20	0.20	0.28	1.0	1.10	1.0	1.69	0.27	0	0	0	0	0.38	**1.69**
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	25.75	6.70	0	0	0	0	1.88	**25.75**
Hazardous Air Pollutant															
HCl							26.4							9.90	**9.90**
Antimony			5.25E-03	5.25E-03			negl			0	0			negl	**0.0E+00**
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03			1.1E-01	6.1E-05	7.50E-04	0	0			4.13E-02	**4.1E-02**
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05			negl	3.7E-06	5.63E-04	0	0			negl	**5.6E-04**
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04			9.3E-03	3.4E-04	5.63E-04	0	0			3.49E-03	**3.5E-03**
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02	4.3E-04	5.63E-04	0	0			7.50E-03	**7.5E-03**
Cobalt	8.4E-05		6.02E-03	6.02E-03			2.1E-04	2.6E-05		0	0			7.88E-05	**7.9E-05**
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03			0.55	1.5E-04	1.69E-03	0	0			2.1E-01	**0.21**
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03			6.8E-02	1.2E-04	1.13E-03	0	0			2.55E-02	**0.03**
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04				8.0E-05	5.63E-04	0	0				**5.6E-04**
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02	6.4E-04	5.63E-04	0	0			4.13E-03	**0.004**
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl	7.4E-06	2.81E-03	0	0			negl	**2.8E-03**
1.1.1-Trichloroethane			2.36E-04	2.36E-04						0	0				**0.0E+00**
1,3-Butadiene															**0.0E+00**
Acetaldehyde															**0.0E+00**
Acrolein															**0.0E+00**
Benzene	2.1E-03		2.14E-04	2.14E-04				6.4E-04		0	0				**6.4E-04**
Bis(2-ethylhexyl)phthalate							2.2E-03							8.25E-04	**8.3E-04**
Dichlorobenzene	1.2E-03						8.0E-07	3.7E-04						3.00E-07	**3.7E-04**
Ethylbenzene			6.36E-05	6.36E-05						0	0				**0.0E+00**
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				2.3E-02	8.17E-02	0	0				**0.082**
Hexane	1.8E+00							0.55							**0.552**
Phenol							2.4E-03							9.00E-04	**9.0E-04**
Toluene	3.4E-03		6.20E-03	6.20E-03				1.0E-03		0	0				**1.0E-03**
Total PAH Haps	negl		1.13E-03	1.13E-03			3.9E-02	negl		0	0			1.47E-02	**1.5E-02**
Polycyclic Organic Matter		3.30E-03							4.42E-03						**4.4E-03**
Xylene			1.09E-04	1.09E-04						0	0				**0.0E+00**
							Total HAPs	**0.58**	**0.10**	**0**	**0**	**0**	**0**	**10.21**	**10.85**

Methodology

Natural Gas: Limited Potential to Emit (tons/yr) = (Natural Gas Limitation (MMCF/yr)) * (Emission Factor (lb/MMCF)) * (ton/2000 lbs)
All Other Fuels: Limited Potential to Emit (tons/yr) = (Fuel Limitation (gals/yr)) * (Emission Factor (lb/kgal)) * (kgal/1000 gal) * (ton/2000 lbs)
Sources of AP-42 Emission Factors for fuel combustion:

Natural Gas :	AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
No. 2, No.4, and No.6 Fuel Oil:	AP-42 Chapter 1.3 (dated 5/10), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11
Propane and Butane:	AP-42 Chapter 1.5 (dated 7/08), Tables 1.5-1 (assuming PM = PM10)
Waste Oil:	AP-42 Chapter 1.11 (dated 10/96), Tables 1.11-1, 1.11-2, 1.11-3, 1.11-4, and 1.11-5

Abbreviations

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

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

Appendix A.2: Limited Emissions Summary
Greenhouse Gas (CO2e) Emissions from the
Dryer/Mixer Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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

Fuel Limitations

Maximum Fuel Input Rate =	70	MMBtu/hr								
Natural Gas Limitation =	613	MMCF/yr								
No. 2 Fuel Oil Limitation =	2,679,232	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Limitation =	0	gal/yr, and	0	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and	0	% sulfur						
Propane Limitation =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Butane Limitation =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Used/Waste Oil Limitation =	750,345	gal/yr, and	0.75	% sulfur	1.02	% ash	0.400	% chlorine,	0.010	% lead

Limited Emissions

	Emission Factor (units)							Global Warming Potentials (GWP)		
CO2e Fraction	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/Waste Oil (lb/kgal)	Name	Chemical Formula	Global warming potential
CO2	120,161.84	22,501.41	24,153.46	24,835.04	12,500.00	14,506.73	22,024.15	Carbon dioxide	CO_2	1
CH4	2.49	0.91	0.97	1.00	0.60	0.67	0.89	Methane	CH_4	21
N2O	2.20	0.26	0.19	0.53	0.90	0.90	0.18	Nitrous oxide	N_2O	310

	Limited Potential to Emit (tons/yr)							
CO2e Fraction	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/Waste Oil (tons/yr)	**CO2e for Worst Case Fuel* (tons/yr)**
CO2	36,841.62	30,143.25	0	0	0	0	8,262.85	**37,066.78**
CH4	0.76	1.22	0	0	0	0	0.33	
N2O	0.67	0.35	0	0	0	0	0.07	
Total	36,843.06	30,144.82	0	0	0	0	8,263.26	
CO2e Equivalent Emissions (tons/yr)	37,066.78	30,276.91	0	0	0	0	8,290.82	

Methodology
Fuel Limitations from TSD Appendix A.2, page 1 of 15.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)
Natural Gas: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2
No. 2, No. 4, and Residual (No. 5 or No. 6) Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 5/10), Table 1.3-8
Propane and Butane: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.5 (dated 7/08), Table 1.5-1
Waste Oil: Emission Factors for CO2, CH4, and N2O from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal.
Emission Factor (EF) Conversions
Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Natural Gas (MMBtu/scf) * Conversion Factor (1,000,000 scf/MMCF)]
Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of the Fuel Oil (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]
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)
Limited CO2e Emissions (tons/yr) = CO2 Potential Emission of "worst case" fuel (ton/yr) x CO2 GWP (1) + CH4 Potential Emission of "worst case" fuel (ton/yr) x CH4 GWP (21) + N2O Potential Emission of "worst case" fuel (ton/yr) x N2O GWP (310).

Abbreviations
CH4 = Methane CO2 = Carbon Dioxide N2O = Nitrogen Dioxide PTE = Potential to Emit

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

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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

Maximum Hourly Asphalt Production =	120	ton/hr
Annual Asphalt Production Limitation =	488,251	ton/yr
PM Dryer/Mixer Limitation =	0.914	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation =	0.373	lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation =	0.392	lb/ton of asphalt production
CO Dryer/Mixer Limitation =	0.400	lb/ton of asphalt production
VOC Dryer/Mixer Limitation =	0.036	lb/ton of asphalt production

	Emission Factor or Limitation (lb/ton) Batch-Mix Plant (dryer, hot screens, and mixer)			Limited/Controlled Potential to Emit (tons/yr) Batch-Mix Plant (dryer, hot screens, and mixer)			
Criteria Pollutant	Natural Gas	No. 2 Fuel Oil	Waste Oil	Natural Gas	No. 2 Fuel Oil	Waste Oil	**Worst Case PTE**
PM	0.914	0.914	0.914	223.1	223.1	223.1	**223.1**
PM10	0.373	0.373	0.373	91.1	91.1	91.1	**91.1**
PM2.5	0.392	0.392	0.392	95.7	95.7	95.7	**95.7**
SO2*	0.0046	0.088	0.088	1.1	21.5	21.5	**21.5**
NOx*	0.025	0.12	0.12	6.1	29.3	29.3	**29.3**
VOC	0.036	0.036	0.036	8.8	8.8	8.8	**8.8**
CO**	0.400	0.400	0.400	97.7	97.7	97.7	**97.7**
Hazardous Air Pollutant							
Arsenic	4.60E-07	4.60E-07	4.60E-07	1.12E-04	1.12E-04	1.12E-04	**1.12E-04**
Beryllium	1.50E-07	1.50E-07	1.50E-07	3.66E-05	3.66E-05	3.66E-05	**3.66E-05**
Cadmium	6.10E-07	6.10E-07	6.10E-07	1.49E-04	1.49E-04	1.49E-04	**1.49E-04**
Chromium	5.70E-07	5.70E-07	5.70E-07	1.39E-04	1.39E-04	1.39E-04	**1.39E-04**
Lead	8.90E-07	8.90E-07	1.00E-05	2.17E-04	2.17E-04	2.44E-03	**2.44E-03**
Manganese	6.90E-06	6.90E-06	6.90E-06	1.68E-03	1.68E-03	1.68E-03	**1.68E-03**
Mercury	4.10E-07	4.10E-07	4.10E-07	1.00E-04	1.00E-04	1.00E-04	**1.00E-04**
Nickel	3.00E-06	3.00E-06	3.00E-06	7.32E-04	7.32E-04	7.32E-04	**7.32E-04**
Selenium	4.90E-07	4.90E-07	4.90E-07	1.20E-04	1.20E-04	1.20E-04	**1.20E-04**
Acetaldehyde	3.20E-04	3.20E-04	3.20E-04	0.08	0.08	0.08	**0.08**
Benzene	2.80E-04	2.80E-04	2.80E-04	0.07	0.07	0.07	**0.07**
Ethylbenzene	2.20E-03	2.20E-03	2.20E-03	0.54	0.54	0.54	**0.54**
Formaldehyde	7.40E-04	7.40E-04	7.40E-04	0.18	0.18	0.18	**0.18**
Quinone	2.70E-04	2.70E-04	2.70E-04	0.07	0.07	0.07	**0.07**
Toluene	1.00E-03	1.00E-03	1.00E-03	0.24	0.24	0.24	**0.24**
Total PAH Haps	1.10E-04	1.10E-04	2.30E-04	0.03	0.03	0.06	**0.06**
Xylene	2.70E-03	2.70E-03	2.70E-03	0.66	0.66	0.66	**0.66**
						Total HAPs	**1.90**
						Worst Single HAP	**0.66** **(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, 11.1-2, 11.1-5, 11.1-6, 11.1-19, and 11.1-11
Natural gas, No. 2 fuel oil, and waste oil represent the worst possible emissions scenario. AP-42 did not provide emission factors for any other fuels.
* SO2 and NOx AP-42 emission factors are for natural gas, No. 2 fuel oil, and waste oil only.
** CO AP-42 emission factor determined by combining data from batch mix dryer fired with natural gas, No. 6 fuel oil, and No. 2 fuel oil to develop single CO emission factor.

Abbreviations

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

Appendix A.2: Limited Emissions Summary
Greenhouse Gas (CO2e) Emissions from the
Batch-Mix Plant (Dryer/Mixer) Process Emissions

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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

Maximum Hourly Asphalt Production =	120	ton/hr
Annual Asphalt Production Limitation =	488,251	ton/yr

	Emission Factor (lb/ton) Batch-Mix Plant (dryer/mixer)				Limited Potential to Emit (tons/yr) Batch-Mix Plant (dryer/mixer)			
Criteria Pollutant	Natural Gas	No. 2 Fuel Oil	Waste Oil	Global Warming Potentials (GWP)	Natural Gas	No. 2 Fuel Oil	Waste Oil	**CO2e for Worst Case Fuel (tons/yr)**
CO2	37	37	37	1	9,032.64	9,032.64	9,032.64	
CH4	0.0074	0.0074	0.0074	21	1.81	1.81	1.81	
N2O				310	0	0	0	**9,070.58**
				Total	9,034.44	9,034.44	9,034.44	
		CO2e Equivalent Emissions (tons/yr)			9,070.58	9,070.58	9,070.58	

Methodology

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

There are no emission factors for N20 available in either the 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no N2O emission anticipated from this process.

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

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

Limited CO2e Emissions (tons/yr) = CO2 Potential Emission of "worst case" fuel (ton/yr) x CO2 GWP (1) + CH4 Potential Emission of "worst case" fuel (ton/yr) x CH4 GWP (21) + N2O Potential Emission of "worst case" fuel (ton/yr) x N2O GWP (310).

Abbreviations

CO2 = Carbon Dioxide CH4 = Methane N2O = Nitrogen Dioxide PTE = Potential to Emit

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

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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

Limited Blast Furnace Slag Usage =	0	ton/yr	0	% sulfur
Limited Annual Steel Slag Usage =	0	ton/yr	0	% sulfur

Type of Slag	SO2 Emission Factor (lb/ton)	Limited Potential to Emit SO2 (tons/yr)
Blast Furnace Slag*	0.0000	0.0
Steel Slag**	0.0000	0.00

Methodology

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

** Testing results for steel slag, obtained June 2009 from E & B Paving, Inc. facility located in Huntington, IN. The testing results showed a steel slag emission factor of 0.0007 lb/ton from slag containing 0.33% sulfur content.

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

Abbreviations

SO2 = Sulfur Dioxide

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

Company Name: Tri-County Asphalt
Source Location: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

Maximum Hot Oil Heater Fuel Input Rate =	1.75	MMBtu/hr		
Natural Gas Usage =	15	MMCF/yr		
No. 2 Fuel Oil Usage =	109,500	gal/yr, and	0.50	% sulfur

Unlimited/Uncontrolled Emissions

	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
	Hot Oil Heater		Hot Oil Heater		
Criteria Pollutant	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	**Worse Case Fuel (tons/yr)**
PM	1.9	2.0	0.015	0.110	**0.11**
PM10/PM2.5	7.6	3.3	0.058	0.181	**0.18**
SO2	0.6	71.0	0.005	3.887	**3.89**
NOx	100	20.0	0.767	1.095	**1.10**
VOC	5.5	0.20	0.042	0.011	**0.04**
CO	84	5.0	0.644	0.274	**0.64**
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	1.5E-06	3.07E-05	**3.1E-05**
Beryllium	1.2E-05	4.2E-04	9.2E-08	2.30E-05	**2.3E-05**
Cadmium	1.1E-03	4.2E-04	8.4E-06	2.30E-05	**2.3E-05**
Chromium	1.4E-03	4.2E-04	1.1E-05	2.30E-05	**2.3E-05**
Cobalt	8.4E-05		6.4E-07		**6.4E-07**
Lead	5.0E-04	1.3E-03	3.8E-06	6.90E-05	**6.9E-05**
Manganese	3.8E-04	8.4E-04	2.9E-06	4.60E-05	**4.6E-05**
Mercury	2.6E-04	4.2E-04	2.0E-06	2.30E-05	**2.3E-05**
Nickel	2.1E-03	4.2E-04	1.6E-05	2.30E-05	**2.3E-05**
Selenium	2.4E-05	2.1E-03	1.8E-07	1.15E-04	**1.1E-04**
Benzene	2.1E-03		1.6E-05		**1.6E-05**
Dichlorobenzene	1.2E-03		9.2E-06		**9.2E-06**
Ethylbenzene					**0**
Formaldehyde	7.5E-02	6.10E-02	5.7E-04	3.34E-03	**0.003**
Hexane	1.8E+00		0.01		**0.014**
Phenol					**0**
Toluene	3.4E-03		2.6E-05		**2.6E-05**
Total PAH Haps	negl		negl		**0**
Polycyclic Organic Matter		3.30E-03		1.81E-04	**1.8E-04**
		Total HAPs =	**1.4E-02**	**3.9E-03**	**0.018**
		Worst Single HAP =	**1.4E-02 (Hexane)**	**3.3E-03 (Formaldehyde)**	**1.4E-02 (Hexane)**

Methodology

Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
Sources of AP-42 Emission Factors for fuel combustion:
Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
No. 2 Fuel Oil: AP-42 Chapter 1.3 (dated 5/10), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11

Abbreviations

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

Appendix A.2: Limited Emissions Summary
Greenhouse Gas (CO2e) Emissions from
Hot Oil Heater Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

Maximum Hot Oil Heater Fuel Input Rate =	1.75	MMBtu/hr		
Natural Gas Usage =	15	MMCF/yr		
No. 2 Fuel Oil Usage =	109,500	gal/yr,	0.50	% sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units) Natural Gas (lb/MMCF)	Emission Factor (units) No. 2 Fuel Oil (lb/kgal)	Global Warming Potentials (GWP)	Unlimited/Uncontrolled Potential to Emit (tons/yr) Natural Gas (tons/yr)	Unlimited/Uncontrolled Potential to Emit (tons/yr) No. 2 Fuel Oil (tons/yr)
CO2	120,161.84	22,501.41	1	921.04	1,231.95
CH4	2.49	0.91	21	0.019	5.00E-02
N2O	2.20	0.26	310	0.017	1.42E-02
			Total	921.08	1,232.02

Worse Case CO2e Emissions (tons/yr)
1,237.41

CO2e Equivalent Emissions (tons/yr)	926.67	1,237.41

Methodology

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)

Natural Gas : Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2

No. 2 Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 5/10), Table 1.3-8

Emission Factor (EF) Conversions

Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Natural Gas (MMBtu/scf) * Conversion Factor (1,000,000 scf/MMCF)]

Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of the Fuel Oil (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]

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

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

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

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

Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (310).

Abbreviations

CH4 = Methane
CO2 = Carbon Dioxide
N2O = Nitrogen Dioxide
PTE = Potential to Emit

Appendix A.2: Limited Emissions Summary
Hot Oil Heating System - Process Emissions

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

The following calculations determine the unlimited/uncontrolled emissions from the combustion of natural gas and No. 2 fuel oil in the hot oil heating system, which is used to heat a specially designed transfer oil. The hot transfer oil is then pumped through a piping system that passes through the asphalt cement storage tanks, in order to keep the asphalt cement at the correct temperature.

Maximum Fuel Input Rate To Hot Oil Heater =	1.75	MMBtu/hr
Natural Gas Usage =	15	MMCF/yr, and
No. 2 Fuel Oil Usage =	109,500	gal/yr

	Emission Factors		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
Criteria Pollutant	Natural Gas (lb/ft3)	No. 2 Fuel Oil (lb/gal)	Natural Gas	No. 2 Fuel Oil	**Worse Case PTE**
VOC	2.60E-08	2.65E-05	1.99E-04	0.001	**0.001**
CO	8.90E-06	0.0012	0.068	0.066	**0.068**
Greenhouse Gas as CO2e*					
CO2	0.20	28.00	1533.00	1,533.00	**1,533.00**
Hazardous Air Pollutant					
Formaldehyde	2.60E-08	3.50E-06	1.99E-04	1.92E-04	**1.99E-04**
Acenaphthene		5.30E-07		2.90E-05	**2.90E-05**
Acenaphthylene		2.00E-07		1.10E-05	**1.10E-05**
Anthracene		1.80E-07		9.86E-06	**9.86E-06**
Benzo(b)fluoranthene		1.00E-07		5.48E-06	**5.48E-06**
Fluoranthene		4.40E-08		2.41E-06	**2.41E-06**
Fluorene		3.20E-08		1.75E-06	**1.75E-06**
Naphthalene		1.70E-05		9.31E-04	**9.31E-04**
Phenanthrene		4.90E-06		2.68E-04	**2.68E-04**
Pyrene		3.20E-08		1.75E-06	**1.75E-06**
				Total HAPs	**1.46E-03**
				Worst Single HAP	**9.31E-04** **(Naphthalene)**

Methodology
Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
No. 2 Fuel Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Natural Gas: Potential to Emit (tons/yr) = (Natural Gas Usage (MMCF/yr))*(Emission Factor (lb/CF))*(1000000 CF/MMCF)*(ton/2000 lbs)
No. 2 Fuel Oil: Potential to Emit (tons/yr) = (No. 2 Fuel Oil Usage (gals/yr))*(Emission Factor (lb/gal))*(ton/2000 lbs)
Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 (ton/yr) x CO2 GWP (1)
1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Table 11.1-13

*Note: There are no emission factors for CH4 and N20 available in either 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no CH4 and N2O emission anticipated from this process.

Abbreviations
CO = Carbon Monoxide VOC = Volatile Organic Compound CO2 = Carbon Dioxide

Appendix A.2: Limited Emissions Summary
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

Output Horsepower Rating (hp)	0
Limited Hours Operated per Year	0
Limited Throughput (hp-hr/yr)	0
Limited Diesel Fuel Usage (gal/yr)	0

	Pollutant						
	PM[2]	PM10[2]	direct PM2.5[2]	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Emission Factor in lb/kgal[1]	43.07	43.07	43.07	40.13	606.85	49.22	130.77
Limited Emission in tons/yr	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[1] The AP-42 Chapter 3.3-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[1]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[2]PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs[3]
Emission Factor in lb/MMBtu	9.33E-04	4.09E-04	2.85E-04	3.91E-05	1.18E-03	7.67E-04	9.25E-05	1.68E-04
Emission Factor in lb/kgal[4]	1.28E-01	5.60E-02	3.91E-02	5.36E-03	1.62E-01	1.05E-01	1.27E-02	2.30E-02
Limited Emission in tons/yr	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

[3]PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

[4]The AP-42 Chapter 3.3-1 emission factors in lb/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[4]Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Limited Emission of Total HAPs (tons/yr)	**0.00E+00**
Limited Emission of Worst Case HAPs (tons/yr)	**0.00E+00**

Green House Gas Emissions (GHG)

	Pollutant		
	CO2[5]	CH4[6]	N2O[6]
Emission Factor in lb/hp-hr	1.15	NA	NA
Emission Factor in kg/MMBtu	NA	0.003	0.0006
Emission Factor in lb/kgal	22,512.07	0.91	0.18
Limited Emission in tons/yr	0.00	0.000	0.000

[5]The AP-42 Chapter 3.3-1 emission factor in lb/hp-hr was converted to lb/kgal emission factor using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[5]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[6]The 40 CFR 98 Subpart C emission factors in kg/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[6]Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) * 2.20462 (lb/kg) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Summed Limited Emissions in tons/yr	**0.00**
CO2e Total in tons/yr	**0.00**

Methodology

Limited Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Limited Hours Operated per Year]

Limited Diesel Fuel Usage (gal/yr) = Limited Throughput (hp-hr/yr) * 7000 (Btu/hp-hr) * 1/19300 (lb/Btu) * 1/7.1 (gal/lb)

Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2 and have been converted to lb/kgal

CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2 and have been converted to lb/kgal

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Limited Emissions (tons/yr) = [Limited Diesel Fuel Usage (gal/yr) x Emission Factor (lb/kgal)] / (1,000 ga/kgal) / (2,000 lb/ton)

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A.2: Limited Emissions Summary
Large Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (>600 HP)

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

Output Horsepower Rating (hp)	0
Limited Hours Operated per Year	0
Limited Throughput (hp-hr/yr)	0
Limited Diesel Fuel Usage (gal/yr)	0

Sulfur Content (S) of Fuel (% by weight) 0

	Pollutant						
	PM	PM10[2]	direct PM2.5[2]	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	7.00E-04			0.00E+00 *(.00809S)*	2.40E-02	7.05E-04	5.50E-03
Emission Factor in lb/MMBtu		0.0573	0.0573				
Emission Factor in lb/kgal[1]	13.70	7.85	7.85	0.00	469.82	13.80	107.67
Limited Emission in tons/yr	0.00	0.00	0.00	0.00	0.00	0.00	0.00

[1] The AP-42 Chapter 3.4-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[1]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[2]Emission factors in lb/kgal were converted from the AP-42 Chapter 3.4-1 emission factors in lb/MMBtu using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[2]Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs[3]
Emission Factor in lb/MMBtu	7.76E-04	2.81E-04	1.93E-04	7.89E-05	2.52E-05	7.88E-06	2.12E-04
Emission Factor in lb/kgal[4]	1.06E-01	3.85E-02	2.64E-02	1.08E-02	3.45E-03	1.08E-03	2.91E-02
Limited Emission in tons/yr	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

[3]PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

[4]Emission factors in lb/kgal were converted from the AP-42 Chapter 3.4-1 emission factors in lb/MMBtu using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[4]Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Limited Emission of Total HAPs (tons/yr)	**0.00E+00**
Limited Emission of Worst Case HAPs (tons/yr)	**0.00E+00**

Green House Gas Emissions (GHG)

	Pollutant		
	CO2[5]	CH4[5,6]	N2O[7]
Emission Factor in lb/hp-hr	1.16	6.35E-05	NA
Emission Factor in kg/MMBtu	NA	NA	0.0006
Emission Factor in lb/kgal	22,707.83	1.24	0.18
Limited Emission in tons/yr	0.00	0.00	0.00

[5] The AP-42 Chapter 3.4-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[5]Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

[6]According to AP-42, Table 3.4-1, TOC (as CH4) is 9% methane by weight. As a result, the lb/hp-hr emission factor for TOC (as CH4) in AP-42 has been multiplied by 9% to determine the portion that is emitted as methane.

[7]The 40 CFR 98 Subpart C emission factors in kg/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

[7]Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) * 2.20462 (lb/kg) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Summed Potential Emissions in tons/yr	**0.00**
CO2e Total in tons/yr	**0.00**

Methodology

Limited Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Limited Hours Operated per Year]

Limited Diesel Fuel Usage (gal/yr) = Limited Throughput (hp-hr/yr) * 7000 (Btu/hp-hr) * 1/19300 (lb/Btu) * 1/7.1 (gal/lb)

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4 and have been converted to lb/kgal.

N2O Emission Factor from 40 CFR 98 Subpart C Table C-2 and have been converted to lb/kgal.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Limited Emissions (tons/yr) = [Limited Diesel Fuel Usage (gal/yr) x Emission Factor (lb/kgal)] / (1,000 ga/kgal) / (2,000 lb/ton)
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

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

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.5	
Annual Asphalt Production Limitation =	488,251	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	0.13	0.14	NA	**0.27**
Organic PM	3.4E-04	2.5E-04	NA	0.08	0.062	NA	**0.15**
TOC	0.004	0.012	0.001	1.02	2.98	0.269	**4.3**
CO	0.001	0.001	3.5E-04	0.33	0.288	0.086	**0.70**

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

PM/HAPs	**0.006**	**0.007**	**0**	**0.013**
VOC/HAPs	**0.015**	**0.038**	**0.004**	**0.057**
non-VOC/HAPs	**7.8E-05**	**8.0E-06**	**2.1E-05**	**1.1E-04**
non-VOC/non-HAPs	**0.07**	**0.04**	**0.02**	**0.14**

Total VOCs	**0.95**	**2.98**	**0.3**	**4.2**
Total HAPs	**0.02**	**0.04**	**0.004**	**0.07**
			Worst Single HAP	**0.022 (formaldehyde)**

Methodology
The asphalt temperature and volatility factor were provided by the source.
Limited Potential to Emit (tons/yr) = (Annual Asphalt Production Limitation (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-14, 11.1-15, and 11.1-16
Plant Load-Out Emission Factor Equations (AP-42 Table 11.1-14)::
Total PM/PM10 Ef = 0.000181 + 0.00141(-V)e^((0.0251)(T+460)-20.43)
Organic PM Ef = 0.00141(-V)e^((0.0251)(T+460)-20.43)
TOC Ef = 0.0172(-V)e^((0.0251)(T+460)-20.43)
CO Ef = 0.00558(-V)e^((0.0251)(T+460)-20.43)
Silo Filling Emission Factor Equations (AP-42 Table 11.1-14):
PM/PM10 Ef = 0.000332 + 0.00105(-V)e^((0.0251)(T+460)-20.43)
Organic PM Ef = 0.00105(-V)e^((0.0251)(T+460)-20.43)
TOC Ef = 0.0504(-V)e^((0.0251)(T+460)-20.43)
CO Ef = 0.00488(-V)e^((0.0251)(T+460)-20.43)
On Site Yard CO emissions estimated by multiplying the TOC emissions by 0.32
*No emission factors available for PM10 or PM2.5, therefore IDEM assumes PM10 and PM2.5 are equivalent to Total PM.

Abbreviations
TOC = Total Organic Compounds
CO = Carbon Monoxide
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound

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

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

Organic Particulate-Based Compounds (Table 11.1-15)

					Speciation Profile		Limited Potential to Emit (tons/yr)			
Pollutant	**CASRN**	**Category**	**HAP Type**	**Source**	**Load-out and Onsite Yard (% by weight of Total Organic PM)**	**Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)**	**Load-out**	**Silo Filling**	**Onsite Yard**	**Total**
PAH HAPs										
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	0.47%	2.2E-04	2.9E-04	NA	5.1E-04
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	2.3E-05	8.7E-06	NA	3.2E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	5.8E-05	8.1E-05	NA	1.4E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	1.6E-05	3.5E-05	NA	5.1E-05
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	6.3E-06	0	NA	6.3E-06
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	1.8E-06	0	NA	1.8E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	1.6E-06	0	NA	1.6E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	1.9E-06	0	NA	1.9E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	6.5E-06	5.9E-06	NA	1.2E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	8.6E-05	1.3E-04	NA	2.2E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	3.1E-07	0	NA	3.1E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	4.2E-05	9.3E-05	NA	1.3E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	6.4E-04	6.3E-04	NA	1.3E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	3.9E-07	0	NA	3.9E-07
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	2.0E-03	3.3E-03	NA	0.005
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	1.0E-03	1.1E-03	NA	2.2E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	1.8E-05	1.9E-05	NA	3.7E-05
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	6.7E-04	1.1E-03	NA	1.8E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	1.2E-04	2.7E-04	NA	4.0E-04
Total PAH HAPs							**0.005**	**0.007**	**NA**	**0.012**
Other semi-volatile HAPs										
Phenol		PM/HAP	---	Organic PM	1.18%	0	9.8E-04	0	0	9.8E-04

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

Methodology

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

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

Abbreviations

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

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

Organic Volatile-Based Compounds (Table 11.1-16)

					Speciation Profile		Limited Potential to Emit (tons/yr)			
Pollutant	**CASRN**	**Category**	**HAP Type**	**Source**	**Load-out and Onsite Yard (% by weight of TOC)**	**Silo Filling and Asphalt Storage Tank (% by weight of TOC)**	**Load-out**	**Silo Filling**	**Onsite Yard**	**Total**
VOC		VOC	---	TOC	94%	100%	**0.95**	**2.98**	**0.25**	**4.18**
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	6.6E-02	7.7E-03	1.7E-02	0.091
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	4.7E-04	1.6E-03	1.2E-04	0.002
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	7.2E-03	3.3E-02	1.9E-03	0.042
Total non-VOC/non-HAPS					7.30%	1.40%	**0.074**	**0.042**	**0.020**	**0.14**
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	5.3E-04	9.5E-04	1.4E-04	1.6E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	9.7E-05	1.5E-04	2.6E-05	2.7E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	5.0E-04	1.2E-03	1.3E-04	1.8E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	1.3E-04	4.8E-04	3.5E-05	6.4E-04
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	2.1E-06	1.2E-04	5.6E-07	1.2E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	1.5E-04	6.8E-04	4.0E-05	8.8E-04
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	1.1E-03	0	3.0E-04	1.4E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	2.8E-03	1.1E-03	7.5E-04	0.005
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	8.9E-04	2.1E-02	2.4E-04	0.022
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	1.5E-03	3.0E-03	4.0E-04	0.005
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	1.8E-05	9.2E-06	4.8E-06	3.2E-05
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	8.0E-06	0	8.0E-06
MTBE	1634-04-4	VOC/HAP	---	TOC	0	0	0	0	0	0
Styrene	100-42-5	VOC/HAP	---	TOC	0.0073%	0.0054%	7.4E-05	1.6E-04	2.0E-05	2.5E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	7.8E-05	0	2.1E-05	9.9E-05
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	2.1E-03	1.8E-03	5.6E-04	0.005
1,1,1-Trichloroethane	71-55-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichloroethene	79-01-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichlorofluoromethane	75-69-4	VOC/HAP	---	TOC	0.0013%	0	1.3E-05	0	3.5E-06	1.7E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	4.2E-03	6.0E-03	1.1E-03	0.011
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	8.1E-04	1.7E-03	2.1E-04	2.7E-03
Total volatile organic HAPs					1.50%	1.30%	**0.015**	**0.039**	**0.004**	**0.058**

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

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

Appendix A.2: Limited Emissions Summary
Material Storage Piles

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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

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

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/PM2.5 (tons/yr)
Sand	2.6	3.01	0.08	0.044	0.015
Limestone	1.6	1.85	0.16	0.054	0.019
RAP	0.5	0.58	0	0	0
Gravel	1.6	1.85	0	0	0
Shingles	0.5	0.58	0	0	0
Slag	3.8	4.40	0	0	0
			Totals	**0.10**	**0.03**

Methodology
PTE of PM (tons/yr) = (Emission Factor (lb/acre/day)) * (Maximum Pile Size (acres)) * (ton/2000 lbs) * (8760 hours/yr)
PTE of PM10/PM2.5 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%
*Silt content values obtained from AP-42 Table 13.2.4-1 (dated 1/95)
**Maximum anticipated pile size (acres) provided by the source.
PM2.5 = PM10
Abbreviations
RAP = recycled asphalt pavement
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PTE = Potential to Emit

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

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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

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

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

Annual Asphalt Production Limitation =	488,251	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	463,838	tons/yr

Type of Activity	Limited PTE of PM (tons/yr)	Limited PTE of PM10 (tons/yr)	Limited PTE of PM2.5 (tons/yr)
Truck unloading of materials into storage piles	0.53	0.25	0.04
Front-end loader dumping of materials into feeder bins	0.53	0.25	0.04
Conveyor dropping material into dryer/mixer or batch tower	0.53	0.25	0.04
Total (tons/yr)	**1.58**	**0.75**	**0.11**

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

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

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM10 (lbs/ton)*	Limited PTE of PM (tons/yr)	Limited PTE of PM10/PM2.5 (tons/yr)**
Crushing	0.0054	0.0024	0	0
Screening	0.025	0.0087	5.80	2.02
Conveying	0.003	0.0011	0.70	0.26
Limited Potential to Emit (tons/yr) =			**6.49**	**2.27**

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

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

Appendix A.2: Limited Emissions Summary
Unpaved Roads

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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 =	488,251	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	463,838	tons/yr
Maximum Asphalt Cement/Binder Throughput =	24,413	tons/yr
No. 2 Fuel Oil Limitation =	2,679,232	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)	17.0	22.4	39.4	2.1E+04	8.2E+05	300	0.057	1,176.5
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	2.1E+04	3.5E+05	300	0.057	1,176.5
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	6.8E+02	3.3E+04	300	0.057	38.5
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	6.8E+02	8.1E+03	300	0.057	38.5
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	2.8E+02	1.2E+04	300	0.057	16.1
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	2.8E+02	3.4E+03	300	0.057	16.1
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	1.1E+05	2.1E+06	300	0.057	6,274.9
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	1.1E+05	1.7E+06	300	0.057	6,274.9
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.0	2.0E+04	8.3E+05	300	0.057	1,155.9
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.0	2.0E+04	3.5E+05	300	0.057	1,155.9
	Total				**3.0E+05**	**6.2E+06**			**1.7E+04**

Average Vehicle Weight Per Trip =	20.3	tons/trip
Average Miles Per Trip =	0.057	miles/trip

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

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
W =	20.3	20.3	20.3	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, 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	PM2.5	
Unmitigated Emission Factor, Ef =	6.10	1.55	0.16	lb/mile
Mitigated Emission Factor, Eext =	4.01	1.02	0.10	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	3.59	0.91	0.09	2.36	0.60	0.06	1.18	0.30	0.03
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	3.59	0.91	0.09	2.36	0.60	0.06	1.18	0.30	0.03
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.117	0.030	0.00	0.077	0.020	2.0E-03	0.039	0.010	9.8E-04
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.117	0.030	0.00	0.077	0.020	2.0E-03	0.039	0.010	9.8E-04
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.049	0.012	1.2E-03	0.032	0.008	8.2E-04	0.016	0.004	4.1E-04
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.049	0.012	1.2E-03	0.032	0.008	8.2E-04	0.016	0.004	4.1E-04
Aggregate/RAP Loader Full	Front-end loader (3 CY)	19.13	4.87	0.49	12.58	3.21	0.32	6.29	1.60	0.16
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	19.13	4.87	0.49	12.58	3.21	0.32	6.29	1.60	0.16
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	3.52	0.90	0.09	2.32	0.59	0.06	1.16	0.30	0.03
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	3.52	0.90	0.09	2.32	0.59	0.06	1.16	0.30	0.03
	Totals	**52.80**	**13.46**	**1.35**	**34.72**	**8.85**	**0.88**	**17.36**	**4.42**	**0.44**

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

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

Appendix A.2: Limited Emissions Summary
Paved Roads

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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 =	488,251	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	463,838	tons/yr
Maximum Asphalt Cement/Binder Throughput =	24,413	tons/yr
No. 2 Fuel Oil Limitation =	2,679,232	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)	17.0	22.4	39.40	2.1E+04	8.2E+05	300	0.057	1,176.5
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.00	2.1E+04	3.5E+05	300	0.057	1,176.5
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.00	6.8E+02	3.3E+04	300	0.057	38.5
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	6.8E+02	8.1E+03	300	0.057	38.5
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.00	2.8E+02	1.2E+04	300	0.057	16.1
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	2.8E+02	3.4E+03	300	0.057	16.1
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.20	1.1E+05	2.1E+06	300	0.057	6,274.9
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	1.1E+05	1.7E+06	300	0.057	6,274.9
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.00	2.0E+04	8.3E+05	300	0.057	1,155.9
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.00	2.0E+04	3.5E+05	300	0.057	1,155.9
	Total				**3.0E+05**	**6.2E+06**			**1.7E+04**

Average Vehicle Weight Per Trip =	20.3	tons/trip
Average Miles Per Trip =	0.057	miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	20.3	20.3	20.3	tons = average vehicle weight (provided by source)
sL =	0.6	0.6	0.6	g/m^2 = Ubitiguous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months)

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

where p =	125	days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N =	365	days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.15	0.03	0.01	lb/mile
Mitigated Emission Factor, Eext =	0.14	0.03	0.01	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	0.09	0.02	0.00	0.08	0.02	0.00	0.04	0.01	0.00
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.09	0.02	0.00	0.08	0.02	0.00	0.04	0.01	0.00
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.003	0.001	1.4E-04	0.003	0.001	1.3E-04	0.001	2.6E-04	6.4E-05
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.003	0.001	1.4E-04	0.003	0.001	1.3E-04	0.001	2.6E-04	6.4E-05
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	1.2E-03	2.4E-04	5.9E-05	1.1E-03	2.2E-04	5.4E-05	5.5E-04	1.1E-04	2.7E-05
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	1.2E-03	2.4E-04	5.9E-05	1.1E-03	2.2E-04	5.4E-05	5.5E-04	1.1E-04	2.7E-05
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0.47	0.09	0.02	0.43	0.09	0.02	0.21	0.04	0.01
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0.47	0.09	0.02	0.43	0.09	0.02	0.21	0.04	0.01
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.09	0.02	0.00	0.08	0.02	0.00	0.04	0.01	0.00
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.09	0.02	0.00	0.08	0.02	0.00	0.04	0.01	0.00
	Totals	**1.29**	**0.26**	**0.06**	**1.18**	**0.24**	**0.06**	**0.59**	**0.12**	**0.03**

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

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

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

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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

Limited VOC Emissions from the Sum of the Liquid Binders = 0.00 tons/yr

Volatile Organic Compounds

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

Hazardous Air Pollutants

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

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

		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
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.

Abbreviations
VOC = Volatile Organic Compounds
PTE = Potential to Emit

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

Company Name: Tri-County Asphalt
Source Address: 882 N. CR 800 E, Otwell, Indiana 47564
Permit Number: F125-31073-00035
Reviewer: Hannah L. Desrosiers

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

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

Gasoline Throughput =	1,300	gallons/day
=	474.5	kgal/yr

Volatile Organic Compounds

Emission Source	Emission Factor (lb/kgal of throughput)	PTE of VOC (tons/yr)*
Filling storage tank (balanced submerged filling)	0.3	0.07
Tank breathing and emptying	1.0	0.24
Vehicle refueling (displaced losses - controlled)	1.1	0.26
Spillage	0.7	0.17
Total		**0.74**

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%	
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0%	Xylenes
Limited PTE of Total HAPs (tons/yr) =	**0.19**	
Limited PTE of Single HAP (tons/yr) =	**0.07**	**Xylenes**

Methodology
The gasoline throughput was provided by the source.
Gasoline Throughput (kgal/yr) = [Gasoline Throughput (lbs/day)] * [365 days/yr] * [kgal/1000 gal]
PTE of VOC (tons/yr) = [Gasoline Throughput (kgal/yr)] * [Emission Factor (lb/kgal)] * [ton/2000 lb]
PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]
PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]

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

Abbreviations
VOC = Volatile Organic Compounds
PTE = Potential to Emit

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

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

TO: Cade Knies
Tri-County Asphalt
P.O. Box 117
882 N. CR 800 E
Otwell, IN 47564

DATE: July 26, 2012

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

SUBJECT: Final Decision
FESOP - Renewal
125-31073-00035

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

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

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

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

Final Applicant Cover letter.dot 11/30/07

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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July 26, 2012

TO: Winslow Branch Public Library

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

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

Applicant Name: Tri-County Asphalt
Permit Number: 125-31073-00035

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

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

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	MIDENNEY 7/26/2012 Tri-County Asphalt 125-31073-00035 (final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Cade Knies Tri-County Asphalt PO Box 117, 882 N CR 800 E Otwell IN 47564 (Source CAATS) via confirm delivery									
2		Mr. Wendell Hibdon Plumbers & Steam Fitters Union, Local 136 2300 St. Joe Industrial Park Dr Evansville IN 47720 *(Affected Party)*									
3		Mr. Paul Lake 2364 South CR 750 E. Winslow IN 47598 *(Affected Party)*									
4		Mr. Eric Parsley Commonwealth Engineers 101 Plaza East Blvd., Suite 200 Evansville IN 47715 *(Consultant)*									
5		Ms. Andrea Wood 4565 E CR 750 N Petersburg IN 47567 *(Affected Party)*									
6		Pike County Commissioners 801 Main Street Petersburg IN 47567 *(Local Official)*									
7		Petersburg City Council and Mayors Office 704 Main St, City Hall Petersburg IN 47567 *(Local Official)*									
8		Pike County Health Department 801 Main St, Courthouse Petersburg IN 47567-1298 *(Health Department)*									
9		Mr. Meyer Larry 4715 S. CR 175 E. Winslow IN 47598 *(Affected Party)*									
10		Mr. Gary Leavitt 502 S. Lakeview Dr. Petersburg IN 47567 *(Affected Party)*									
11		Winslow Branch Public Library 105 Center Street P O BOX 39 Winslow IN 47598 *(Library)*									
12		Tom & Sandy Loveless 138 Nichols Ave Petersburg IN 47567 *(Affected Party)*									
13		C.J. & Betty Meadors 5582 N CR 500 E Petersburg IN 47567 (Affected Party)									
14		Mr. Mark Wilson Evansville Courier & Press P.O. Box 268 Evansville IN 47702-0268 *(Affected Party)*									
15		Rachel Lewis 12710 N Green River Rd Evansville In 47725 *(Affected Party)*									

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
14			

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Mail Code 61-53

IDEM Staff	MIDENNEY 7/26/2012 Tri-County Asphalt 125-31073-00035 (final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		John Blair 800 Adams Ave Evansville IN 47713 (Affected Party)									
2											
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Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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