



# 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](http://www.idem.IN.gov)

TO: Interested Parties / Applicant

DATE: June 12, 2008

RE: Rieth-Riley Construction Company, Inc. / 157-23134-00457

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



Mitchell E. Daniels, Jr.  
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100 North Senate Avenue  
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## Federally Enforceable State Operating Permit Renewal OFFICE OF AIR QUALITY

**Rieth-Riley Construction Co., Inc.  
3425 O'Farrell Road  
Lafayette, Indiana 47904**

(herein known as the Permittee) is hereby authorized 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.**

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.

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.

Operation Permit No.: F157-23134-00457	
Issued by:	Issuance Date: June 13, 2008
<i>Original document signed by</i>	Expiration Date: June 13, 2018
Chrystal Wagner, Section Chief Permits Branch Office of Air Quality	

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## SECTION A

## SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in Conditions: A.1, A.3, and A.4, 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)]

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

Source Address:	3425 O'Farrell Road, Lafayette, Indiana 47904
Mailing Address:	P.O. Box 477, Goshen, Indiana 46527
General Source Phone Number:	574-875-5183
SIC Code:	2951
County Location:	Tippecanoe
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

### A.2 Part 70 Source Definition [326 IAC 2-8-1] [326 IAC 2-7-1(22)]

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This stationary hot batch-mix asphalt production source consists of two (2) plants:

- (a) Plant 157-03310 is located at 3425 O'Farrell Road, Lafayette, Indiana 47904; and
- (b) Plant 157-03286 is located at 3425 O'Farrell Road, Lafayette, Indiana 47904.

These plants are located on one or more contiguous properties, have the same two digit SIC code and are under common ownership. Therefore, they will be considered one (1) source, as defined by 326 IAC 2-7-1(22).

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

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

#### **Plant 157-03310 consists of the following:**

- (a) One (1) batch mixer, identified as 157-03310, equipped with a baghouse for PM control, exhausted to Stack SV1a, capacity: 225 tons of asphalt per hour.
- (b) One (1) dryer burner, firing re-refined oil as primary fuel, using natural gas, No. 2 fuel oil, No. 4 fuel oil, propane gas and butane gas as backup fuels, exhausting to Stack SV1a, rated at 75 million British thermal units per hour.
- (c) Two (2) hot oil heaters, firing natural gas, capacity: 1.7 million British thermal units per hour, total.
- (d) One (1) tank, identified as 10 (previously identified as 20), constructed in 1995, capacity: 30,000 gallons of liquid asphalt.
- (e) One (1) tank, identified as 11, constructed in 1978, capacity: 20,000 gallons of liquid asphalt.
- (f) Two (2) tanks, identified as 16A and 16B, constructed in 1978 and 1970, respectively,

capacity: 12,500 and 8,000 gallons of re-refined oil, respectively.

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

**Plant 157-03286 consists of the following:**

- (g) One (1) batch mixer, identified as 157-03286, equipped with a baghouse for PM control, exhausted to Stack SV1, capacity: 200 tons of asphalt per hour.
- (h) One (1) dryer burner, firing re-refined oil as primary fuel, using natural gas, No. 2 fuel oil, No. 4 fuel oil, propane gas and butane gas as backup fuels, exhausting to Stack SV1, rated at 82.4 million British thermal units per hour.
- (i) One (1) hot oil heater, firing propane, capacity: 0.8 million British thermal units per hour.
- (j) One (1) tank, identified as E (previously identified as 15), constructed in 1986, capacity: 35,000 gallons of liquid asphalt.
- (k) One (1) tank, identified as J, constructed in 1980, capacity: 18,000 gallons of propane.
- (l) One (1) tank, identified as K, constructed in 1970, capacity: 20,000 gallons of re-refined oil.
- (m) Aggregate storage piles, with a maximum storage capacity of 50,000 tons.
- (n) Two (2) aggregate cold feed systems, each consisting of aggregate feed bins, conveyors, and screens.
- (o) Two (2) Reclaimed Asphalt Pavement (RAP) feed systems, each consisting of RAP feed bins, conveyors, a lump breaker system, and screens, with a total capacity of 50 tons per hour.
- (p) Cold-mix (stockpile mix) asphalt storage piles.

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

**A.4 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, as defined in 326 IAC 2-7-1(21):

- (a) Plant maintenance activities including grinding, sanding and welding.
- (b) A laboratory as defined in 326 IAC 2-7-1(21)(D)
- (c) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]

**A.5 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, F 157-23134-03286, 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]**

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

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

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

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

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

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

- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U.S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

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

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- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

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

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

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

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

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

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

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

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

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

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

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
  - (2) The permitted facility was at the time being properly operated;
  - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
  - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;  
  
Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or  
Telephone Number: 317-233-0178 (ask for Compliance Section)  
Facsimile Number: 317-233-6865
  - (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

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

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

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

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

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

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

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

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

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

- (a) All terms and conditions of permits established prior to F 157-23134-03286 and issued pursuant to permitting programs approved into the state implementation plan have been either:

- (1) incorporated as originally stated,
- (2) revised, or
- (3) deleted.

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

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

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

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

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

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

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

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

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

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

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

- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-

7-2 or if IDEM, OAQ determines any of the following:

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

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

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

Request for renewal shall be submitted to:

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

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

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

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

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

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

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

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

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

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

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

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

and

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

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

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

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

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

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

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

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2] [IC 13-17-3-2] [IC13-30-3-1]

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

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

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

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

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

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

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

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

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

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

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

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period. This limitation shall also satisfy the requirements of 326 IAC 2-3 (Emission Offset);
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

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

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

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

#### C.3 Opacity [326 IAC 5-1]

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

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

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

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

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

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

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

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

**C.7 Stack Height [326 IAC 1-7]**

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

**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 two hundred sixty (260) linear feet on pipes or one hundred sixty (160) square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
  - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
  - (2) If there is a change in the following:
    - (A) Asbestos removal or demolition start date;
    - (B) Removal or demolition contractor; or
    - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

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

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

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

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

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

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

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

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

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

### **Compliance Requirements [326 IAC 2-1.1-11]**

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

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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)]**

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

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

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

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

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

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

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

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

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- (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.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]**

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

(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval to:

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

within ninety (90) days after the date of issuance of this permit.

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

(c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(f) 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.15 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]**

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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.16 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]**

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

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

(1) initial inspection and evaluation

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

(3) any necessary follow-up actions to return operation to within the indicator range,

designated condition, or below the applicable emission limitation or standard, as applicable.

- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
  - (1) monitoring results;
  - (2) review of operation and maintenance procedures and records;
  - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
  - (1) monitoring data;
  - (2) monitor performance data, if applicable; and
  - (3) corrective actions taken.

**C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4] [326 IAC 2-8-5]**

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

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

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

**C.18 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]**

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

**C.19 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]**

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- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:  
  
Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

**Stratospheric Ozone Protection**

**C.20 Compliance with 40 CFR 82 and 326 IAC 22-1**

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

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

**SECTION D.1**

**FACILITY OPERATION CONDITIONS**

**Facility Description [326 IAC 2-7-5(15)]: Asphalt Plants**

**Plant 157-03310 consists of the following:**

- (a) One (1) batch mixer, identified as 157-03310, equipped with a baghouse for PM control, exhausted to Stack SV1a, capacity: 225 tons of asphalt per hour.
- (b) One (1) dryer burner, firing re-refined oil as primary fuel, using natural gas, No. 2 fuel oil, No. 4 fuel oil, propane gas and butane gas as backup fuels, exhausting to Stack SV1a, rated at 75 million British thermal units per hour.
- (c) Two (2) hot oil heaters, firing natural gas, capacity: 1.7 million British thermal units per hour, total.
- (d) One (1) tank, identified as 10 (previously identified as 20), constructed in 1995, capacity: 30,000 gallons of liquid asphalt.
- (e) One (1) tank, identified as 11, constructed in 1978, capacity: 20,000 gallons of liquid asphalt.
- (f) Two (2) tanks, identified as 16A and 16B, constructed in 1978 and 1970, respectively, capacity: 12,500 and 8,000 gallons of re-refined oil, respectively.

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

**Plant 157-03286 consists of the following:**

- (g) One (1) batch mixer, identified as 157-03286, equipped with a baghouse for PM control, exhausted to Stack SV1, capacity: 200 tons of asphalt per hour.
- (h) One (1) dryer burner, firing re-refined oil as primary fuel, using natural gas, No. 2 fuel oil, No. 4 fuel oil, propane gas and butane gas as backup fuels, exhausting to Stack SV1, rated at 82.4 million British thermal units per hour.
- (i) One (1) hot oil heater, firing propane, capacity: 0.8 million British thermal units per hour.
- (j) One (1) tank, identified as E (previously identified as 15), constructed in 1986, capacity: 35,000 gallons of liquid asphalt.
- (k) One (1) tank, identified as J, constructed in 1980, capacity: 18,000 gallons of propane.
- (l) One (1) tank, identified as K, constructed in 1970, capacity: 20,000 gallons of re-refined oil.
- (m) Aggregate storage piles, with a maximum storage capacity of 50,000 tons.
- (n) Two (2) aggregate cold feed systems, each consisting of aggregate feed bins, conveyors, and screens.
- (o) Two (2) Reclaimed Asphalt Pavement (RAP) feed systems, each consisting of RAP feed bins, conveyors, a lump breaker system, and screens, with a total capacity of 50 tons per hour.
- (p) Cold-mix (stockpile mix) asphalt storage piles.

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

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

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

#### **D.1.1 Volatile Organic Compounds (VOC) [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 8-5-2]**

- (a) The VOC emissions from the use of liquid binders in cold mix, including emulsified, asphalt production shall be limited to less than 90.0 tons of VOC is emitted per twelve (12) consecutive month period, with compliance determined at the end of each month. This will limit the potential to emit VOC to less than 90.0 tons per year from VOC usage, and the total source potential to emit VOC to less than 100 tons per year, including the heaters and the aggregate dryers/mixers. Thus, this limit renders 326 IAC 2-7, Part 70, and 326 IAC 2-2, PSD, not applicable based on VOC emissions.
- (b) Pursuant to 326 IAC 8-5-2, the Permittee shall not allow the use of asphalt emulsion containing more than seven percent (7%) oil distillate by volume of emulsion, except as used for the following purposes:
  - (1) penetrating prime coating;
  - (2) stockpile storage mix; and
  - (3) application during the months of November, December, January, February, and March.

#### **D.1.2 Particulate (PM<sub>10</sub>), Nitrogen Oxides (NO<sub>x</sub>) and Carbon Monoxide (CO) Limitations [326 IAC 2-8-4] [326 IAC 2-2]**

- (a) Pursuant to 326 IAC 2-8-4, the total amount of asphalt processed shall not exceed 491,260 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The potential to emit PM<sub>10</sub> from the two (2) aggregate dryers/mixers shall be less than 0.366 pounds per ton of asphalt processed. Together with (a) of this condition, this shall limit the potential to emit PM<sub>10</sub> to less than 90.0 tons per year from the two (2) aggregate dryers/mixers and less than 100 tons per year from the entire source, including PM<sub>10</sub> emissions from the heaters, screening and conveying, storage and insignificant activities.
- (c) The potential to emit NO<sub>x</sub> from the two (2) aggregate dryers/mixers shall be less than 0.398 pounds per ton of asphalt processed. Together with (a) of this condition, this shall limit the potential to emit NO<sub>x</sub> to less than 97.7 tons per year from the two (2) aggregate dryers/mixers and less than 100 tons per year from the entire source, including NO<sub>x</sub> emissions from the heaters.
- (d) The potential to emit CO from the two (2) aggregate dryers/mixers shall be less than 0.400 pounds per ton of asphalt processed. Together with (a) of this condition, this shall limit the potential to emit CO to less than 98.3 tons per year from the two (2) aggregate dryers/mixers and less than 100 tons per year from the entire source, including CO emissions from the heaters.

Compliance with these limitations shall render 326 IAC 2-7, Part 70, not applicable based on PM<sub>10</sub>, NO<sub>x</sub> and CO emissions, and 326 IAC 2-2, PSD, not applicable based on PM<sub>10</sub> and CO emissions.

#### **D.1.3 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 2-8-4] [326 IAC 7-1.1-1] [326 IAC 7-2-1] [326 IAC 2-2]**

- (a) Pursuant to 326 IAC 2-8-4, total use of re-refined oil at the two (2) aggregate dryers/mixers shall be limited to less than 750,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. Each gallon of No. 4 distillate fuel oil used shall be considered equal to using 0.500 gallons of re-refined oil and each gallon of No. 2 fuel oil used shall be considered equal to using 0.4733 gallons of re-refined oil. The sulfur content of the re-refined oil shall not exceed one percent (1.0%) by weight and the sulfur content of the No. 2 and No. 4 fuel oils shall not exceed one half of a percent (0.5%) by weight. This will

limit SO<sub>2</sub> emissions from the use of distillate fuel oils or re-refined oil to less than 68.5 tons per year and the potential to emit SO<sub>2</sub> from the entire source to less than 100 tons per year, including SO<sub>2</sub> emissions from the aggregate dryers/burners when using all fuels and the heaters. Compliance with these limitations shall render 326 IAC 2-7, Part 70, not applicable based on SO<sub>2</sub> emissions.

- (b) Pursuant to 326 IAC 7-1.1, the SO<sub>2</sub> emissions from the aggregate dryer shall not exceed five-tenths (0.5) pounds per million British thermal unit heat input when operating on No. 2 distillate oil or No. 4 distillate oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a thirty (30) day rolling weighted average.
- (c) Pursuant to 326 IAC 7-1.1, the SO<sub>2</sub> emissions from the aggregate dryer shall not exceed one (1.0) pound per million British thermal unit heat input when operating on re-refined (waste) oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a thirty (30) day rolling weighted average.

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

The potential to emit PM from the two (2) aggregate dryers/mixers shall be less than 0.734 pounds per ton of asphalt processed, and the amount of asphalt processed shall not exceed 491,260 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. This shall limit the potential to emit PM to less than 180 tons per year from the two (2) aggregate dryers/mixers and less than 250 tons per year from the entire source, including PM emissions from the heaters, screening and conveying, storage and insignificant activities. Compliance with these limitations shall render 326 IAC 2-2, PSD, not applicable based on PM emissions.

#### D.1.5 Hydrogen Chloride (HCl) and Lead (Pb) [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4, the following limits shall apply to the two (2) aggregate dryers/mixers

- (a) The usage of re-refined (waste) oil or waste oil equivalents in the two (2) aggregate dryers/mixers shall be limited to less than 750,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. The chlorine content of the waste oil shall not exceed 0.4%, and the Lead content of the re-refined (waste) oil shall not exceed 0.01%.
- (b) The HCL emissions from the two (2) aggregate dryers/mixers shall be limited to less than 9.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (c) The Lead emissions from the two (2) aggregate dryers/mixers shall be limited to less than five (5) tons per 365 consecutive day period, with compliance determined at the end of each month, based on the Lead emission factor of 0.75 pounds per 1,000 gallons of waste oil.

Compliance with these limits will keep the source-wide emissions of HCL below ten (10) tons per year (a single HAP) and source-wide emissions of Lead below five (5) tons per year. Compliance with these limits will also keep source-wide combined HAPs below twenty-five (25) tons per year, and will satisfy 326 IAC 2-8-4, and render 326 IAC 2-7, Part 70 not applicable.

#### D.1.6 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the aggregate dryer and batch mixer and the associated control devices.

### **Compliance Determination Requirements**

#### D.1.7 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

No later than May 11, 2012, in order to demonstrate compliance with Conditions D.1.2(b) and D.1.4, the Permittee shall perform PM and PM<sub>10</sub> testing of the two (2) aggregate dryers/mixers utilizing

methods approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>. Testing shall be conducted in accordance with Section C - Performance Testing.

#### D.1.8 Volatile Organic Compounds (VOC)

---

- (a) In order to comply with Condition D.1.1, the Permittee shall limit the total VOC usage of any selected binder to less than the stated limit in D.1.8(c) for that binder. When more than one (1) binder is used, the following formula (also shown in D.1.8(c)(6)) must be applied so that the total VOC emitted is less than 90.0 tons of VOC is emitted per twelve (12) consecutive month period:

$$\text{VOC emitted (tons/yr)} = \frac{\text{VOC solvent used for each binder (tons/yr)}}{\text{Adjustment ratio}}$$

- (b) Liquid binders used in the production of cold mix asphalt shall be defined as follows:
- (1) Cut back asphalt rapid cure, containing a maximum of 25.3% VOC solvent by weight in the liquid binder, with 95% by weight of the VOC solvent evaporating.
  - (2) Cut back asphalt medium cure, containing a maximum of 28.6% VOC solvent by weight in the liquid binder, with 70% by weight of the VOC solvent evaporating.
  - (3) Cut back asphalt slow cure, containing a maximum of 20% VOC solvent by weight in the liquid binder, with 25% by weight of the VOC solvent evaporating.
  - (4) Emulsified asphalt with solvent, containing a maximum of 15% VOC solvent by weight in the liquid binder, with 46.4% by weight of the VOC solvent in the liquid blend evaporating. The percent oil distillate in emulsified asphalt with solvent liquid, as determined by ASTM, must be 7% or less of the total emulsion by volume.
  - (5) Other asphalt with solvent binder, containing a maximum 25.9% VOC solvent by weight in the liquid binder, with 2.5% by weight of the VOC solvent evaporating.
- (c) The liquid binder used in cold mix asphalt production shall be limited as follows:
- (1) The amount of VOC solvent used in rapid cure cutback asphalt shall be limited to less than 94.8 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (2) The amount of VOC solvent used in medium cure cutback asphalt shall be limited to less than 128.7 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (3) The amount of VOC solvent used in slow cure cutback asphalt shall be limited to less than 360.2 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (4) The amount of VOC solvent used in emulsified asphalt shall be limited to less than 194.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (5) The amount of VOC solvent used in all other asphalt shall be limited to less than 3,601.7 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (6) When more than one type of binder is used per twelve (12) consecutive month

period, the total usage of all binders shall be limited so that the total potential to emit VOC is less than 90.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

In order to determine the tons of VOC emitted per year for each type of binder, use the following formula and divide the tons of VOC solvent used per year for each type of binder by the corresponding adjustment ratio listed in the table that follows.

$$\text{VOC emitted (tons/yr)} = \frac{\text{VOC solvent used for each binder (tons/yr)}}{\text{Adjustment ratio}}$$

Type of binder	tons solvent	adjustment ratio	tons VOC emitted
cutback asphalt rapid cure		1.053	
cutback asphalt medium cure		1.429	
cutback asphalt slow cure		4.0	
emulsified asphalt		2.155	
other asphalt		40	

#### D.1.9 Sulfur Dioxide Emissions and Sulfur Content

Compliance with Conditions D.1.3(a), D.1.3(b) and D.1.3(c) shall be determined utilizing one of the following options:

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million British thermal unit heat input when operating on No. 2 distillate oil or No. 4 distillate oil and one (1.0) pound per million British thermal unit heat input when operating on re-refined (waste) oil by:
  - (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
  - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
    - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
    - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the aggregate dryer and batch mixer using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

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

#### D.1.10 Particulate Control

- (a) In order to comply with Conditions D.1.2(b) and D.1.4, the baghouses for the two (2) aggregate dryers/mixers shall be in operation and control emissions from the aggregate dryers/mixers at all times when the aggregate dryers/mixers are 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.1.11 Hydrogen Chloride Emissions and Chlorine Content, Lead Emissions and Lead Content

- (a) In order to determine compliance with Condition D.1.5 (a) and (b), the Permittee shall use the following equation:

$$E = (U \times \text{HCl}) + P$$

Where: E = actual HCl emissions per 365 consecutive day period;  
U = actual waste oil used in kilogallons per day;  
HCl = weight percent of HCl in waste oil per day; and  
P = actual HCl emissions from previous 364 consecutive day period.

- (b) In order to determine compliance with Condition D.1.5 (a) and (c) the Permittee shall use the following equation:

$$E = (U \times \text{Pb}) + P$$

Where: E = actual Lead emissions per 365 consecutive day period;  
U = actual waste oil used in kilogallons per day;  
Pb = weight percent of Lead in waste oil per day; and  
P = actual Lead emissions from previous 364 consecutive day period.

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

#### D.1.12 Visible Emissions Notations

- (a) Visible emission notations of the conveyers, material transfer points, aggregate storage piles, unpaved roads, and each batch mixer/burner stack exhaust (SV1 and SV1a) shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

#### D.1.13 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the aggregate dryer/mixer at plant 157-03310 at least once per day when the aggregate dryer/mixer is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance

with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

- (b) The Permittee shall record the inlet temperature to the baghouse used in conjunction with the aggregate dryer/mixer at plant 157-03310, at least once per day when the aggregate dryer/mixer is in operation. When for any one reading, the inlet temperature to the baghouse is outside the normal range of 200 and 400 degrees Fahrenheit or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. This is required to prevent overheating of the bags and to prevent low temperatures from mudding up the bags. A temperature reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.
- (c) The Permittee shall record the pressure drop across the baghouse used in conjunction with the aggregate dryer/mixer at plant 157-03286 at least once per day when the aggregate dryer/mixer is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 7.0 and 13.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.
- (d) The Permittee shall record the inlet temperature to the baghouse used in conjunction with the aggregate dryer/mixer at plant 157-03286, at least once per day when the aggregate dryer/mixer is in operation. When for any one reading, the inlet temperature to the baghouse is outside the normal range of 200 and 400 degrees Fahrenheit or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. This is required to prevent overheating of the bags and to prevent low temperatures from mudding up the bags. A temperature reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.
- (e) The instruments used for determining the pressure and temperature shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

#### D.1.14 Broken or Failed Bag Detection

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

visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, or dust traces.

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

#### **D.1.15 Record Keeping Requirements**

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(a) To document compliance with Condition D.1.3, the Permittee shall maintain records in accordance with (1) through (6) below.

- (1) Calendar dates covered in the compliance determination period;
- (2) 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, the natural gas fired boiler certification does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1); and

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

- (3) The name of the fuel supplier; and
- (4) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
- (5) A statement from the fuel supplier that certifies the chlorine content of the fuel oil.
- (6) A statement from the fuel supplier that certifies the Lead content of the fuel oil.

(b) To document compliance with Conditions D.1.3(a) and D.1.5(a), (b), and (c) the Permittee shall keep records of the total amount of each fuel used at the two (2) aggregate dryer burners. Records necessary to demonstrate compliance shall be available within thirty (30) days of the end of each compliance period.

(c) To document compliance with Conditions D.1.2(a) and D.1.4, the Permittee shall keep records of the total amount of asphalt processed through the two (2) aggregate dryers/mixers. Records necessary to demonstrate compliance shall be available within thirty (30) days of the end of each compliance period.

(d) To document compliance with Condition D.1.1(a), the Permittee shall keep records of the amount and VOC content of each solvent used for emulsified and cutback asphalt. Records shall include purchase orders, invoices and material safety data sheets (MSDS) necessary to verify the type and amount used.

(e) To document compliance with Condition D.1.12, the Permittee shall maintain daily records of the visible emission notations of the conveyors, material transfer points and aggregate dryers/mixers stack exhausts. 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 plant did not operate that day).

(f) To document compliance with Condition D.1.13, the Permittee shall maintain the following:

- (1) Records of the pressure drop across the baghouses during normal operation once per day. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g., the aggregate dryer/mixer did not operate that day).

- (2) Records of the inlet temperature at the baghouses during normal operation once per day. The Permittee shall include in its daily record when a temperature reading is not taken and the reason for the lack of a temperature reading, (e.g., the aggregate dryer/mixer did not operate that day).
- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.1.16 Reporting Requirements

- (a) A quarterly summary of the information to document compliance with Condition D.1.1(a) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting form located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) A quarterly summary of the information to document compliance with Conditions D.1.2(a) and D.1.4 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting form located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) A quarterly summary of the information to document compliance with Conditions D.1.3(a) and D.1.5(a) and (b) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using one of the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

##### D.1.17 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

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

##### D.1.18 NSPS Subpart I Requirements [40 CFR Part 60, Subpart I] [326 IAC 12-1]

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

#### **§ 60.91 Definitions**

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

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

#### **§ 60.92 Standard for particulate matter**

- (a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall discharge or cause the

discharge into the atmosphere from any affected facility any gases which:

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

**§ 60.93 Test methods and procedures**

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

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

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

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

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

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

Source Name: Rieth Riley Construction Co., Inc.  
Source Address: 3425 O'Farrell Road, Lafayette, Indiana 47904  
Mailing Address: P.O. Box 477, Goshen, Indiana 46527  
FESOP No.: F 157-23134-00457

**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 DATA SECTION**

**FESOP Quarterly Report**

Source Name: Rieth-Riley Construction Co., Inc.  
 Source Address: 3425 O'Farrell Road, Lafayette, Indiana 47904  
 Mailing Address: P.O. Box 477, Goshen, Indiana 46527  
 FESOP No.: F 157-23134-00457  
 Facilities: Two (2) aggregate dryers  
 Parameter: Fuel Usage (SO<sub>2</sub> emissions)  
 Limit: Total use of re-refined oil at the two (2) aggregate dryers/mixers shall be limited to less than 750,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. Each gallon of No. 4 distillate fuel oil used shall be considered equal to using 0.500 gallons of re-refined oil and each gallon of No. 2 fuel oil used shall be considered equal to using 0.4733 gallons of re-refined oil.

QUARTER: \_\_\_\_\_ YEAR: \_\_\_\_\_

Month	Equivalent Re-refined Oil Usage (gallons)	Equivalent Re-refined Oil Usage (gallons)	Equivalent Re-refined Oil Usage (gallons)
	This Month	Previous 11 Months	12 Month Total

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
 Deviation has been reported on \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

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

**FESOP Quarterly Report**

Source Name: Rieth-Riley Construction Co., Inc.  
 Source Address: 3425 O'Farrell Road, Lafayette, Indiana 47904  
 Mailing Address: P.O. Box 477, Goshen, Indiana 46527  
 FESOP No.: F157-23134-00457  
 Facilities: Two (2) aggregate dryers  
 Parameter: Re-refined (Waste) Oil Usage (HCl and Lead emissions)  
 Limit: Less than 750,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER: \_\_\_\_\_ YEAR: \_\_\_\_\_

Month	Re-refined (Waste) Oil Usage (gallons)	Re-refined (Waste) Oil Usage (gallons)	Re-refined (Waste) Oil Usage (gallons)
	This Month	Previous 11 Months	12 Month Total

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
 Deviation has been reported on \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

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

**FESOP Quarterly Report**

Source Name: Rieth-Riley Construction Co., Inc.  
Source Address: 3425 O'Farrell Road, Lafayette, Indiana 47904  
Mailing Address: P.O. Box 477, Goshen, Indiana 46527  
FESOP No.: F 157-23134-00457  
Facilities: Two (2) aggregate dryers/mixers  
Parameter: Asphalt processed  
Limit: 491,260 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

QUARTER: \_\_\_\_\_ YEAR: \_\_\_\_\_

Month	Asphalt processed (tons)	Asphalt processed (tons)	Asphalt processed (tons)
	This Month	Previous 11 Months	12 Month Total

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.  
Deviation has been reported on \_\_\_\_\_

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

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

**FESOP Quarterly Report**

Source Name: Rieth-Riley Construction Co., Inc.  
 Source Address: 3425 O'Farrell Road, Lafayette, Indiana 47904  
 Mailing Address: P.O. Box 477, Goshen, Indiana 46527  
 FESOP No.: F 157-23134-00457  
 Facility: Cutback (cold mix) asphalt production  
 Parameter: Single VOC Liquid Binder Usage  
 Limit: Cutback asphalt rapid cure liquid binder usage shall not exceed 94.8 tons of VOC solvent per twelve (12) consecutive month period. Cutback asphalt medium cure liquid binder usage shall not exceed 128.7 tons of VOC solvent per twelve (12) consecutive month period. Cutback asphalt slow cure liquid binder usage shall not exceed 360.2 tons of VOC solvent per twelve (12) consecutive month period. Emulsified asphalt with solvent liquid binder usage shall not exceed 194.0 tons of VOC solvent per twelve (12) consecutive month period. Other asphalt with solvent liquid binder shall not exceed 3,601.7 tons of VOC solvent per twelve (12) consecutive month period.

Quarter: \_\_\_\_\_ Year: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	<b>This Month</b>	<b>Previous 11 Months</b>	<b>12 Month Total</b>
<b>Month 1</b>			
<b>Month 2</b>			
<b>Month 3</b>			

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

Submitted by: \_\_\_\_\_  
 Title / Position: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

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

**FESOP Quarterly Report**

Source Name: Rieth-Riley Construction Co., Inc.  
 Source Address: 3425 O'Farrell Road, Lafayette, Indiana 47904  
 Mailing Address: P.O. Box 477, Goshen, Indiana 46527  
 FESOP No.: F 157-23134-00457  
 Facility: Cutback (cold mix) asphalt production  
 Parameter: VOC emissions, based on solvent usage  
 Limit: Less than 90.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the following equation:

$$\text{VOC emitted (tons/yr)} = \frac{\text{VOC solvent used for each binder (tons/yr)}}{\text{Adjustment ratio}}$$

Quarter: \_\_\_\_\_ Year: \_\_\_\_\_

Month	Type of Liquid binder	Solvent Usage This Month (tons)	Adjustment Ratio	VOC emitted from each binder This Month (tons)	VOC emitted from all binders This Month (tons)	VOC emitted Previous 11 Months (tons)	VOC emitted 12 Month Total (tons)
	Cutback asphalt rapid cure		1.053				
	Cutback asphalt medium cure		1.429				
	Cutback asphalt slow cure		4.0				
	Emulsified asphalt		2.155				
	other asphalt		40				
	Cutback asphalt rapid cure		1.053				
	Cutback asphalt medium cure		1.429				
	Cutback asphalt slow cure		4.0				
	Emulsified asphalt		2.155				
	other asphalt		40				
	Cutback asphalt rapid cure		1.053				
	Cutback asphalt medium cure		1.429				
	Cutback asphalt slow cure		4.0				
	Emulsified asphalt		2.155				
	other asphalt		40				

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

Submitted by: \_\_\_\_\_  
 Title / Position: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE 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: Rieth-Riley Construction Co., Inc.  
Source Address: 3425 O'Farrell Road, Lafayette, Indiana 47904  
Mailing Address: P.O. Box 477, Goshen, Indiana 46527  
FESOP No.: F 157-23134-00457

**This form consists of 2 pages**

**Page 1 of 2**

- |   |
|---|
| <input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none"><li>• 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</li><li>• 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</li></ul> |
|---|

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 <sub>2</sub> , VOC, NO <sub>x</sub> , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

A certification is not required for this report.

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

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

Source Name: Rieth-Riley Construction Co., Inc.  
Source Address: 3425 O'Farrell Road, Lafayette, Indiana 47904  
Mailing Address: P.O. Box 477, Goshen, Indiana 46527  
FESOP No.: F 157-23134-00457

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

Page 1 of 2

<p>This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked <b>NO deviations occurred this reporting period</b>.</p>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

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

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

A certification is not required for this report.

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

Addendum to the  
Technical Support Document for a  
Federally Enforceable State Operating Permit (FESOP) Renewal

<b>Source Name:</b>	Rieth-Riley Construction Co., Inc.
<b>Source Location:</b>	3425 O'Farrell Road, Lafayette, Indiana 47904
<b>County:</b>	Tippecanoe
<b>SIC Code:</b>	2951
<b>Permit Renewal No.:</b>	F157-23134-00457
<b>Permit Reviewer:</b>	APT

On March 5, 2008, the Office of Air Quality (OAQ) had a notice published in the Journal and Courier in Tippecanoe, Indiana, stating that Rieth-Riley Construction Company, Inc. had applied for a Federally Enforceable State Operating Permit (FESOP) Renewal for a stationary asphalt plant. The notice also stated that OAQ proposed to issue a permit renewal for this operation and provided information on how the public could review the proposed permit renewal and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit renewal should be issued as proposed.

Changes to the permit and TSD are noted as follows: ~~struck~~ language has been deleted; **bold** language has been added. The Table of Contents has been modified to reflect these changes.

Necessary changes will be noted in this addendum only, as no changes will be made to the TSD.

**Permit F157-23134-00457**

Comments on the proposed Federally Enforceable State Operating Permit (FESOP) Renewal were received on March 5, 2008 from Mr. Ed Clements, representing Rieth-Riley Construction Company, Inc.

**Comment #1**

There are no equivalents for Propane, Butane and Natural Gas in the permit for the dryer burners and mixers.

**Response to Comment #1**

The usage of natural gas, propane and butane are not limited by the renewal because the maximum unrestricted potential SO<sub>2</sub> emissions from those fuels are low enough such that when added to the SO<sub>2</sub> limitations for re-refined (waste) oil, No. 2 fuel oil and No. 4 fuel oil, the emissions are still less than the Part 70 applicability levels. Therefore, the natural gas, propane and butane equivalencies are not included in the renewal.

**Comment #2**

There is no NOx limit, and NOx reporting was left out. Why is this?

### Response to Comment #2

There is a NO<sub>x</sub> limit under condition D.1.2, as shown below. There are no separate recordkeeping requirements for NO<sub>x</sub> specifically, as compliance with the source-wide throughput and fuel usage limits will satisfy the NO<sub>x</sub> limitations and omit the need for additional recordkeeping and reporting pertaining to NO<sub>x</sub> emissions. No changes have been made to the permit.

\* \* \*

#### D.1.2 Particulate (PM<sub>10</sub>), Nitrogen Oxides (NO<sub>x</sub>) and Carbon Monoxide (CO) Limitations [326 IAC 2-8-4]

[326 IAC 2-2]

- 
- (a) Pursuant to 326 IAC 2-8-4, the total amount of asphalt processed shall not exceed 491,260 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (b) The potential to emit PM<sub>10</sub> from the two (2) aggregate dryers/mixers shall be less than 0.366 pounds per ton of asphalt processed. Together with (a) of this condition, this shall limit the potential to emit PM<sub>10</sub> to less than 90.0 tons per year from the two (2) aggregate dryers/ mixers and less than 100 tons per year from the entire source, including PM<sub>10</sub> emissions from the heaters, screening and conveying, storage and insignificant activities.
  - (c) The potential to emit NO<sub>x</sub> from the two (2) aggregate dryers/mixers shall be less than 0.398 pounds per ton of asphalt processed. Together with (a) of this condition, this shall limit the potential to emit NO<sub>x</sub> to less than 97.7 tons per year from the two (2) aggregate dryers/mixers and less than 100 tons per year from the entire source, including NO<sub>x</sub> emissions from the heaters.

\* \* \*

### Comment #3

In section D.1.5, HCl reporting should be consistent with other pollutants and should be "per twelve (12) consecutive month period, with compliance determined at the end of each month."

### Response to Comment #3

The following changes have been made to the Emission Limitations and Standards Section D.1.5:

#### D.1.5 Hydrogen Chloride (HCl) and Lead (Pb) [326 IAC 2-8-4]

Pursuant to 326 IAC 2-8-4, the following limits shall apply to the two (2) aggregate dryers/mixers

- (a) The usage of re-refined (waste) oil or waste oil equivalents in the two (2) aggregate dryers/mixers shall be limited to less than 750,000 gallons per **twelve (12) consecutive month period, with compliance determined at the end of each month** ~~365 consecutive day period, with compliance determined at the end of each day~~. The chlorine content of the waste oil shall not exceed 0.4%, and the Lead content of the re-refined (waste) oil shall not exceed 0.01%.
- (b) The HCL emissions from the two (2) aggregate dryers/mixers shall be limited to less than 9.9 tons per **twelve (12) consecutive month period, with compliance determined at the end of each month** ~~365 consecutive day period, with compliance determined at the end of each day~~.
- (c) The Lead emissions from the two (2) aggregate dryers/mixers shall be limited to less than five (5) tons per 365 consecutive day period, with compliance

determined at the end of each **month day**, based on the Lead emission factor of 0.75 pounds per 1,000 gallons of waste oil.

Compliance with these limits will keep the source-wide emissions of HCL below ten (10) tons per year (a single HAP) and source-wide emissions of Lead below five (5) tons per year. Compliance with these limits will also keep source-wide combined HAPs below twenty-five (25) tons per year, and will satisfy 326 IAC 2-8-4, and render 326 IAC 2-7, Part 70 not applicable.

**Comment #4**

The proposed FESOP Quarterly Report for HCl only requires reporting gallons of Re-Refined waste oil used, is this ok?

**Response to Comment #4**

Yes, this is okay, because the other fuels used contain negligible amounts of Chlorine (which when emitted converts to HCl), and will not affect the limitations established to control HCl emissions. The other fuels used (No. 2 and No. 4 fuel oils), have the appropriate equivalencies to re-refined waste oil established to account for emissions of all criteria pollutants and HAPs.

**Comment #5**

In Condition D.1.3, SO<sub>2</sub> has a limit of 750,000 gallons of re-refined oil, which limits us to 68.5 tons of SO<sub>2</sub> per year. Where is the remaining 31.4 tons of SO<sub>2</sub> for a total of 99.9 tons of allowable emissions?

**Response to Comment #5**

The SO<sub>2</sub> limit is tied to the source-wide throughput and fuel usage limits. In order to limit CO and other criteria pollutant emissions below 100 tons per year and HAP emissions below 10 (single) and 25 (combined), fuel usage limits have been established. These fuel usage limits simultaneously control criteria pollutant and HAP emissions below the Part 70 applicability levels. Based on the emission factor for CO in the combustion of fuel oils, CO is the greatest limiting factor and other pollutant limits are established in accordance with the throughput and fuel usage limits for CO. Because the unrestricted potential emissions of SO<sub>2</sub> from the source are greater than the major source threshold of 100 tons per year, IDEM included an SO<sub>2</sub> limit in accordance with the greatest emission factor (CO), in order to keep the source minor under 326 IAC 2-8 (FESOP).

**Comment #6**

Can reports be submitted separately from the two (2) plants?

**Response to Comment #6**

The reports can be submitted by the two plants separately to the designated Authorized Individual for the source. Because there is only one Authorized Individual for the source, all reports must be signed by that person, and all emissions from both plants must be submitted together to IDEM. In order for the two plants located at this source to submit records independently of one another, the permittee will need to submit a new application requesting that each plant be issued administratively separate permits. This process would also require that each plant be issued separate source identification numbers, and designate an Authorized Individual for each plant.

**Comment #7**

VOC record-keeping should be more in line with our other plants in Indiana. An example of our proposed record-keeping form is attached.

**Response to Comment #7**

As is stated in the portion of Condition C.19 below, any forms are accepted as long as they are comparable to the forms provided, and all of the pertinent information is contained therein. No changes have been made to the permit.

C.19 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. \* \* \*

**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**

<b>Source Name:</b>	Rieth-Riley Construction Co., Inc.
<b>Source Location:</b>	3425 O'Farrell Road, Lafayette, Indiana 47904
<b>County:</b>	Tippecanoe
<b>SIC Code:</b>	2951
<b>Permit Renewal No.:</b>	F157-23134-00457
<b>Permit Reviewer:</b>	CAP/MES

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Rieth-Riley Construction Co., Inc. relating to the operation of a stationary hot batch-mix asphalt production source.

**History**

On May 24, 2006, Rieth-Riley Construction Co., Inc. submitted applications to the OAQ requesting to renew its operating permit. Rieth-Riley Construction Co., Inc. was issued its first FESOP Renewal, F157-14146-03286, on February 25, 2002.

The source was originally permitted as a portable source, with a source identification number of 157-03286. However, pursuant to 326 IAC 2-1.1-1(15), the source does not meet the definition of a portable source. Therefore, the source identification number has been changed to 157-00457 and will be changed throughout the permit.

**Source Definition**

This Source Definition from the Part 70 Operating Permit was incorporated into this permit as follows:

This stationary hot batch-mix asphalt production source company consists of two (2) plants:

- (a) Plant 157-03310 is located at 3425 O'Farrell Road, Lafayette, Indiana 47904; and
- (b) Plant 157-03286 is located at 3425 O'Farrell Road, Lafayette, Indiana 47904.

These plants are located on one or more contiguous properties, have the same two-digit SIC code and are under common ownership, therefore they will be considered one (1) source, as defined by 326 IAC 2-7-1(22).

**Permitted Emission Units and Pollution Control Equipment**

**Plant 157-03310 consists of the following:**

- (a) One (1) batch mixer, identified as 157-03310, equipped with a baghouse for PM control, exhausted to Stack SV1a, capacity: 225 tons of asphalt per hour.
- (b) One (1) dryer burner, firing re-refined oil as primary fuel, using natural gas, No. 2 fuel oil, No. 4 fuel oil, propane gas and butane gas as backup fuels, exhausting to Stack SV1a, rated at 75 million British thermal units per hour.

- (c) Two (2) hot oil heaters, firing natural gas, capacity: 1.7 million British thermal units per hour, total.
- (d) One (1) tank, identified as 10 (previously identified as 20), constructed in 1995, capacity: 30,000 gallons of liquid asphalt.
- (e) One (1) tank, identified as 11, constructed in 1978, capacity: 20,000 gallons of liquid asphalt.
- (f) Two (2) tanks, identified as 16A and 16B, constructed in 1978 and 1970, respectively, capacity: 12,500 and 8,000 gallons of re-refined oil, respectively.

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

**Plant 157-03286 consists of the following:**

- (g) One (1) batch mixer, identified as 157-03286, equipped with a baghouse for PM control, exhausted to Stack SV1, capacity: 200 tons of asphalt per hour.
- (h) One (1) dryer burner, firing re-refined oil as primary fuel, using natural gas, No. 2 fuel oil, No. 4 fuel oil, propane gas and butane gas as backup fuels, exhausting to Stack SV1, rated at 82.4 million British thermal units per hour.
- (i) One (1) hot oil heater, firing propane, capacity: 0.8 million British thermal units per hour.
- (j) One (1) tank, identified as E (previously identified as 15), constructed in 1986, capacity: 35,000 gallons of liquid asphalt.
- (k) One (1) tank, identified as J, constructed in 1980, capacity: 18,000 gallons of propane.
- (l) One (1) tank, identified as K, constructed in 1970, capacity: 20,000 gallons of re-refined oil.
- (m) Aggregate storage piles, with a maximum storage capacity of 50,000 tons.
- (n) Two (2) aggregate cold feed systems, each consisting of aggregate feed bins, conveyors, and screens.
- (o) Two (2) Reclaimed Asphalt Pavement (RAP) feed systems, each consisting of RAP feed bins, conveyors, a lump breaker system, and screens, with a total capacity of 50 tons per hour.
- (p) Cold-mix (stockpile mix) asphalt storage piles.

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

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

There are no emission units that were constructed and/or operated without a permit at the time of this permit review.

**Insignificant Activities**

- (a) Plant maintenance activities including grinding, sanding and welding.

- (b) A laboratory as defined in 326 IAC 2-7-1(21)(D)
- (c) Paved and unpaved roads and parking lots with public access. [326 IAC 6-4]

### Existing Approvals

Since the issuance of the FESOP Renewal F157-14146-03286 on February 25, 2002, the source has constructed or has been operating under the following approvals as well:

Administrative Amendment No. 157-22416-03286 issued on January 24, 2006.

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

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

- (a) Condition D.1.2: Pursuant to 326 IAC 2-8-4, emissions of particulate matter 10 microns or less in diameter (PM<sub>10</sub>) from each aggregate dryer/mixer (157-03310 and 157-03286) shall not exceed 8.78 pounds per hour, equivalent to 38.5 tons per year from each aggregate dryer/mixer.

and

Condition D.1.5: Pursuant to 326 IAC 2-8-4, the input of propane to the dryer/burner at Plant 157-03310 shall be limited to less than 622,105 gallons per twelve (12) consecutive month period, and the input of propane to the dryer/burner at Plant 157-03286 shall be limited to less than 414,736 gallons per twelve (12) consecutive month period, which is equivalent to NO<sub>x</sub> emissions of less than 98.5 tons per year. For purposes of determining compliance based on NO<sub>x</sub> emissions, each gallon of No.2 distillate oil shall be equivalent to 1.053 gallons of propane, each gallon of No.4 distillate oil shall be equivalent to 1.053 gallons of propane, each gallon of butane shall be equivalent to 1.105 gallons of propane, each gallon of re-refined oil shall be equivalent to 0.8421 gallons of propane, and each million cubic feet of natural gas shall be equivalent to 10,000 gallons of propane.

Reason revised: The AP-42 emission factors for asphalt plants (Chapter 11) were revised in 2004. As a result, CO emission limitations have been added to the permit. As part of those limitations, the amount of asphalt produced is limited. Thus, these limitations were changed to pounds per ton limitations instead of fuel usage limitations.

- (b) Condition D.1.4(c): For purposes of determining compliance based on SO<sub>2</sub> emissions, each gallon of No.2 distillate oil shall be equivalent to 0.4733 gallons of re-refined oil, each gallon of No.4 distillate oil shall be equivalent to 0.500 gallons of re-refined oil, each gallon of propane shall be equivalent to 0.000133 gallons of re-refined oil, each gallon of butane shall be equivalent to 0.000133 gallons of re-refined oil, and each million cubic feet of natural gas shall be equivalent to 4.00 gallons of re-refined oil.

Reason revised: The equivalencies for No. 2 and No. 4 fuel oils remain in the permit. The usage of natural gas, propane and butane are not limited by the renewal because the maximum unrestricted potential SO<sub>2</sub> emissions from those fuels are low enough such that when added to the SO<sub>2</sub> limitations for re-refined (waste) oil, No. 2 fuel oil and No. 4 fuel oil, the emissions are still less than the Part 70 applicability levels. Therefore, the natural gas, propane and butane equivalencies are not included in the renewal.

- (c) Condition D.1.6: Pursuant to 326 IAC 2-8-4, liquid binder used in the production of cold mix cutback asphalt shall be limited to less than 7,242 tons of liquid binder per twelve (12) consecutive month period, and the monthly average diluent content shall not exceed 8.0% percent. This is equivalent to VOC emissions of less than 95.0 tons per year.  
Reason revised: This limitation has been revised in accordance with the emission factors for each process. The AP-42 emission factors for asphalt plants (Chapter 11) were revised in 2004. As a result, calculated VOC emissions from other processes have increased. The VOC emissions from cutback asphalt are now limited to less than 90.0 tons per year as described under "326 IAC 2-8 (FESOP)."

The following terms and conditions from previous approvals have been determined no longer applicable; therefore, were not incorporated into this FESOP Renewal:

- (a) Condition D.1.17: An inspection shall be performed each calendar quarter of all bags controlling the aggregate dryer and batch mixer when venting to the atmosphere. A baghouse inspection shall be performed within three (3) months of redirecting vents to the atmosphere and every three (3) months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

Reason not incorporated: IDEM has determined that it is the Permittee's responsibility to include routine control device inspection requirements for control devices in the applicable preventive maintenance plan. Since the Permittee is in the best position to determine the appropriate frequency of baghouse inspections and the details regarding which components of the baghouses should be inspected, the condition requiring scrubber inspections has been removed from the permit. In addition, the requirement to keep records of the inspections has been removed.

- (b) Condition D.1.20: The one (1) tank, identified as 10, with a capacity of 30,000 gallons, and the one (1) tank, identified as E, with a capacity of 35,000 gallons, shall comply with the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.110b, Subpart Kb). These tanks are subject to only 40 CFR Part 60.116b, paragraphs (a) and (b) which require the Permittee to maintain accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Records shall be kept for the life of the storage tanks.

Reason not incorporated: 40 CFR 60, Subpart Kb was revised on October 15, 2003. Under the rule revision, the Standard is not applicable to vessels with capacities less than 75 cubic meters or vessels with a capacity greater than or equal to 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa), or vessels with a capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure less than 15.0 kPa. Therefore, the requirements of 40 CFR 60, Subpart Kb, are no longer applicable to the vessels at this source (see the Federal Rule Applicability section of this document).

### **Enforcement Issue**

There are no enforcement actions pending.

### **Emission Calculations**

See pages 1 through 13 of Appendix A of this document for detailed emission calculations.

## County Attainment Status

The source is located in Tippecanoe County

Pollutant	Status
PM <sub>10</sub>	Attainment
PM <sub>2.5</sub>	Attainment
SO <sub>2</sub>	Attainment
NO <sub>x</sub>	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Tippecanoe County has been classified as attainment for PM<sub>2.5</sub>. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM<sub>2.5</sub> emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM<sub>2.5</sub> emissions, it has directed states to regulate PM<sub>10</sub> emissions as a surrogate for PM<sub>2.5</sub> emissions. See the State Rule Applicability – Entire Source section.
- (b) Volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) 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 emissions and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to ozone. Tippecanoe County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions and NO<sub>x</sub> 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) Tippecanoe County has been classified as attainment or unclassifiable in Indiana for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.
- (d) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (e) Fugitive Emissions  
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD applicability.

### Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Pollutant	tons/year
PM	59,994
PM <sub>10</sub>	8,567
SO <sub>2</sub>	728
VOC	Greater than 250
CO	745
NO <sub>x</sub>	224

HAPs	tons/year
HCl	128
Lead	3.65
Benzene, Ethyl benzene, Formaldehyde, Methyl chloroform, Naphthalene, Xylenes, Toluene, Arsenic, Cadmium, Chromium, Manganese, Mercury & Nickel Compounds	Single less than 10; 14.2, total
Total	146

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM<sub>10</sub>, SO<sub>2</sub>, VOC, CO and NO<sub>x</sub> is equal to or greater than one hundred (100) tons per year. The source is subject to the provisions of 326 IAC 2-7. However, the source has agreed to limit its PM<sub>10</sub>, SO<sub>2</sub>, VOC, CO and NO<sub>x</sub> emissions to less than Title V levels, therefore the source will be issued a FESOP.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is greater than or equal to ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is greater than or equal to twenty-five (25) tons per year. However, the source has agreed to limit its HAP emissions to less than Title V levels, therefore the source will be issued a FESOP.

#### Fugitive Emissions

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

#### Potential to Emit After Issuance

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

Process/emission unit	Limited Potential To Emit After Issuance (tons/year)						
	PM	PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Batch Mixers including Burners (Both Plants)	<180	<90.0	<77.1	8.84	<98.3	<97.7	< 9.90 HCl; < 24.3 total
Hot Oil Heaters	0.029	0.072	0.005	0.114	0.748	1.28	negligible
Conveying/Handling and Screening (including RAP system) Screening	68.2	8.77	-	-	-	-	-
Storage Piles	0.434	0.152	-	-	-	-	-
Cutback Asphalt	-	-	-	90.0	-	-	-
Insignificant Activities	1.00	0.90	-	-	-	-	-
Total Emissions	<250	<99.9	77.1	99.0	99.0	99.0	< 10 single; < 25 total
Major Source Threshold	250	100	100	100	100	100	10/25

- (a) This existing stationary source is not major for PSD because the emissions of each criteria pollutant are less than two hundred fifty (<250) tons per year, and it is not one of the twenty-eight (28) listed source categories.
- (b) Fugitive Emissions  
 This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2; however, there is an applicable New Source Performance Standard that was in effect on August 7, 1980. Therefore, fugitive emissions are counted toward the determination of PSD applicability.
- (c) Emission limitations are described under "326 IAC 2-2 (Prevention of Significant Deterioration (PSD))" and "326 IAC 2-8-4 (FESOP)" in the State Rule Applicability - Entire Source section of this document.

**Federal Rule Applicability**

- (a) The batch mix asphalt manufacturing source is subject to the New Source Performance Standard, 40 CFR Part 60.90, Subpart I, Standards of Performance for Hot Mix Asphalt Facilities, incorporated by reference under 326 IAC 12-1, because the source was constructed and modified after the June 11, 1973 applicability date of this subpart. The processes currently existing at this source subject to the rule include 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. Nonapplicable portions of the NSPS will not be included in the permit. This source is subject to all portions of Subpart I, which are:
  - (1) 40 CFR 60.90
  - (2) 40 CFR 60.91
  - (3) 40 CFR 60.92
  - (4) 40 CFR 60.93

- (b) The requirements of the New Source Performance Standards 40 CFR 60.110, 60.110a and 60.110b, Subparts K, Ka and Kb, are not included in this permit for the three (3) tanks, identified as 16A, 16B and J, because each storage tank has a capacity less than 75 cubic meters, and the two (2) tanks, identified as 11 and K, because the tanks were constructed prior to July 23, 1984 and have capacities less than 40,000 gallons, each.
- (c) The requirements of the New Source Performance Standard, 40 CFR Part 60.110b, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels, apply to tanks constructed after July 23, 1984, with a storage capacity between 75 cubic meters (19,812.9 gallons) and 151 cubic meters (39,890 gallons) and that store a liquid with a maximum true vapor pressure greater than 15.0 kilopascals.

The two (2) storage tanks, identified as 10 and E have capacities within that range. However, these tanks do not store a liquid with a maximum true vapor pressure greater than 15 kilopascals. Therefore, the requirements of the NSPS, 40 CFR 60, Subpart Kb, are not included in the permit for this source.

- (d) The one (1) recycled asphalt pavement (RAP) system at this source follows in the plant process a facility that is subject to the provisions of Subpart I of 40 CFR Part 60. Therefore, pursuant to 40 CFR 60.670(b), the requirements of 40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants are not included in the permit for this source
- (e) There are still no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20, 40 CFR Part 61 and 40 CFR Part 63) applicable to this source.

#### **State Rule Applicability – Entire Source**

##### **326 IAC 2-2 (Prevention of Significant Deterioration)**

This source, constructed prior to August 7, 1977, has a potential to emit more than 250 tons per year of PM, PM<sub>10</sub>, SO<sub>2</sub>, VOC and CO. In 1996, the applicant agreed to limit emissions to be a minor source pursuant to 326 IAC 2-2, Prevention of Significant Deterioration (PSD). The limitations are as follows:

- (a) The potential to emit PM from the two (2) aggregate dryers/mixers shall be less than 0.734 pounds per ton of asphalt processed, and the amount of asphalt processed shall not exceed 491,260 tons per twelve (12) consecutive month period, total, with compliance determined at the end of each month. This shall limit the potential to emit PM to less than 180 tons per year from the aggregate dryers/mixers and less than 250 tons per year from the entire source, including PM emissions from the heaters, screening and conveying, storage, and insignificant activities. Therefore, this source is not a major source and the requirements of 326 IAC 2-2, PSD, are not applicable based on PM emissions. Potential PM emissions from the aggregate dryers/mixers are 12.0 tons per year after control by the baghouses. Therefore, the baghouses must be in operation at all times when the aggregate dryers/mixers are in operation in order for the source to comply with this limitation.
- (b) The potential to emit SO<sub>2</sub>, VOC, PM<sub>10</sub> and CO is limited to less than 100 tons per year to comply with 326 IAC 2-8-4, FESOP. Compliance with these limits will also ensure that this source is a minor source of SO<sub>2</sub>, VOC, PM<sub>10</sub> and CO pursuant to 326 IAC 2-2, PSD.

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

HAP emissions from the operation of this source are limited to less than ten (10) tons per year of a single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)

This source is not located in Lake, Porter or LaPorte County, does not emit five (5) tons per year or more of lead and does not require a Part 70 Operating Permit. Therefore, the requirements of 326 IAC 2-6 do not apply.

326 IAC 2-8-4 (FESOP)

- (a) The amount of asphalt processed shall not exceed 491,260 tons per twelve (12) consecutive month period, with compliance determined at the end of each month from the two (2) asphalt plants, total. In addition, the PM<sub>10</sub>, NO<sub>x</sub> and CO emissions shall be limited as follows:
- (1) The potential to emit PM<sub>10</sub> from the two (2) aggregate dryers/mixers shall be less than 0.366 pounds per ton of asphalt processed. This shall limit the potential to emit PM<sub>10</sub> to less than 90.0 tons per year from the aggregate dryers/mixers and less than 100 tons per year from the entire source, including PM<sub>10</sub> emissions from the heaters, screening and conveying, storage, and insignificant activities. Thus, the requirements of 326 IAC 2-7, Part 70, do not apply with respect to PM<sub>10</sub> emissions. The potential to emit PM<sub>10</sub> from the aggregate dryers/mixers is 1.69 tons per year after control by the baghouses. Therefore, the baghouses must be in operation at all times when the aggregate dryers/mixers is in operation in order for the source to comply with this limitation.
  - (2) The potential to emit NO<sub>x</sub> from the two (2) aggregate dryers/mixers shall be less than 0.398 pounds per ton of asphalt processed. This shall limit the potential to emit NO<sub>x</sub> to less than 97.7 tons per year from the two (2) aggregate dryers/mixers and less than 100 tons per year from the entire source, including NO<sub>x</sub> emissions from the heaters. Thus, the requirements of 326 IAC 2-7, Part 70, do not apply with respect to NO<sub>x</sub> emissions. The potential to emit NO<sub>x</sub> from the two (2) aggregate dryers/mixers, based on the worst-case AP-42 emission factor, is 0.120 pounds per ton. Therefore, the aggregate dryer/mixer can comply with this limitation.
  - (3) The potential to emit CO from the two (2) aggregate dryers/mixers shall be less than 0.400 pounds per ton of asphalt processed. This shall limit the potential to emit CO to less than 98.3 tons per year from the two (2) aggregate dryers/mixers and less than 100 tons per year from the entire source, including CO emissions from the heaters. Thus, the requirements of 326 IAC 2-7, Part 70, do not apply with respect to CO emissions. The potential to emit CO from the two (2) aggregate dryers/mixers, based on the worst-case AP-42 emission factor, is 0.400 pounds per ton. Therefore, the aggregate dryer/mixer can comply with this limitation.
- (b) The total use of re-refined oil at the two (2) aggregate dryers/mixers shall be limited to less than 750,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. Each gallon of No. 4 distillate fuel oil used shall be considered equal to using 0.500 gallons of re-refined oil and each gallon of No. 2 fuel oil used shall be considered equal to using 0.4733 gallons of re-refined oil. The sulfur content of the re-refined oil shall not exceed one percent (1.0%) by weight and the sulfur content of the No. 2 and No. 4 fuel oils shall not exceed one half of a percent (0.5%) by weight. This will limit SO<sub>2</sub> emissions from the use of distillate fuel oils or re-refined oil to less than 68.5 tons per year and the potential to emit SO<sub>2</sub> from the entire source to less than 100 tons per year, including SO<sub>2</sub> emissions from the aggregate dryers/burners when using all fuels and the heaters. Thus, the requirements of 326 IAC 2-7, Part 70, do not apply with respect to SO<sub>2</sub> emissions.

- (c) This source may use cutback or emulsified asphalt. The VOC emissions from the use of liquid binders in cold mix, including emulsified, asphalt production shall be limited to less than 90.0 tons of VOC is emitted per twelve (12) consecutive month period, with compliance determined at the end of each month. In order to comply with this limit, the total amount of VOC solvent used at the two (2) asphalt plants is limited as follows:
- (1) The amount of VOC solvent used in rapid cure cutback asphalt shall be limited to less than 94.8 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (2) The amount of VOC solvent used in medium cure cutback asphalt shall be limited to less than 128.7 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (3) The amount of VOC solvent used in slow cure cutback asphalt shall be limited to less than 360.2 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (4) The amount of VOC solvent used in emulsified asphalt shall be limited to less than 194.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (5) The amount of VOC solvent used in all other asphalt shall be limited to less than 3,601.7 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

When more than one type of binder is used per twelve (12) consecutive month period, the total usage of all binders shall be limited so that the total potential to emit VOC is less than 90.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

In order to determine the tons of VOC emitted per year for each type of binder, use the following formula and divide the tons of VOC solvent used per year for each type of binder by the corresponding adjustment ratio listed in the table that follows.

$$\text{VOC emitted (tons/yr)} = \frac{\text{VOC solvent used for each binder (tons/yr)}}{\text{Adjustment ratio}}$$

Type of binder	tons solvent	adjustment ratio	tons VOC emitted
cutback asphalt rapid cure		1.053	
cutback asphalt medium cure		1.429	
cutback asphalt slow cure		4.0	
emulsified asphalt		2.155	
other asphalt		40	

This will limit the potential to emit VOC from cutback and emulsified asphalt usage to less than 90.0 tons per year, and the total source potential to emit VOC to less than 100 tons per year, including the heater and the aggregate dryers/mixers. Thus, the requirements of 326 IAC 2-2, PSD, and 326 IAC 2-7, Part 70, do not apply with respect to VOC emissions.

- (d) The total input of re-refined (waste) oil to the two (2) aggregate dryers/mixers shall be limited to less than 750,000 gallons per twelve (12) consecutive month period and the chlorine content of the re-refined (waste) oil shall not exceed 0.4%, with compliance determined at the end of each month. This will limit the potential to emit HCl to less than 9.9 tons of per year based on the HCl emission factor of 26.4 pounds per 1,000 gallons of waste oil. (AP-42 Chapter 1.11, Table 1.11-3).
- (e) The total input of re-refined (waste) oil to the two (2) aggregate dryers/mixers shall be limited to less than 750,000 gallons per twelve (12) consecutive month period and the Lead content of the re-refined (waste) oil shall not exceed 0.01%, with compliance determined at the end of each month. Compliance with this limit will keep Lead emissions below five (5) tons per year based on the lead emission factor of 0.75 pounds per 1,000 gallons of waste oil. (AP-42 Chapter 1.11, Table 1.11-3).

Compliance with these limits will keep the entire source emissions below ten (10) tons per year of a single HAP and below twenty-five (25) tons per year of a combination of HAPs. Compliance with these limits will satisfy 326 IAC 2-8-4 and renders 326 IAC 2-7, Part 70, not applicable.

The AP-42 emission factors for asphalt plants (Chapter 11) were revised in 2004. As a result, the limitations have been revised in this permit.

#### 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 meet the following, unless otherwise stated in the permit:

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

#### 326 IAC 6-4 (Fugitive Dust Emissions Limitations)

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

#### 326 IAC 6-5 (Fugitive Particulate Emissions Limitations)

This source was constructed prior to December 13, 1985 in Tippecanoe County. Therefore, the requirements of 326 IAC 6-5 are not applicable.

#### 326 IAC 8-5-2 (Asphalt paving rules)

Although construction of this source commenced prior to January 1, 1980, the source applied for approval after January 1, 1980. Pursuant to 326 IAC 8-5-1(2), the requirements of 326 IAC 8-5-2 are applicable to any asphalt paving application made after January 1, 1980. Pursuant to 326 IAC 8-5-2, the Permittee shall not allow the use of asphalt emulsion containing more than seven percent (7%) oil distillate by volume of emulsion, except as used for the following purposes:

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

### State Rule Applicability – Individual Facilities

#### 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

The potential to emit PM from these plants is limited by 326 IAC 12, 40 CFR Part 60.90, Subpart I, and the limitation in Subpart I is more stringent, as shown in the calculations below. Therefore, pursuant to 326 IAC 6-3-2(b)(2), the limitations of 326 IAC 6-3-2 are not applicable.

Subpart I: 0.04 gr/dscf

(a) Plant 157-03310

Based on the latest compliance stack test: 15.25 lbs/hr = 0.04 gr/dscf

(b) Plant 157-03286

Based on the latest compliance stack test: 0.75 lbs/hr > 0.0031 gr/dscf

Therefore: 0.04 gr/dscf < 9.68 pounds per hour

326 IAC 6-3-2: Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

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

(a) Plant 157-03310

$E = 55.0 (225)^{0.11} - 40 = 59.8$  pounds per hour

(b) Plant 157-03286

$E = 55.0 (200)^{0.11} - 40 = 58.5$  pounds per hour

#### 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

The potential to emit SO<sub>2</sub> from the two (2) aggregate dryer burners are twenty-five (25) tons per year or more. Therefore, the requirements of 326 IAC 7-1.1 are applicable.

(a) When operating on No. 2 or No. 4 distillate fuel oil, the sulfur dioxide emissions shall be limited to five-tenths (0.5) pound per million British thermal units. Compliance with this limitation shall be accomplished by limiting the weight percent sulfur in the No. 2 distillate fuel oil and the No. 4 distillate fuel oil to no more than one half of one percent (0.5%).

(b) When operating on waste oil, the sulfur dioxide emissions shall be limited to one pound per million British thermal units. Compliance with this limitation shall be accomplished by limiting the weight percent sulfur in the waste oil to no more than one percent (1.0%).

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

The tanks at this source are not stationary vessels in Clark, Floyd, Lake or Porter County. Therefore, the requirements of 326 IAC 8-9 are not applicable.

#### 326 IAC 12-1 (New Source Performance Standards)

The hot mix asphalt plant is required to comply with the requirements of 40 CFR 60.90, Subpart I, Standards of Performance for Hot Mix Asphalt Facilities, as described in the "Federal Rule Applicability" section of this TSD.

### 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.

- (a) The two (2) aggregate dryers/mixers have applicable compliance determination conditions as specified below:
  - (1) Testing  
No later than May 11, 2012, in order to demonstrate compliance with the PM and PM<sub>10</sub> emission limitations in the permit, the Permittee shall perform PM and PM<sub>10</sub> testing of the two (2) aggregate dryers/mixers, identified as 157-03310 and 157-03286, utilizing methods approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>. Testing shall be conducted in accordance with Section C - Performance Testing.
  - (2) Compliance with the SO<sub>2</sub> emission limitations shall be determined utilizing one of the following options.
    - (A) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million British thermal unit heat input when operating on No. 2 distillate oil or No. 4 distillate oil and one (1.0) pound per million British thermal unit heat input when operating on reused (waste) oil by:
      - (i) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
      - (ii) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
        - (AA) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
        - (BB) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
    - (B) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the aggregate dryer and batch mixer using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

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

- (3) In order to comply with the PM and PM<sub>10</sub> limitations in the permit, the baghouses for the aggregate dryers/mixers shall be in operation and control emissions from the aggregate dryers/mixers at all times when the aggregate dryers/mixers are in operation. 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.

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

Equipment	Parameter	Frequency	Range	Excursions and Exceedances
Conveyors, material transfer points and aggregate dryer/mixer stack (SV1 and SV1a) exhaust	Visible Emissions	Daily	Normal-Abnormal	Response Steps
Baghouses for the aggregate dryers/mixers	Water Pressure Drop	Daily	2.0 to 8.0 inches (157-03310) and 7.0 to 14.0 inches (157-03286)	Response Steps
	Inlet Temperature		200 and 400 degrees Fahrenheit (both plants)	

These monitoring conditions are necessary because the baghouses must operate properly to ensure compliance with 40 CFR 60, Subpart I, 326 IAC 2-8, and the limits that render 326 IAC 2-2 not applicable.

### Recommendation

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

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

An application for the purposes of this review was received on May 24, 2006.

### Conclusion

The operation of this stationary hot batch-mix asphalt production source shall be subject to the conditions of the attached **FESOP Renewal No. F157-23134-00457**.

Company Name: **Rieth-Riley Construction Co., Inc.**  
 Plant Location: **3425 O'Farrel Road, Lafayette, Indiana 47904**  
 County: **Tippecanoe**  
 FESOP: **F157-23134-00457**  
 Date: **October 30, 2007**  
 Permit Reviewer: **CAP/MES**

**Plant 157-03310 (1 of 2 plants)**

**I. Potential Emissions**

**A. Source emissions before controls**

		Hot Oil Heater (gas/<100MMBTU/uncontrolled)	(Natural Gas)
The following calculations determine the amount of emissions created by natural gas combustion, based on 8760 hours of use, AP-42 Ch. 1.4, Tables 1.4-1, 1.4-2, 1.4-3			
Pollutant:	<u>1.700 MMBtu/hr * 8760 hrs/yr</u> 1000 Btu/cf * 2000 lbs/ton		* Ef (lbs/MMcf) = (tons/yr)
P M:	1.9 lbs/MMcf =		<u>0.014</u> tons/yr
P M-10:	7.6 lbs/MMcf =		<u>0.057</u> tons/yr
S O x:	0.6 lbs/MMcf =		<u>0.004</u> tons/yr
N O x:	100.0 lbs/MMcf =		<u>0.745</u> tons/yr
V O C:	5.5 lbs/MMcf =		<u>0.041</u> tons/yr
C O:	84.0 lbs/MMcf =		<u>0.625</u> tons/yr

		Dryer Burner (gas/<100MMBTU/uncontrolled)	
The following calculations determine the amount of emissions created by natural gas combustion, based on 8760 hours of use, AP-42 Ch. 1.4, Tables 1.4-1, 1.4-2, 1.4-3			
Pollutant:	<u>75.000 MMBtu/hr * 8760 hrs/yr</u> 1000 Btu/cf * 2000 lbs/ton		* Ef (lbs/MMcf) = (tons/yr)
P M:	1.9 lbs/MMcf =		<u>0.624</u> tons/yr
P M-10:	7.6 lbs/MMcf =		<u>2.50</u> tons/yr
S O x:	0.6 lbs/MMcf =		<u>0.197</u> tons/yr
N O x:	100.0 lbs/MMcf =		<u>32.9</u> tons/yr
V O C:	5.5 lbs/MMcf =		<u>1.81</u> tons/yr
C O:	84.0 lbs/MMcf =		<u>27.6</u> tons/yr

		Batch Mix Dryer (natural gas)	
The following calculations determine the amount of emissions created by natural gas combustion and dryer, based on 8760 hours of use, AP-42 Ch. 11.1, Tables 11.1-5 and 6			
Pollutant:	<u>225 tons/hr * 8760 hrs/yr</u> 2000 lbs/ton		* Ef (lbs/MMcf) : (tons/yr)
S O x:	0.0046 lbs/ton =		<u>4.53</u> tons/yr
N O x:	0.025 lbs/ton =		<u>24.6</u> tons/yr
V O C:	0.008 lbs/ton =		<u>8.08</u> tons/yr
C O:	0.400 lbs/ton =		<u>394</u> tons/yr

		Dryer Burner (#2 oil)	<100 MMBtu/hr
The following calculations determine the amount of emissions created by #2 & #1 distillate fuel oil @ <u>0.5</u> % sulfur, based on 8760 hours of use and AP-42, Tables 1.3-1, 1.3-2, 1.3-3			
Pollutant:	<u>75.0 MMBtu/hr * 8760 hrs/yr</u> <u>138000.0</u> Btu/gal * 2000 lbs/ton		* Ef (lbs/1000 gal) = (tons/yr)
P M:	2.0 lbs/1000 gal =		<u>4.76</u> tons/yr
PM-10:	3.3 lbs/1000 gal =		<u>7.86</u> tons/yr
S O x:	71.0 lbs/1000 gal =		<u>169</u> tons/yr
N O x:	20.0 lbs/1000 gal =		<u>47.6</u> tons/yr
V O C:	0.34 lbs/1000 gal =		<u>0.809</u> tons/yr
C O:	5.0 lbs/1000 gal =		<u>11.9</u> tons/yr

		Batch Mix Dryer (#2 oil)	
The following calculations determine the amount of emissions created by No. 2 fuel oil combustion and dryer, based on 8760 hours of use, AP-42 Ch. 11.1, Tables 11.1-5 and 6			
Pollutant:	<u>225 tons/hr * 8760 hrs/yr</u> 2000 lbs/ton		* Ef (lbs/MMcf) : (tons/yr)
S O x:	0.0880 lbs/ton =		<u>86.7</u> tons/yr
N O x:	0.120 lbs/ton =		<u>118</u> tons/yr
V O C:	0.0082 lbs/ton =		<u>8.08</u> tons/yr
C O:	0.400 lbs/ton =		<u>394</u> tons/yr

**Dryer Burner (#4 oil/ <100MMBTU)**

The following calculations determine the amount of emissions created by #4 distillate fuel oil @ 0.5 % sulfur, based on 8760 hours of use and AP-42, Tables 1.3-1, 1.3-2, 1.3-3

Pollutant:	<u>75.000</u> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<u>138000.0</u> Btu/gal * 2000 lbs/ton	
P M:	2.0 lbs/1000 gal =	<u>4.76</u> tons/yr
PM-10:	3.3 lbs/1000 gal =	<u>7.86</u> tons/yr
S O x:	75.0 lbs/1000 gal =	<u>179</u> tons/yr
N O x:	20.0 lbs/1000 gal =	<u>47.6</u> tons/yr
V O C:	0.34 lbs/1000 gal =	<u>0.809</u> tons/yr
C O:	5.0 lbs/1000 gal =	<u>11.9</u> tons/yr

**Dryer Burner (waste oil/atomizing burner)**

The following calculations determine the amount of emissions created by waste fuel oil @ 1.000 % sulfur, based on 8760 hours of use and AP-42 Chapter 1.11

<u>0.400</u>	% Chlorine
<u>0.500</u>	% Ash
<u>0.015</u>	% Lead

Pollutant:	<u>75.000</u> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<u>142000.000</u> Btu/gal * 2000 lbs/ton	
P M:	33.0 lbs/1000 gal =	<u>76.3</u> tons/yr
P M-10:	28.5 lbs/1000 gal =	<u>65.9</u> tons/yr
S O x:	150.0 lbs/1000 gal =	<u>347</u> tons/yr
N O x:	16.0 lbs/1000 gal =	<u>37.0</u> tons/yr
V O C:	1.0 lbs/1000 gal =	<u>2.31</u> tons/yr
C O:	2.10 lbs/1000 gal =	<u>4.86</u> tons/yr
Pb:	0.75 lbs/1000 gal =	<u>1.74</u> tons/yr
HCl:	26.4 lbs/1000 gal =	<u>61.1</u> tons/yr

**Batch Mix Dryer (waste oil)**

The following calculations determine the amount of emissions created by waste oil combustion and dryer, based on 8760 hours of use, AP-42 Ch. 11.1, Tables 11.1-5 and 6

Pollutant:	<u>225</u> tons/hr * 8760 hrs/yr	* Ef (lbs/MMcf) : (tons/yr)
	2000 lbs/ton	
S O x:	0.0880 lbs/ton =	<u>86.7</u> tons/yr
N O x:	0.120 lbs/ton =	<u>118</u> tons/yr
V O C:	0.0360 lbs/ton =	<u>35.5</u> tons/yr
C O:	0.400 lbs/ton =	<u>394</u> tons/yr

**Dryer Burner (butane)**

The following calculations determine the amount of emissions created by butane gas @ 0.20 grains sulfur per 100 cubic feet, based on 8760 hours of use and AP-42, Table 1.5-1

Pollutant:	<u>75.000</u> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<u>102600.0</u> Btu/gal * 2000 lbs/ton	
P M:	0.6 lbs/1000 gal =	<u>1.92</u> tons/yr
PM-10:	0.6 lbs/1000 gal =	<u>1.92</u> tons/yr
S O x:	0.02 lbs/1000 gal =	<u>0.058</u> tons/yr
N O x:	21.0 lbs/1000 gal =	<u>67.2</u> tons/yr
V O C:	0.26 lbs/1000 gal =	<u>0.832</u> tons/yr
C O:	3.6 lbs/1000 gal =	<u>11.5</u> tons/yr

**Dryer Burner (propane)**

The following calculations determine the amount of emissions created by propane gas @ 0.20 grains sulfur per 100 cubic feet, based on 8760 hours of use and AP-42, Table 1.5-1

Pollutant:	<u>75.000</u> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<u>91500.0</u> Btu/gal * 2000 lbs/ton	
P M:	0.6 lbs/1000 gal =	<u>2.15</u> tons/yr
PM-10:	0.6 lbs/1000 gal =	<u>2.15</u> tons/yr
S O x:	0.02 lbs/1000 gal =	<u>0.072</u> tons/yr
N O x:	19.0 lbs/1000 gal =	<u>68.2</u> tons/yr
V O C:	0.25 lbs/1000 gal =	<u>0.898</u> tons/yr
C O:	3.2 lbs/1000 gal =	<u>11.5</u> tons/yr

**\*\* aggregate drying: batch-mix plant \*\***

The following calculations determine the amount of emissions created by aggregate drying, based on 8760 hours of use and EPA SCC #3-05-002-05:

P M:	32 lbs/ton x	<u>225.0</u>	tons/hr x	8760 hrs/yr =	<u>31536</u>	tons/yr
		2000	lbs/ton			
P M-10:	4.5 lbs/ton x	<u>225</u>	tons/hr x	8760 hrs/yr =	<u>4435</u>	tons/yr
		2000	lbs/ton			
Lead:	3.30E-06 lbs/ton x	<u>225</u>	tons/hr x	8760 hrs/yr =	<u>0.003</u>	tons/yr
		2000	lbs/ton			
HAPs:	0.0076 lbs/ton x	<u>225</u>	tons/hr x	8760 hrs/yr =	<u>7.49</u>	tons/yr
		2000	lbs/ton			

HAPs include benzene, ethylbenzene, formaldehyde, methyl chloroform, naphthalene, toluene, xylene; arsenic, cadmium, chromium, manganese, mercury, and nickel compounds.

**\*\* conveying / handling \*\***

The following calculations determine the amount of emissions created by material handling of aggregate, based on 8760 hours of use and AP-42, Ch 11.19.2

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

where k= 1 (particle size multiplier)  
 U = 12 mph mean wind speed (worst case)  
 M = 5.0 % moisture

0.003 lbs/ton

P M : 0.003 lbs/ton x 216.00 tons/hr x 8760 hrs/yr = 2.62 tons/yr  
 2000 lbs/ton

P M-10: 10% of PM = 0.262 tons/yr

**Screening** PM: 216.00 tons/hr x 0.0315 lbs/ton / 2000 lbs/ton x 8760 hrs/yr = 29.8 tons/yr AP-42 Ch.11.19.2

P M-10: 10% of PM = 2.98 tons/yr

**\*\* unpaved roads \*\***

The following calculations determine the amount of emissions created by vehicle traffic on unpaved roads, based on 8760 hours of use and AP-42, Ch 13.2.2.

**A. Tri-axle Truck**

22.50 trips/hr x  
0.12 miles/roundtrip x  
 8760 hrs/yr = 24440.4 miles per year

**For PM**

- 5.83
- 10
- 4.8
- 0.5
- 0.4
- 23
- 0.2
- 125
- 10

**For PM-10**

$$E_f = \{k^*[(s/12)^{0.8}]^{1.3} * [(W/3)^b] * [(Mdry/0.2)^c] * [(365-p)/365] * (S/15)\}$$

= 1.24 lb/mile

where k = 2.6 (particle size multiplier for PM-10) (k=10 for PM-30 or TSP)  
 s = 4.8 mean % silt content of unpaved roads  
 b = 0.4 Constant for PM-10 (b = 0.5 for PM-30 or TSP)  
 c = 0.3 Constant for PM-10 (c = 0.4 for PM-30 or TSP)  
 W = 23 tons average vehicle weight  
 Mdry = 0.2 surface material moisture content, % (default is 0.2 for dry conditions)  
 p = 125 number of days with at least 0.254mm of precipitation (See Figure 13.2.2-1)  
 S = 10 miles/hr vehicle speed

5.83 lb/mi x 24440.4 mi/yr = PM 71.3 tons/yr  
 2000 lb/ton

1.24 lb/mi x 24440.4 mi/yr = PM-10 15.1 tons/yr  
 2000 lb/ton

**B. Front End Loader**

38.8 trips/hr x  
0.056 miles/roundtrip x  
 8760 hrs/yr = 19033.7 miles per year

**For PM**

- 3.42
- 10
- 4.8
- 0.5
- 0.4
- 22
- 0.2
- 125
- 6

**For PM-10**

$$E_f = \{k^*[(s/12)^{0.8}]^{1.3} * [(W/3)^b] * [(Mdry/0.2)^c] * [(365-p)/365] * (S/15)\}$$

= 0.73 lb/mile

where k = 2.6 (particle size multiplier for PM-10) (k=10 for PM-30 or TSP)  
 s = 4.8 mean % silt content of unpaved roads  
 b = 0.4 Constant for PM-10 (b = 0.5 for PM-30 or TSP)  
 c = 0.3 Constant for PM-10 (c = 0.4 for PM-30 or TSP)  
 W = 22 tons average vehicle weight  
 Mdry = 0.2 surface material moisture content, % (default is 0.2 for dry conditions)  
 p = 125 number of days with at least 0.254mm of precipitation (See Figure 13.2.2-1)  
 S = 6 miles/hr vehicle speed

3.42 lb/mi x 19033.728 mi/yr = PM 32.6 tons/yr  
 2000 lb/ton

0.73 lb/mi x 19033.728 mi/yr = PM-10 6.94 tons/yr  
 2000 lb/ton

**All Trucking**

Total PM: 104 tons/yr  
 Total PM-10: 22.1 tons/yr

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8760 hours of use and AP-42, Ch 11.2.3.

E <sub>f</sub> = 1.7*(s/1.5) <sup>3</sup> (365-p)/235*(f/15)	
=	1.27 lbs/acre/day for sand
=	1.39 lbs/acre/day for stone
=	1.16 lbs/acre/day for slag
=	1.16 lbs/acre/day for gravel
=	0.93 lbs/acre/day for RAP
where s =	1.1 % silt for sand
s =	1.2 % silt of stone
s =	1.0 % silt of slag
s =	1.0 % silt of gravel
s =	0.8 % silt for RAP
p =	125 days of rain greater than or equal to 0.01 inches
f =	15 % of wind greater than or equal to 12 mph
E <sub>p</sub> (storage) = E <sub>f</sub> * sc * (20 cuft/ton) * (365 days/yr)	
(2000 lbs/ton)*(43560 sqft/acre)*(25 ft)	
=	0.085 tons/yr for sand
=	0.279 tons/yr for stone
=	0.000 tons/yr for slag
=	0.039 tons/yr for gravel
=	0.155 tons/yr for RAP
Total PM:	<b>0.559</b> tons/yr
where sc =	20,000 tons storage capacity for sand
sc =	60,000 tons storage capacity for stone
sc =	0,000 tons storage capacity for slag
sc =	10,000 tons storage capacity for gravel
sc =	50,000 tons storage capacity for RAP
P M-10:	35% of PM = 0.030 tons/yr for sand
	35% of PM = 0.098 tons/yr for stone
	35% of PM = 0.000 tons/yr for slag
	35% of PM = 0.014 tons/yr for gravel
	35% of PM = 0.054 tons/yr for RAP
Total PM-10:	<b>0.196</b> tons/yr

**Plant 157-03310 Totals**

Emissions before controls (combustion plus production) are as follows:

natural gas	#2 oil	#4 oil	waste oil
P M: 31673 tons/yr	P M: 31678 tons/yr	P M: 31678 tons/yr	P M: 31749 tons/yr
P M-10: 4463 tons/yr	P M-10: 4468 tons/yr	P M-10: 4468 tons/yr	P M-10: 4526 tons/yr
S O x: 4.54 tons/yr	S O x: 169 tons/yr	S O x: 179 tons/yr	S O x: 347 tons/yr
N O x: 33.6 tons/yr	N O x: 119 tons/yr	N O x: 119 tons/yr	N O x: 119 tons/yr
V O C: 8.12 tons/yr	V O C: 8.12 tons/yr	V O C: 8.12 tons/yr	V O C: 35.5 tons/yr
C O: 395 tons/yr			
Lead: 0.003 tons/yr	Lead: 0.003 tons/yr	Lead: 0.003 tons/yr	Lead: 1.74 tons/yr
HAPs: 7.49 tons/yr	HAPs: 7.49 tons/yr	HAPs: 7.49 tons/yr	HAPs: 70.3 tons/yr

  

butane	propane
P M: 31675 tons/yr	P M: 31675 tons/yr
P M-10: 4462 tons/yr	P M-10: 4462 tons/yr
S O x: 0.062 tons/yr	S O x: 0.076 tons/yr
N O x: 68.0 tons/yr	N O x: 69.0 tons/yr
V O C: 0.873 tons/yr	V O C: 0.938 tons/yr
C O: 12.2 tons/yr	C O: 12.1 tons/yr
Lead: 0.003 tons/yr	Lead: 0.003 tons/yr
HAPs: 7.49 tons/yr	HAPs: 7.49 tons/yr

The worst-case of the "Dryer Burner" and "Batch Mix Dryer" emissions are used for each fuel. This does not include VOC from cutback and emulsified asphalt. The total potential VOC emissions are greater than 250 tons per year.

**B. Plant 157-03310 Emissions After Controls**

<b>hot oil heater combustion: gas</b>			
P M:	0.014 tons/yr x	<u>1.00000</u> emitted after controls =	<u>0.014</u> tons/yr
P M-10:	0.057 tons/yr x	<u>1.00000</u> emitted after controls =	<u>0.057</u> tons/yr
<b>dryer combustion: gas</b>			
P M:	0.62 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.0001</u> tons/yr
P M-10:	2.50 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.0005</u> tons/yr
<b>dryer combustion: #2 oil</b>			
P M:	4.76 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.001</u> tons/yr
P M-10:	7.86 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.002</u> tons/yr
<b>dryer combustion: #4 oil</b>			
P M:	4.76 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.001</u> tons/yr
P M-10:	7.86 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.002</u> tons/yr
<b>dryer combustion: waste oil</b>			
P M:	76.34 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.015</u> tons/yr
P M-10:	65.93 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.013</u> tons/yr
<b>dryer combustion: butane</b>			
P M:	1.92 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.0004</u> tons/yr
P M-10:	1.92 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.0004</u> tons/yr
<b>dryer combustion: propane</b>			
P M:	2.15 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.0004</u> tons/yr
P M-10:	2.15 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.0004</u> tons/yr
<b>aggregate drying:</b>			
P M:	31536.00 tons/yr x	<u>0.00020</u> emitted after controls =	<u>6.31</u> tons/yr
P M-10:	4434.75 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.887</u> tons/yr
<b>conveying/handling:</b>			
P M:	2.62 tons/yr x	<u>1.000</u> emitted after controls =	<u>2.62</u> tons/yr
P M-10:	0.26 tons/yr x	<u>1.000</u> emitted after controls =	<u>0.262</u> tons/yr
<b>screening</b>			
P M:	29.80 tons/yr x	<u>1.000</u> emitted after controls =	<u>29.8</u> tons/yr
P M-10:	2.98 tons/yr x	<u>1.000</u> emitted after controls =	<u>2.98</u> tons/yr
<b>unpaved roads:</b>			
P M:	103.83 tons/yr x	50.00% emitted after controls =	<u>51.9</u> tons/yr
P M-10:	22.05 tons/yr x	50.00% emitted after controls =	<u>11.0</u> tons/yr
<b>storage:</b>			
P M:	0.559 tons/yr x	50.00% emitted after controls =	<u>0.279</u> tons/yr
P M-10:	0.196 tons/yr x	50.00% emitted after controls =	<u>0.098</u> tons/yr

Emissions after controls (combustion plus production) are as follows:

	Butane	Propane	Gas	#2 Oil	#4 Oil	Waste Oil	
P M:	90.9	90.9	90.9	90.9	90.9	91.0	tons/yr
P M-10:	15.3	15.3	15.3	15.3	15.3	15.3	tons/yr

**II. Plant 157-03310 Allowable Emissions**

A. The following calculations determine the maximum sulfur content of distillate #2 fuel oil allowable by 326 IAC 7:

limit:	0.5 lbs/MMBtu			
	0.5 lbs/MMBtu x	<u>138000.0</u>	Btu/gal=	<u>69.0</u>
	69 lbs/1000gal /	<u>142.0</u>	lbs/1000 gal =	<u>0.486</u>
Sulfur content must be less than or equal to and to limit SO2 emissions to 99 tons per year or less.		<u>0.5</u>	% to comply with 326 IAC 7	

B. The following calculations determine the maximum sulfur content of residual waste fuel oil allowable by 326 IAC 7:

limit:	1.6 lbs/MMBtu			
	1.6 lbs/MMBtu x	<u>142000.0</u>	Btu/gal=	227.2 lbs/1000gal
	227.2 lbs/1000gal /	<u>214.0</u>	lbs/1000 gal = (check burner type)	<u>1.062</u>
Sulfur content must be less than or equal to and to limit SO2 emissions to 99 tons per year or less.		<u>1.06</u>	% to comply with 326 IAC 7	

C. The following calculations determine the maximum sulfur content of distillate #4 fuel oil allowable by 326 IAC 7:

limit:	0.5 lbs/MMBtu			
	0.5 lbs/MMBtu x	<u>138000.0</u>	Btu/gal=	69 lbs/1000gal
	69 lbs/1000gal /	<u>142.0</u>	lbs/1000 gal =	<u>0.486</u>
Sulfur content must be less than or equal to and to limit SO2 emissions to 99 tons per year or less.		<u>0.5</u>	% to comply with 326 IAC 7	

Company Name: Rieth-Riley Construction Co., Inc.  
 Plant Location: 3425 O'Farrel Road, Lafayette, Indiana 47904  
 County: Tippecanoe  
 FESOP: F157-23134-00457  
 Date: October 30, 2007  
 Permit Reviewer: CAP/MES

Plant 157-03286 (1 of 2 plants)

I. Potential Emissions

A. Emissions before controls

Hot Oil Heater		(propane)
The following calculations determine the amount of emissions created by propane gas @ <u>0.20</u> grains sulfur per 100 cubic feet, based on 8760 hours of use and AP-42 Ch. 1.5, Table 1.5-1		
<u>0.800</u> MMBtu/hr * 8760 hrs/yr		* Ef (lbs/1000 gal) = (tons/yr)
<u>91500.0</u> Btu/gal * 2000 lbs/ton		
P M:	0.4 lbs/1000 gal =	<u>0.015</u> tons/yr
PM-10:	0.4 lbs/1000 gal =	<u>0.015</u> tons/yr
S O x:	0.02 lbs/1000 gal =	<u>0.001</u> tons/yr
N O x:	14.0 lbs/1000 gal =	<u>0.536</u> tons/yr
V O C:	1.90 lbs/1000 gal =	<u>0.073</u> tons/yr
C O:	3.2 lbs/1000 gal =	<u>0.123</u> tons/yr

Dryer Burner		(gas<100MMBTU/uncontrolled)
The following calculations determine the amount of emissions created by natural gas combustion, based on 8760 hours of use, AP-42 Ch. 1.4, Tables 1.4-1, 1.4-2, 1.4-3		
Pollutant:	<u>82.400</u> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/MMcf) = (tons/yr)
	1000 Btu/cf * 2000 lbs/ton	
P M:	1.9 lbs/MMcf =	<u>0.686</u> tons/yr
P M-10:	7.6 lbs/MMcf =	<u>2.74</u> tons/yr
S O x:	0.6 lbs/MMcf =	<u>0.217</u> tons/yr
N O x:	100.0 lbs/MMcf =	<u>36.1</u> tons/yr
V O C:	5.5 lbs/MMcf =	<u>1.99</u> tons/yr
C O:	84.0 lbs/MMcf =	<u>30.3</u> tons/yr

Batch Mix Dryer		(natural gas)
The following calculations determine the amount of emissions created by natural gas combustion and dryer, based on 8760 hours of use, AP-42 Ch. 11.1, Tables 11.1-5 and 6		
Pollutant:	<u>200</u> tons/hr * 8760 hrs/yr	* Ef (lbs/MMcf) : (tons/yr)
	2000 lbs/ton	
S O x:	0.0046 lbs/ton =	<u>4.03</u> tons/yr
N O x:	0.025 lbs/ton =	<u>21.9</u> tons/yr
V O C:	0.008 lbs/ton =	<u>7.18</u> tons/yr
C O:	0.400 lbs/ton =	<u>350</u> tons/yr

Dryer Burner		(#2 oil)	<100 MMBtu/hr
The following calculations determine the amount of emissions created by #2 & #1 distillate fuel oil @ <u>0.5</u> % sulfur, based on 8760 hours of use and AP-42, Tables 1.3-1, 1.3-2, 1.3-3			
Pollutant:	<u>82.400</u> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)	
	<u>138000.0</u> Btu/gal * 2000 lbs/ton		
P M:	2.0 lbs/1000 gal =	<u>5.23</u> tons/yr	
PM-10:	3.3 lbs/1000 gal =	<u>8.63</u> tons/yr	
S O x:	71.0 lbs/1000 gal =	<u>186</u> tons/yr	
N O x:	20.0 lbs/1000 gal =	<u>52.3</u> tons/yr	
V O C:	0.34 lbs/1000 gal =	<u>0.889</u> tons/yr	
C O:	5.0 lbs/1000 gal =	<u>13.1</u> tons/yr	

Batch Mix Dryer		(#2 oil)
The following calculations determine the amount of emissions created by No. 2 fuel oil combustion and dryer, based on 8760 hours of use, AP-42 Ch. 11.1, Tables 11.1-5 and 6		
Pollutant:	<u>200</u> tons/hr * 8760 hrs/yr	* Ef (lbs/MMcf) : (tons/yr)
	2000 lbs/ton	
S O x:	0.0880 lbs/ton =	<u>77.1</u> tons/yr
N O x:	0.120 lbs/ton =	<u>105</u> tons/yr
V O C:	0.0082 lbs/ton =	<u>7.18</u> tons/yr
C O:	0.400 lbs/ton =	<u>350</u> tons/yr

**Dryer Burner (#4 oil/ <100MMBTU)**

The following calculations determine the amount of emissions created by #4 distillate fuel oil @ 0.5 % sulfur, based on 8760 hours of use and AP-42, Tables 1.3-1, 1.3-2, 1.3-3

Pollutant:	<u>82.400</u> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<u>138000.0</u> Btu/gal * 2000 lbs/ton	
P M:	2.0 lbs/1000 gal =	<u>5.23</u> tons/yr
PM-10:	3.3 lbs/1000 gal =	<u>8.63</u> tons/yr
S O x:	75.0 lbs/1000 gal =	<u>196</u> tons/yr
N O x:	20.0 lbs/1000 gal =	<u>52.3</u> tons/yr
V O C:	0.34 lbs/1000 gal =	<u>0.889</u> tons/yr
C O:	5.0 lbs/1000 gal =	<u>13.1</u> tons/yr

**Dryer Burner (waste oil/atomizing burner)**

The following calculations determine the amount of emissions created by waste fuel oil @ 1.000 % sulfur, based on 8760 hours of use and AP-42 Chapter 1.11

0.400 % Chlorine  
0.500 % Ash  
0.015 % Lead

Pollutant:	<u>82.400</u> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<u>142000.000</u> Btu/gal * 2000 lbs/ton	
P M:	33.0 lbs/1000 gal =	<u>83.9</u> tons/yr
P M-10:	28.5 lbs/1000 gal =	<u>72.4</u> tons/yr
S O x:	150.0 lbs/1000 gal =	<u>381</u> tons/yr
N O x:	16.0 lbs/1000 gal =	<u>40.7</u> tons/yr
V O C:	1.0 lbs/1000 gal =	<u>2.54</u> tons/yr
C O:	2.10 lbs/1000 gal =	<u>5.34</u> tons/yr
Pb:	0.75 lbs/1000 gal =	<u>1.91</u> tons/yr
HCl:	26.4 lbs/1000 gal =	<u>67.1</u> tons/yr

**Batch Mix Dryer (waste oil)**

The following calculations determine the amount of emissions created by waste oil combustion and dryer, based on 8760 hours of use, AP-42 Ch. 11.1, Tables 11.1-5 and 6

Pollutant:	<u>200</u> tons/hr * 8760 hrs/yr	* Ef (lbs/MMcf) : (tons/yr)
	2000 lbs/ton	
S O x:	0.0880 lbs/ton =	<u>77.1</u> tons/yr
N O x:	0.120 lbs/ton =	<u>105</u> tons/yr
V O C:	0.0360 lbs/ton =	<u>31.5</u> tons/yr
C O:	0.400 lbs/ton =	<u>350</u> tons/yr

**Dryer Burner (butane)**

The following calculations determine the amount of emissions created by butane gas @ 0.20 grains sulfur per 100 cubic feet, based on 8760 hours of use and AP-42, Table 1.5-1

Pollutant:	<u>82.400</u> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<u>102600.0</u> Btu/gal * 2000 lbs/ton	
P M:	0.6 lbs/1000 gal =	<u>2.11</u> tons/yr
PM-10:	0.6 lbs/1000 gal =	<u>2.11</u> tons/yr
S O x:	0.02 lbs/1000 gal =	<u>0.063</u> tons/yr
N O x:	21.0 lbs/1000 gal =	<u>73.9</u> tons/yr
V O C:	0.26 lbs/1000 gal =	<u>0.915</u> tons/yr
C O:	3.6 lbs/1000 gal =	<u>12.7</u> tons/yr

**Dryer Burner (propane)**

The following calculations determine the amount of emissions created by propane gas @ 0.20 grains sulfur per 100 cubic feet, based on 8760 hours of use and AP-42, Table 1.5-1

Pollutant:	<u>82.400</u> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<u>91500.0</u> Btu/gal * 2000 lbs/ton	
P M:	0.6 lbs/1000 gal =	<u>2.37</u> tons/yr
PM-10:	0.6 lbs/1000 gal =	<u>2.37</u> tons/yr
S O x:	0.02 lbs/1000 gal =	<u>0.079</u> tons/yr
N O x:	19.0 lbs/1000 gal =	<u>74.9</u> tons/yr
V O C:	0.25 lbs/1000 gal =	<u>0.986</u> tons/yr
C O:	3.2 lbs/1000 gal =	<u>12.6</u> tons/yr

**\*\* aggregate drying: batch-mix plant \*\***

The following calculations determine the amount of emissions created by aggregate drying, based on 8760 hours of use and EPA SCC #3-05-002-05:

P M:	32 lbs/ton x	<u>200</u> lbs/ton	tons/hr x	8760 hrs/yr =	<u>28032</u> tons/yr
		2000			
P M-10:	4.5 lbs/ton x	<u>200</u> lbs/ton	tons/hr x	8760 hrs/yr =	<u>3942</u> tons/yr
		2000			
Lead:	3.30E-06 lbs/ton x	<u>200</u> lbs/ton	tons/hr x	8760 hrs/yr =	<u>0.003</u> tons/yr
		2000			
HAPs:	0.0076 lbs/ton x	<u>200</u> lbs/ton	tons/hr x	8760 hrs/yr =	<u>6.66</u> tons/yr
		2000			

HAPs include benzene, ethylbenzene, formaldehyde, methyl chloroform, naphthalene, toluene, xylene; arsenic, cadmium, chromium, manganese, mercury, and nickel compounds.

**\*\* conveying / handling \*\***

The following calculations determine the amount of emissions created by material handling of aggregate, based on 8760 hours of use and AP-42, Ch 11.19.2

$$E_f = .0032 * \frac{(U/5)^{1.3} * k}{(M/2)^{1.4}} = \underline{0.003} \text{ lbs/ton}$$

where k= 1 (particle size multiplier)  
 U = 12 mph mean wind speed (worst case)  
 M = 5.0 % moisture

P M :	<u>0.003</u> lbs/ton x	<u>190.00</u> tons/hr x	8760 hrs/yr =	<u>2.30</u> tons/yr
		2000 lbs/ton		
P M-10:	10% of PM =			<u>0.230</u> tons/yr
<b>Screening</b>	PM: <u>190.00</u> tons/hr x	0.0315 lbs/ton	/ 2000 lbs/ton x	8760 hrs/yr = <u>26.2</u> tons/yr
	P M-10: 10% of PM =			<u>2.62</u> tons/yr

AP-42 Ch.11.19.2

**\*\* unpaved roads \*\***

The following calculations determine the amount of emissions created by vehicle traffic on unpaved roads, based on 8760 hours of use and AP-42, Ch 13.2.2.

**A. Tri-axle Truck**

$$\frac{20.00 \text{ trips/hr x } 0.12 \text{ miles/roundtrip x } 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}} = \underline{21724.8} \text{ miles per year}$$

<b>For PM</b>	<b>For PM-10</b>		
5.83	$E_f = \frac{k * [(s/12)^{0.8}] * [(W/3)^b] * [(Mdry/0.2)^c] * [(365-p)/365] * (S/15)}{1.24}$		
10	= 1.24 lb/mile		
4.8	where k = 2.6 (particle size multiplier for PM-10) (k=10 for PM-30 or TSP)		
0.5	s = 4.8 mean % silt content of unpaved roads		
0.4	b = 0.4 Constant for PM-10 (b = 0.5 for PM-30 or TSP)		
23	c = 0.3 Constant for PM-10 (c = 0.4 for PM-30 or TSP)		
0.2	W = 23 tons average vehicle weight		
125	Mdry = 0.2 surface material moisture content, % (default is 0.2 for dry conditions)		
10	p = 125 number of days with at least 0.254mm of precipitation (See Figure 13.2.2-1)		
	S = 10 miles/hr vehicle speed		
	<u>5.83</u> lb/mi x <u>21724.8</u> mi/yr =	PM	<u>63.3</u> tons/yr
	<u>1.24</u> lb/mi x <u>21724.8</u> mi/yr =	PM-10	<u>13.4</u> tons/yr

**B. Front End Loader**

$$\frac{34.5 \text{ trips/hr x } 0.056 \text{ miles/roundtrip x } 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}} = \underline{16924.3} \text{ miles per year}$$

<b>For PM</b>	<b>For PM-10</b>		
3.42	$E_f = \frac{k * [(s/12)^{0.8}] * [(W/3)^b] * [(Mdry/0.2)^c] * [(365-p)/365] * (S/15)}{0.73}$		
10	= 0.73 lb/mile		
4.8	where k = 2.6 (particle size multiplier for PM-10) (k=10 for PM-30 or TSP)		
0.5	s = 4.8 mean % silt content of unpaved roads		
0.4	b = 0.4 Constant for PM-10 (b = 0.5 for PM-30 or TSP)		
22	c = 0.3 Constant for PM-10 (c = 0.4 for PM-30 or TSP)		
0.2	W = 22 tons average vehicle weight		
125	Mdry = 0.2 surface material moisture content, % (default is 0.2 for dry conditions)		
6	p = 125 number of days with at least 0.254mm of precipitation (See Figure 13.2.2-1)		
	S = 6 miles/hr vehicle speed		
	<u>3.42</u> lb/mi x <u>16924.32</u> mi/yr =	PM	<u>29.0</u> tons/yr
	<u>0.73</u> lb/mi x <u>16924.32</u> mi/yr =	PM-10	<u>6.17</u> tons/yr

**All Trucking** Total PM: 92.3 tons/yr  
 Total PM-10: 19.6 tons/yr

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8760 hours of use and AP-42, Ch 11.2.3.

$$E_f = 1.7 \cdot (s/1.5)^{0.365-p} / 235 \cdot (f/15)$$

= 1.27 lbs/acre/day for sand  
 = 1.39 lbs/acre/day for stone  
 = 1.16 lbs/acre/day for slag  
 = 1.16 lbs/acre/day for gravel  
 = 0.93 lbs/acre/day for RAP

where s = 1.1 % silt for sand  
 s = 1.2 % silt for stone  
 s = 1.0 % silt for slag  
 s = 1.0 % silt for gravel  
 s = 0.8 % silt for RAP

p = 125 days of rain greater than or equal to 0.01 inches  
 f = 15 % of wind greater than or equal to 12 mph

$$E_p(\text{storage}) = E_f \cdot sc \cdot (20 \text{ cuft/ton}) \cdot (365 \text{ days/yr})$$

$$(2000 \text{ lbs/ton}) \cdot (43560 \text{ sqft/acre}) \cdot (25 \text{ ft})$$

= 0.085 tons/yr for sand  
 = 0.186 tons/yr for stone  
 = 0.000 tons/yr for slag  
 = 0.039 tons/yr for gravel  
 = 0.000 tons/yr for RAP

Total PM: **0.310** tons/yr

where sc = **20**,000 tons storage capacity for sand  
 sc = **40**,000 tons storage capacity for stone  
 sc = **0**,000 tons storage capacity for slag  
 sc = **10**,000 tons storage capacity for gravel  
 sc = **0**,000 tons storage capacity for RAP

P M-10: 35% of PM = **0.030** tons/yr for sand  
 35% of PM = **0.065** tons/yr for stone  
 35% of PM = **0.000** tons/yr for slag  
 35% of PM = **0.014** tons/yr for gravel  
 35% of PM = **0.000** tons/yr for RAP

Total PM-10: **0.109** tons/yr

**\*\* Recycled Asphalt Pavement System \*\***

Operation	Capacity (tons/hr)	Emission Factor for PM (lbs/ton)	Emission Factor for PM-10 (lbs/ton)	Potential PM Emissions (lbs/hr)	Potential PM-10 Emissions (lbs/hr)	Potential PM Emissions (tons/yr)	Potential PM-10 Emissions (tons/yr)
Screening	50	0.025	0.0087	1.25	0.44	5.5	1.9053
Conveying	50	0.0029	0.0011	0.145	0.055	0.64	0.241
Breaker	50	0.0054	0.0024	0.27	0.120	1.18	0.53
<b>Totals:</b>				<b>1.67</b>	<b>0.610</b>	<b>7.29</b>	<b>2.67</b>

**Methodology**

Emission Factors for Recycled Asphalt Paving System are from AP-42, Draft Section 11.19.2, Table 11.19.2-2 (SCC 3-05-020-02, SCC 3-05-020-03, SCC 3-05-020-06)

**Plant 157-03286 Totals**

Emissions before controls (combustion plus production) are as follows:

natural gas	#2 oil	#4 oil	waste oil
P M: <b>28161</b> tons/yr	P M: <b>28166</b> tons/yr	P M: <b>28166</b> tons/yr	P M: <b>28244</b> tons/yr
P M-10: <b>3970</b> tons/yr	P M-10: <b>3976</b> tons/yr	P M-10: <b>3976</b> tons/yr	P M-10: <b>4040</b> tons/yr
S O x: <b>4.03</b> tons/yr	S O x: <b>186</b> tons/yr	S O x: <b>196</b> tons/yr	S O x: <b>381</b> tons/yr
N O x: <b>36.1</b> tons/yr	N O x: <b>105</b> tons/yr	N O x: <b>105</b> tons/yr	N O x: <b>105</b> tons/yr
V O C: <b>7.18</b> tons/yr	V O C: <b>7.18</b> tons/yr	V O C: <b>7.18</b> tons/yr	V O C: <b>31.5</b> tons/yr
C O: <b>350</b> tons/yr			
Lead: <b>0.003</b> tons/yr	Lead: <b>0.003</b> tons/yr	Lead: <b>0.003</b> tons/yr	Lead: <b>1.91</b> tons/yr
HAPs: <b>6.66</b> tons/yr	HAPs: <b>6.66</b> tons/yr	HAPs: <b>6.66</b> tons/yr	HAPs: <b>75.7</b> tons/yr

  

butane	propane
P M: <b>28163</b> tons/yr	P M: <b>28163</b> tons/yr
P M-10: <b>3969</b> tons/yr	P M-10: <b>3970</b> tons/yr
S O x: <b>0.063</b> tons/yr	S O x: <b>0.079</b> tons/yr
N O x: <b>73.9</b> tons/yr	N O x: <b>74.9</b> tons/yr
V O C: <b>0.915</b> tons/yr	V O C: <b>0.986</b> tons/yr
C O: <b>12.7</b> tons/yr	C O: <b>12.6</b> tons/yr
Lead: <b>0.003</b> tons/yr	Lead: <b>0.003</b> tons/yr
HAPs: <b>6.66</b> tons/yr	HAPs: <b>6.66</b> tons/yr

The worst-case of the "Dryer Burner" and "Batch Mix Dryer" emissions are used for each fuel. This does not include VOC from cutback and emulsified asphalt. The total potential VOC emissions are greater than 250 tons per year.

**B. Plant 157-03286 Emissions after controls**

<b>hot oil heater combustion: gas</b>			
P M:	0.000 tons/yr x	<u>1.00000</u> emitted after controls =	<u>0.000</u> tons/yr
P M-10:	0.000 tons/yr x	<u>1.00000</u> emitted after controls =	<u>0.000</u> tons/yr
<b>dryer combustion: gas</b>			
P M:	0.69 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.0001</u> tons/yr
P M-10:	2.74 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.0005</u> tons/yr
<b>dryer combustion: #2 oil</b>			
P M:	5.23 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.001</u> tons/yr
P M-10:	8.63 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.002</u> tons/yr
<b>dryer combustion: #4 oil</b>			
P M:	5.23 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.001</u> tons/yr
P M-10:	8.63 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.002</u> tons/yr
<b>dryer combustion: waste oil</b>			
P M:	83.87 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.017</u> tons/yr
P M-10:	72.44 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.014</u> tons/yr
<b>dryer combustion: butane</b>			
P M:	2.11 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.0004</u> tons/yr
P M-10:	2.11 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.0004</u> tons/yr
<b>dryer combustion: propane</b>			
P M:	2.37 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.0005</u> tons/yr
P M-10:	2.37 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.0005</u> tons/yr
<b>aggregate drying:</b>			
P M:	28032.00 tons/yr x	<u>0.00020</u> emitted after controls =	<u>5.61</u> tons/yr
P M-10:	3942.00 tons/yr x	<u>0.00020</u> emitted after controls =	<u>0.788</u> tons/yr
<b>conveying/handling:</b>			
P M:	2.30 tons/yr x	<u>1.000</u> emitted after controls =	<u>2.30</u> tons/yr
P M-10:	0.23 tons/yr x	<u>1.000</u> emitted after controls =	<u>0.230</u> tons/yr
<b>screening</b>			
P M:	26.21 tons/yr x	<u>1.000</u> emitted after controls =	<u>26.2</u> tons/yr
P M-10:	2.62 tons/yr x	<u>1.000</u> emitted after controls =	<u>2.62</u> tons/yr
<b>unpaved roads:</b>			
P M:	92.30 tons/yr x	50.00% emitted after controls =	<u>46.2</u> tons/yr
P M-10:	19.60 tons/yr x	50.00% emitted after controls =	<u>9.80</u> tons/yr
<b>storage:</b>			
P M:	0.310 tons/yr x	50.00% emitted after controls =	<u>0.155</u> tons/yr
P M-10:	0.109 tons/yr x	50.00% emitted after controls =	<u>0.054</u> tons/yr
<b>RAP System:</b>			
P M:	7.29 tons/yr x	100% emitted after controls =	<u>7.29</u> tons/yr
P M-10:	2.67 tons/yr x	100% emitted after controls =	<u>2.67</u> tons/yr

Emissions after controls (combustion plus production) are as follows:

	Butane	Propane	Gas	#2 Oil	#4 Oil	Waste Oil	
P M:	87.7	87.7	87.7	87.7	87.7	87.7	tons/yr
P M-10:	16.2	16.2	16.2	16.2	16.2	16.2	tons/yr

**II. Plant 157-03286 Allowable Emissions**

A. The following calculations determine the maximum sulfur content of distillate #2 fuel oil allowable by 326 IAC 7:

limit:	0.5 lbs/MMBtu		
	0.5 lbs/MMBtu x	<u>138000.0</u> Btu/gal=	<u>69.0</u> lbs/1000gal
	69 lbs/1000gal /	<u>142.0</u> lbs/1000 gal =	<u>0.486</u>
		<u>0.5</u> % to comply with 326 IAC 7	

Sulfur content must be less than or equal to and to limit SO2 emissions to 99 tons per year or less.

B. The following calculations determine the maximum sulfur content of residual waste fuel oil allowable by 326 IAC 7:

limit:	1.6 lbs/MMBtu		
	1.6 lbs/MMBtu x	<u>142000.0</u> Btu/gal=	227.2 lbs/1000gal
	227.2 lbs/1000gal /	<u>214.0</u> lbs/1000 gal =	<u>1.062</u>
		(check burner type)	
		<u>1.06</u> % to comply with 326 IAC 7	

Sulfur content must be less than or equal to and to limit SO2 emissions to 99 tons per year or less.

C. The following calculations determine the maximum sulfur content of distillate #4 fuel oil allowable by 326 IAC 7:

limit:	0.5 lbs/MMBtu		
	0.5 lbs/MMBtu x	<u>138000.0</u> Btu/gal=	69 lbs/1000gal
	69 lbs/1000gal /	<u>142.0</u> lbs/1000 gal =	<u>0.486</u>
		<u>0.5</u> % to comply with 326 IAC 7	

Sulfur content must be less than or equal to and to limit SO2 emissions to 99 tons per year or less.

Company Name: Rieth-Riley Construction Co., Inc.  
 Plant Location: 3425 O'Farrel Road, Lafayette, Indiana 47904  
 County: Tippecanoe  
 FESOP: F157-23134-00457  
 Date: October 30, 2007  
 Permit Reviewer: CAP/MES

III. Limited Potential to Emit

SO2 Limits

	No. 2 fuel oil	No. 2 fuel oil Sulfur Content	No. 4 fuel oil	No. 4 fuel oil Sulfur Content	Waste oil	Waste oil Sulfur Content
Limited Fuel Throughput (gallons)	1688570	0.50%	1598400	0.50%	799200	1.00%
SO2 Emission factor (lbs/1,000 gal)	71.0		75.0		150.0	
Limited Potential to Emit from the Dryers (tons/yr)	59.9		59.9		59.9	
Worst-case SO2 from other fuels (tons/yr)	8.57		8.57		8.57	
Total Limited Potential to Emit (tons/yr)	68.5		68.5		68.5	

The No. 4 fuel oil usage and No. 2 fuel oil usage are computed by dividing the waste oil usage by a conversion factor of 0.4733 for No. 2 fuel oil and 0.500 for No. 4 fuel oil, based upon the emission factors for each.

HCl Limit

	Waste oil	Lead Emissions after Limit for HCl
Limited Fuel Throughput for SO2 (gallons)	799200	
HCl Emission factor (lbs/1,000 gal)	26.4	Lead Emission factor (lbs/1,000 gals) = 0.75
Limited Potential to Emit from the Dryer (tons/yr)	10.5	PTE Lead from Combustion (tons/yr) = 0.281
Required Limit (tons/yr)	9.90	PTE Lead from batch mixer (tons/yr) = 0.006
Limited Fuel Throughput for HCL (gallons)	750000	PTE Lead (tons/yr) = 0.287

Limited Fuel Throughput for HCl = (Required Limit (tons/yr) x 2,000 lbs/ton) x 1,000 gal/26.4 lbs of HCl

Production Limitation based on CO

0.75 Tons per year from processes other than dryer burner  
 98.3 Tons/yr dryer burner limit  
 196504.0 lbs/yr limit  
 0.400 lb/ton AP-42 emission factor for all fuels  
 491260 ton per year throughput limit

Ton per year throughput limit = ((Tons/yr dryer burner limit x 2,000 lbs/ton) / AP-42 emission factor (lb/ton asphalt))

PM, PM10 and NOx Limits

491260 ton per year limited throughput based on CO

PM (tons/yr)	PM10 (tons/yr)	NOx	
0.029	0.072	1.28	Heaters
68.2	8.77	0.000	Screening and Conveying, Including RAP System
0.434	0.152	0.000	Storage
<b>68.7</b>	<b>8.99</b>	<b>1.28</b>	Total from all units other than dryer burner and mixer
180	90.0	97.7	Required limit from dryer burner and mixer
Limited Potential to Emit (lbs/ton of asphalt processed)			
PM	PM10	NOx	
0.734	0.366	0.398	Limited potential to emit (lbs/ton of asphalt processed)

Limited PM and PM10 potential to emit (lbs/ton of asphalt processed) = (Required limit from dryer burner and mixer (tons/yr) x 2,000 lbs/ton)/(Ton per year limited throughput based on CO)

VOC Limit

Dryer/mixer

Limited Throughput for CO (tons/yr)	Worst-case VOC Emission factor (lb/ton)	PTE VOC (tons/yr)
491260	0.036	8.84
Heaters		0.114
Total other than Cutback and Emulsified		8.96
Required Limit from Cutback and Emulsified Asphalt		90.0
<b>Total Limited PTE</b>		<b>99.0</b>

Cutback and Emulsified Asphalt Limits

Type of binder	PTE VOC (tons/yr)	Adjustment Ratio	Limited on Solvent in the Binder (tons/12-months)
cutback - rapid cure	90.0	1.053	94.8
cutback - medium cure	90.0	1.429	128.7
cutback - slow cure	90.0	4.0	360.2
emulsified asphalt	90.0	2.155	194.0
other asphalt	90.0	40	3601.7

Potential to Emit of Source After Issuance (tons/yr)

	PM	PM10	SO2	NOx	VOC	CO	Lead	HCl	Total HAPs
Hot Oil Heaters	0.029	0.072	0.005	1.28	0.114	0.748	0.000	0.000	0.00
Batch Dryers and Mixers	190	90.0	68.5	97.7	8.84	98.3	0.287	9.90	24.3
Screening and Conveying	68.2	8.77	0.00	0.00	0.00	0.00	0.000	0.000	0.00
Storage	0.434	0.152	0.00	0.00	0.500	0.00	0.000	0.000	0.500
Cutback Asphalt	0.00	0.00	0.00	0.00	90.0	0.00	0.000	0.000	0.000
<b>Total</b>	<b>249</b>	<b>99.0</b>	<b>68.5</b>	<b>99.0</b>	<b>99.5</b>	<b>99.0</b>	<b>0.287</b>	<b>9.90</b>	<b>24.8</b>

Permit Limits

Asphalt Production 491260.0 tons/12-month period  
 Maximum Equivalent Fuel Usage (most restricted) 750000 gallons/12-month period  
 Cutback or Emulsified Asphalt (most restricted) 94.8 tons solvent/12-month period