



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
MC 61-53 IGCN 1003
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

TO: Interested Parties / Applicant

DATE: July 9, 2007

RE: Rieth-Riley Construction Co., Inc. / 039-22002-00665

FROM: Nisha Sizemore
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, Room 1049, 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.dot 03/23/06



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

Federally Enforceable State Operating Permit Renewal OFFICE OF AIR QUALITY

**Rieth-Riley Construction Co., Inc.
2500 West Lusher Avenue
Elkhart, Indiana 46517**

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

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

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

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

Operation Permit No.: F 039-22002-00665	
Issued by: <i>Original document signed by</i> Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: July 9, 2007 Expiration Date: July 9, 2012

TABLE OF CONTENTS

A. SOURCE SUMMARY.....	5
A.1 General Information [326 IAC 2-8-3(b)]	
A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]	
A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]	
A.4 FESOP Applicability [326 IAC 2-8-2]	
B. GENERAL CONDITIONS	7
B.1 Definitions [326 IAC 2-8-1]	
B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]	
B.3 Term of Conditions [326 IAC 2-1.1-9.5]	
B.4 Enforceability [326 IAC 2-8-6]	
B.5 Severability [326 IAC 2-8-4(4)]	
B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]	
B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]	
B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]	
B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]	
B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]	
B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]	
B.12 Emergency Provisions [326 IAC 2-8-12]	
B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]	
B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]	
B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]	
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]	
B.17 Permit Renewal [326 IAC 2-8-3(h)]	
B.18 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]	
B.19 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]	
B.20 Source Modification Requirement [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] [IC 13-30-3-1]	
B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]	
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]	
B.24 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]	
C. SOURCE OPERATION CONDITIONS	16
Emission Limitations and Standards [326 IAC 2-8-4(1)]	
C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]	
C.2 Overall Source Limit [326 IAC 2-8]	
C.3 Opacity [326 IAC 5-1]	
C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]	
C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]	
C.6 Fugitive Dust Emissions [326 IAC 6-4]	
C.7 Stack Height [326 IAC 1-7]	
C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]	
Testing Requirements [326 IAC 2-8-4(3)]	
C.9 Performance Testing [326 IAC 3-6]	
Compliance Requirements [326 IAC 2-1.1-11]	
C.10 Compliance Requirements [326 IAC 2-1.1-11]	

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

- C.11 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]
- C.12 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]
- C.13 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)]
[326 IAC 2-8-5(1)]

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

- C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]
- C.15 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]
- C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4]
[326 IAC 2-8-5]

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

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

Stratospheric Ozone Protection

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

D.1. EMISSIONS UNIT OPERATION CONDITIONS..... 23

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

- D.1.1 Particulate Matter (PM and PM₁₀) [326 IAC 2-8-4] [326 IAC 2-2]
- D.1.2 Carbon Monoxide (CO) [326 IAC 2-8-4] [326 IAC 2-2]
- D.1.3 Sulfur Dioxide (SO₂) [326 IAC 2-8-4] [326 IAC 2-2]
- D.1.4 Nitrogen Oxides (NO_x) [326 IAC 2-8-4] [326 IAC 2-3]
- D.1.5 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-2] [326 IAC 7-2-1]
- D.1.6 Volatile Organic Compounds (VOC) [326 IAC 2-8-4] [326 IAC 2-3]
- D.1.7 Particulate Matter (PM)
- D.1.8 Asphalt Paving Operations [326 IAC 8-5-2]
- D.1.9 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

Compliance Determination Requirements

- D.1.10 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]
- D.1.11 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 7-2-1]
- D.1.12 Particulate Control [326 IAC 2-8-6(6)]
- D.1.13 Volatile Organic Compounds (VOC)

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

- D.1.14 Visible Emissions Notations
- D.1.15 Parametric Monitoring
- D.1.16 Broken or Failed Bag Detection

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

- D.1.17 Record Keeping Requirements
- D.1.18 Reporting Requirements

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

- D.1.19 General Provisions Relating to New Source Performance Standards (NSPS) for Hot Mix Asphalt Facilities [326 IAC 12-1] [40 CFR 60, Subpart A] [40 CFR 60, Subpart I]
- D.1.20 New Source Performance Standards (NSPS) for Hot Mix Asphalt Facilities [40 CFR 60, Subpart I]

Certification Form	30
Emergency Occurrence Form	31
FESOP Quarterly Report Form	33
FESOP Quarterly Report Form	34
FESOP Quarterly Report Form	35
FESOP Quarterly Report Form	36
Quarterly Deviation and Compliance Monitoring Report Form	37

SECTION A SOURCE SUMMARY

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

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

Source Address:	2500 West Lusher Avenue, Elkhart, Indiana 46517
Mailing Address:	P.O. Box 477, Goshen, Indiana 46527-0477
General Source Phone Number:	(574) 875-5183
SIC Code:	2951
County Location:	Elkhart
Source Location Status:	Nonattainment for 8-hour ozone standard Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

- (a) One (1) batch mixer, modified in 1995, with a maximum capacity of 383 tons per hour, equipped with a baghouse for particulate control, and exhausting through stack SV1.
- (b) One (1) dryer burner, modified in 1995, with a maximum heat input capacity of 117 mmBtu/hr, firing waste oil as primary fuel, using natural gas, No. 2 fuel oil, No. 4 fuel oil, propane gas, and butane gas as backup fuels, and exhausting through stack SV1.
- (c) One (1) hot oil heater, constructed in 1991, with a maximum heat input capacity of 2.0 mmBtu/hr, firing natural gas as primary fuel, using butane gas and propane gas as backup fuels, and exhausting through stack SV2.
- (d) One (1) tank, identified as 20A, storing liquid asphalt, constructed in 1969, with a maximum capacity of 25,000 gallons, and exhausting through stack SV3.
- (e) Two (2) tanks, identified as 20B and 20C, storing liquid asphalt, each constructed in 1969, each with a maximum capacity of 12,500 gallons, and exhausting through stacks SV4 and SV5, respectively.
- (f) One (1) tank, identified as 21, for asphalt emulsion (AE-P), constructed in 1969, with a maximum capacity of 12,500 gallons, and exhausting through stack SV6.
- (g) One (1) tank, identified as 31, for tack (AE-T), constructed in 1969, with a maximum capacity of 12,500 gallons, and exhausting through stack SV7.
- (h) One (1) split tank, having two (2) chambers, with a maximum capacity 12,500 gallons for each chamber, identified as 19A and 19B, storing waste oil, No. 2, or No. 4 distillate oil, constructed in 1997, and exhausting through stacks SV8 and SV9, respectively.

- (i) Cold-mix cutback asphalt production.

Above units are considered an affected facility under 40 CFR 60, Subpart I.

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

This stationary source also includes the following insignificant activities:

- (a) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling tanks of automobiles, having a storage capacity less than or equal to 10,500 gallons.
- (b) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (c) The following VOC and HAP storage containers: vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.
- (d) A laboratory as defined in 326 IAC 2-7-1(21)(D).

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

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

SECTION B GENERAL CONDITIONS

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

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

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

-
- (a) This permit, F 039-22002-00665, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, 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)]

-
- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This

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

- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1)

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

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than April 15 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)]

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

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality,
Compliance Section), or
Telephone Number: 317-233-0178 (ask for Compliance Section)
Facsimile Number: 317-233-6865
Northern Regional Office phone: (574) 245-4870; fax: (574) 245-4877.

And

Northern Regional Office
220 W. Colfax Avenue., Ste 200
South Bend, Indiana 46601-1634

- (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 039-22002-00665 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][IC 13-30-3-1]

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

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

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

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

responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

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

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

(a) Pursuant to 326 IAC 2-8:

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

(b) 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 that the source's potential to emit does not exceed the above specified limits.

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

C.3 Opacity [326 IAC 5-1]

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

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

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

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

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

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

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

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

C.7 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 by using ambient air quality modeling pursuant to 326 IAC 1-7-4.

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

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or 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 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]

- (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]

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

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

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

Unless otherwise specified in this permit, 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]

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)]

(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 pressure gauge or other 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 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

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

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

-
- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
- (1) initial inspection and evaluation;
 - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
- (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
- (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

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

-
- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM,

OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

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

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

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

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

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

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

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:
- Indiana Department of Environmental Management
Compliance 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.
- (f) The Permittee shall make the information required to be documented and maintained in accordance with (c) in Section C- General Record Keeping Requirements available for

review upon a request for inspection by IDEM, OAQ. The general public may request this information from the IDEM, OAQ under 326 IAC 17.1.

Stratospheric Ozone Protection

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

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

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

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

- (a) One (1) batch mixer, modified in 1995, with a maximum capacity of 383 tons per hour, equipped with a baghouse for particulate control, and exhausting through stack SV1.
- (b) One (1) dryer burner, modified in 1995, with a maximum heat input capacity of 117 mmBtu/hr, firing waste oil as primary fuel, using natural gas, No. 2 fuel oil, No. 4 fuel oil, propane gas, and butane gas as backup fuels, and exhausting through stack SV1.
- (c) One (1) hot oil heater, constructed in 1991, with a maximum heat input capacity of 2.0 mmBtu/hr, firing natural gas as primary fuel, using butane gas and propane gas as backup fuels, and exhausting through stack SV2.
- (d) One (1) tank, identified as 20A, storing liquid asphalt, constructed in 1969, with a maximum capacity of 25,000 gallons, and exhausting through stack SV3.
- (e) Two (2) tanks, identified as 20B and 20C, storing liquid asphalt, each constructed in 1969, each with a maximum capacity of 12,500 gallons, and exhausting through stacks SV4 and SV5, respectively.
- (f) One (1) tank, identified as 21, for asphalt emulsion (AE-P), constructed in 1969, with a maximum capacity of 12,500 gallons, and exhausting through stack SV6.
- (g) One (1) tank, identified as 31, for tack (AE-T), constructed in 1969, with a maximum capacity of 12,500 gallons, and exhausting through stack SV7.
- (h) One (1) split tank, having two (2) chambers, with a maximum capacity 12,500 gallons for each chamber, identified as 19A and 19B, storing waste oil, No. 2, or No. 4 distillate oil, constructed in 1997, and exhausting through stacks SV8 and SV9, respectively.
- (i) Cold-mix cutback asphalt production.

Above units are considered an affected facility under 40 CFR 60, Subpart I.

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

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

D.1.1 Particulate Matter (PM and PM₁₀) [326 IAC 2-8-4] [326 IAC 2-2]

The PM and PM₁₀ emissions from the dryer and mixer shall not exceed 0.2056 pounds PM per ton and 0.1278 pounds PM₁₀ per ton of asphalt produced, and the amount of asphalt produced shall not exceed 1,000,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month. These limits in conjunction with PM and PM₁₀ from other emission units, shall limit the entire source PM emissions to less than two hundred fifty (250) tons per year and PM₁₀ emissions to less one hundred (100) tons per year and render 326 IAC 2-2 (PSD) not applicable for PM and PM₁₀ and 326 IAC 2-7 (Part 70) not applicable for PM₁₀.

D.1.2 Carbon Monoxide (CO) [326 IAC 2-8-4] [326 IAC 2-2]

The CO emissions from the dryer and mixer shall not exceed 0.1837 pounds CO per ton of asphalt produced, and the amount of asphalt produced shall not exceed 1,000,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Compliance with this limit in conjunction with CO emissions from other units, shall limit the entire source CO emissions to less than one hundred (100) tons per year and render 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD) not applicable.

D.1.3 Sulfur Dioxide (SO₂) [326 IAC 2-8-4] [326 IAC 2-2]

- (a) Pursuant to 326 IAC 2-8-4, the input of waste oil to the dryer/burner shall be limited to less than 1,867,290 gallons per twelve (12) consecutive month period.
- (b) The SO₂ emissions shall be limited to 107 lb/Kgal of waste oil burned, 0.60 lb/million cubic feet of natural gas burned, 71 lb/Kgal of No. 2 distillate oil burned, 75 lb/Kgal of No. 4 distillate oil burned, 0.02 lb/Kgal of butane burned, 0.02 lb/Kgal of propane burned.
- (c) For purposes of determining compliance based on SO₂ emissions, each gallon of No.2 distillate oil shall be equivalent to 0.6636 gallons of waste oil, each gallon of No.4 distillate oil shall be equivalent to 0.7010 gallons of waste oil, each gallon of propane shall be equivalent to 0.000187 gallons of waste oil, each gallon of butane shall be equivalent to 0.000187 gallons of waste oil, and each million cubic feet of natural gas shall be equivalent to 5.607 gallons of waste oil.

Compliance with these limits in conjunction with the potential to emit of SO₂ from the hot oil heater, shall limit the entire source SO₂ emissions to less than one hundred (100) tons per year, and shall render 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD) not applicable.

D.1.4 Nitrogen Oxides (NO_x) [326 IAC 2-8-4][326 IAC 2-3]

- (a) Pursuant to 326 IAC 2-8-4, the input of propane to the dryer/burner shall be limited to less than 10,378,947 gallons per twelve (12) consecutive month period.
- (b) The NO_x emissions shall be limited to 19 lb/Kgal of propane burned, 190 lb/million cubic feet of natural gas burned, 24 lb/Kgal of No. 2 distillate oil burned, 24 lb/Kgal of No. 4 distillate oil burned, 16 lb/Kgal of waste oil burned, 21 lb/Kgal of butane burned.
- (c) For purposes of determining compliance based on NO_x emissions, each gallon of distillate oil shall be equivalent to 1.263 gallons of propane, each gallon of No.4 distillate oil shall be equivalent to 1.263 gallons of propane, each gallon of butane shall be equivalent to 1.105 gallons of propane, each gallon of waste 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.

Compliance with these limits in conjunction with the potential to emit of NO_x from the hot oil heater, shall limit the entire source NO_x emissions to less than one hundred (100) tons per year, and shall render 326 IAC 2-7 (Part 70) and 326 IAC 2-3 (Emission Offset) not applicable.

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

- (a) Pursuant to 326 IAC 7-1.1-2, the sulfur content of the No. 2 and No. 4 distillate oils used in the dryer burner shall not exceed five tenths (0.5) pounds per mmBtu, with compliance demonstrated on a calendar month average.
- (b) Pursuant to 326 IAC 7-1.1-2, the sulfur content of the waste oil used in the dryer burner shall not exceed one and six tenths (1.6) pounds per mmBtu, (the equivalent of 1.062% sulfur content at a higher heating value of 0.142 MMBtu/gal and a maximum heat input rate of 117 million British thermal units per hour), with compliance demonstrated on a calendar month average.

D.1.6 Volatile Organic Compounds (VOC) [326 IAC 2-8-4] [326 IAC 2-3]

The usage of liquid binder in the production of cold mix cutback asphalt shall be limited to 1130.5 tons of liquid binder per twelve (12) consecutive month period, with compliance determined at the end of each month, and the daily average VOC content of the binder shall not exceed eight (8.0%) percent and the VOC evaporation rate shall be less than 62.3% by weight.

Compliance with these limits, in conjunction with VOC emissions from all other emission units at the source, shall ensure that the entire source VOC emissions are less than one hundred (100) tons per year, and shall render 326 IAC 2-7 (Part 70) and 326 IAC 2-3 (Emission Offset) not applicable.

D.1.7 Particulate Matter (PM)

Pursuant to FESOP 039-5488-00665, issued on December 9, 1996, the rate of addition of emulsified asphalt to the batch mixer shall be no greater than 7.1 pounds per second per ton of batch size.

D.1.8 Asphalt Paving Operations [326 IAC 8-5-2]

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

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

D.1.9 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 mixer/dryer burner and any control devices.

Compliance Determination Requirements

D.1.10 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

The Permittee shall perform PM, PM₁₀ and CO testing by July 21, 2010 in order to demonstrate compliance with Conditions D.1.1 and D.1.2 utilizing methods as approved by the Commissioner. The test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C – Performance Testing.

D.1.11 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 7-2-1]

Compliance with Condition D.1.5 shall be demonstrated on a thirty (30) day calendar-month average.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions of distillate oil and residual oil do not exceed five-tenths (0.5) and one and six-tenths (1.6) pounds per million British thermal units heat input respectively 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 117 million British thermal units per hour burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

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

D.1.12 Particulate Control [326 IAC 2-8-6(6)]

- (a) In order to comply with Condition D.1.1, the baghouses for PM and PM₁₀ control shall be in operation and control emissions from the mixer/dryer burner at all times that the mixer/dryer burner 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.1.13 Volatile Organic Compounds (VOC)

Compliance with VOC content in Condition D.1.6 shall be determined by obtaining copies of content of the liquid binder from manufacturers or testing according to Section C-Performance Testing or using methods as approved by the commissioner.

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

D.1.14 Visible Emissions Notations

- (a) Visible emission notations of the conveyers, material transfer points, and the mixer/dryer burner stack exhaust shall be performed at least 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) When an abnormal emission is observed, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. Failure to take response steps in accordance with Section C – Response to Excursions and Exceedances shall be considered a deviation from this permit.

D.1.15 Parametric Monitoring

- (a) The Permittee shall record the pressure drop across the baghouses used in conjunction with the mixer/dryer burner, at least once per day when the mixing/drying process 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 and Exceedances. A pressure reading that is outside of the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C – Response to Excursions and

Exceedances, shall be considered a deviation from this permit.

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

- (b) The inlet temperature to the baghouse shall be maintained within a range of 200-400 degrees Fahrenheit to prevent overheating of the bags and to prevent low temperatures from mudding up the bags. The operational parameters shall be monitored for indications of bag failure. The thermocouple at the inlet shall have a temperature switch which automatically shuts the burner off if the high end range is exceeded. When the inlet temperature reading is outside the above mentioned range, the Permittee shall take reasonable steps in accordance with Section C – Response to Excursions and Exceedances. A reading that is outside of the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C – Response to Excursions and Exceedances, shall be considered a deviation from this permit.

D.1.16 Broken or Failed Bag Detection

In the event that bag failure has been observed:

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 emission unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B – Emergency Provisions).

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

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

D.1.17 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.1 and D.1.2, the Permittee shall maintain records of the amount of asphalt produced per month.
- (b) To document compliance with the fuel usages, sulfur content, SO₂ and NO_x emission limit established in Conditions D.1.3, D.1.4 and D.1.5, the Permittee shall maintain records in accordance with (1) through (7) below. Records maintained for (1) through (7) shall be taken monthly and shall be complete and sufficient to establish compliance with fuel usages, sulfur content, SO₂ and NO_x emission limits established in Conditions D.1.3, D.1.4 and D.1.5:
- (1) Calendar dates covered in the compliance determination period;
 - (2) Daily fuel usages;
 - (3) Fuel usages of each fuel used and equivalent sulfur dioxide and nitrogen oxide emissions;
 - (4) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

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

- (5) Fuel supplier certifications;
 - (6) The name of the fuel supplier; and
 - (7) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
- (c) To document compliance with Conditions D.1.6 and D.1.8 the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limit established in Conditions D.1.6 and D.1.8:
- (1) Calendar dates covered in the compliance determination period;
 - (2) Average diluent content of the liquid binder;
 - (3) Amount of liquid binder used in the production of cold mix cutback asphalt, each month;
 - (4) Amount of VOC solvent used in the production of cold mix asphalt, and the amount of VOC emitted.
- (d) The Permittee shall maintain records sufficient to verify compliance with the procedures specified in Conditions D.1.7 and D.1.11.
- (e) To document compliance with Condition D.1.14, the Permittee shall maintain records of visible emission notations of the dryer/burner stack exhaust SV1 at least once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (i.e. the process did not operate that day).
- (f) To document compliance with Condition D.1.15, the Permittee shall maintain records of the pressure drop daily. 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, (i.e. the process did not operate that day).
- (g) All records shall be maintained in accordance with Section C – General Record Keeping Requirements, of this permit.

D.1.18 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1, D.1.2, D.1.3(a), D.1.4(a) and D.1.6 shall be submitted to the address listed in Section C – General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

D.1.19 General Provisions Relating to New Source Performance Standards (NSPS) for Hot Mix Asphalt Facilities [326 IAC 12-1] [40 CFR 60, Subpart A] [40 CFR 60, Subpart I]

The provisions of 40 CFR 60, Subpart A – General Provisions, that are incorporated by reference in 326 IAC 12-1, apply to this source, except when otherwise specified in 40 CFR 60, Subpart I.

D.1.20 New Source Performance Standards (NSPS) for Hot Mix Asphalt Facilities [40 CFR 60, Subpart I]

Pursuant to 40 CFR 60, Subpart I, the Permittee shall comply with the provisions of 40 CFR 60, Subpart I specified as follows:

§ 60.90 Applicability and designation of affected facility.

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

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

§ 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: 2500 West Lusher Avenue, Elkhart, Indiana 46517
Mailing Address: P.O. Box 477, Goshen, Indiana 46527-0477
FESOP Permit No.: F 039-22002-00665

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 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: 2500 West Lusher Avenue, Elkhart, Indiana 46517
Mailing Address: P.O. Box 477, Goshen, Indiana 46527-0477
FESOP Permit No.: F 039-22002-00665

This form consists of 2 pages

Page 1 of 2

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

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

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

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

Page 2 of 2

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

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

FESOP Quarterly Report

Source Name: Rieth-Riley Construction Co., Inc.
Source Address: 2500 West Lusher Avenue, Elkhart, Indiana 46517
Mailing Address: P.O. Box 477, Goshen, Indiana 46527-0477
FESOP Permit No.: F 039-22002-00665
Facility: Mixer and Dryer
Parameter: Amount of Asphalt Produced
Limit: 1,000,000 tons per twelve (12) month period with compliance determined at the end of each month

Month: _____ **Year:** _____

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

No deviation occurred in this month.

Deviation/s occurred in this month.

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: 2500 West Lusher Avenue, Elkhart, Indiana 46517
 Mailing Address: P.O. Box 477, Goshen, Indiana 46527-0477
 FESOP Permit No.: F 039-22002-00665
 Facility: Cutback Asphalt Production
 Parameter: Liquid binder usage
 Limit: 1130.5 tons per twelve (12) consecutive month period, with compliance determined at the end of each month

Month: _____ **Year:** _____

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

No deviation occurred in this month.

Deviation/s occurred in this month.

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**

FESOP Quarterly Report

Source Name: Rieth-Riley Construction Co., Inc.
 Source Address: 2500 West Lusher, Elkhart, Indiana 46517
 Mailing Address: P.O. Box 477, Goshen, Indiana 46527-0477
 FESOP No.: 039-22002-00665
 Facility: Dryer/Burner
 Parameter: Gallons of waste oil burned in the aggregate dryer (SO₂)
 Limit: 1,867,290 gallons of waste oil per twelve (12) consecutive month period, with compliance determined at the end of each month
 Where each gallon of No.2 distillate oil shall be equivalent to 0.6636 gallons of waste oil, each gallon of No.4 distillate oil shall be equivalent to 0.7010 gallons of waste oil, each gallon of propane shall be equivalent to 0.000187 gallons of waste oil, each gallon of butane shall be equivalent to 0.000187 gallons of waste oil, and each million cubic feet of natural gas shall be equivalent to 5.607 gallons of waste oil, equivalent to SO₂ emissions less than 99.9 tons per year.

Month: _____ **Year:** _____

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

- 9 No deviation occurred in this month.
- 9 Deviation/s occurred in this month.
 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**

FESOP Quarterly Report

Source Name: Rieth-Riley Construction Co., Inc.
 Source Address: 2500 West Lusher, Elkhart, Indiana 46517
 Mailing Address: P.O. Box 477, Goshen, Indiana 46527-0477
 FESOP No.: 039-22002-00665
 Facility: Dryer/Burner
 Parameter: Gallons of propane burned in the aggregate dryer (NO_x)
 Limit: 10,378,947 gallons of propane per twelve (12) consecutive month period, with compliance determined at the end of each month
 Where each gallon of No.2 distillate oil shall be equivalent to 1.263 gallons of propane, each gallon of No.4 distillate oil shall be equivalent to 1.263 gallons of propane, each gallon of butane shall be equivalent to 1.105 gallons of propane, each gallon of waste 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.

Month: _____ **Year:** _____

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

- 9 No deviation occurred in this month.
- 9 Deviation/s occurred in this month.
 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
 FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
 QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Rieth-Riley Construction Co., Inc.
 Source Address: 2500 West Lusher Avenue, Elkhart, Indiana 46517
 Mailing Address: P.O. Box 477, Goshen, Indiana 46527-0477
 FESOP Permit No.: F 039-22002-00665

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

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

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

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

Source Background and Description

Source Name:	Rieth-Riley Construction Co., Inc.
Source Location:	2500 West Lusher Avenue, Elkhart, Indiana 46517
County:	Elkhart
SIC Code:	2951
Operation Permit No.:	F039-14150-03173
Operation Permit Issuance Date:	August 20, 2001
Permit Renewal No.:	F039-22002-00665
Permit Reviewer:	L. Traivaranon/ E. Judson

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

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) One (1) batch mixer, modified in 1995, with a maximum capacity of 383 tons per hour, equipped with a baghouse for particulate control, and exhausting through stack SV1.
- (b) One (1) dryer burner, modified in 1995, with a maximum heat input capacity of 117 mmBtu/hr, firing waste oil as primary fuel, using natural gas, No. 2 fuel oil, No. 4 fuel oil, propane gas, and butane gas as backup fuels, and exhausting through stack SV1.
- (c) One (1) hot oil heater, constructed in 1991, with a maximum heat input capacity of 2.0 mmBtu/hr, firing natural gas as primary fuel, using butane gas and propane gas as backup fuels, and exhausting through stack SV2.
- (d) One (1) tank, identified as 20A, storing liquid asphalt, constructed in 1969, with a maximum capacity of 25,000 gallons, and exhausting through stack SV3.
- (e) Two (2) tanks, identified as 20B and 20C, storing liquid asphalt, each constructed in 1969, each with a maximum capacity of 12,500 gallons, and exhausting through stacks SV4 and SV5, respectively.
- (f) One (1) tank, identified as 21, for asphalt emulsion (AE-P), constructed in 1969, with a maximum capacity of 12,500 gallons, and exhausting through stack SV6.
- (g) One (1) tank, identified as 31, for tack (AE-T), constructed in 1969, with a maximum capacity of 12,500 gallons, and exhausting through stack SV7.

- (h) One (1) split tank, having two (2) chambers, with a maximum capacity 12,500 gallons for each chamber, identified as 19A and 19B, storing waste oil, No. 2, or No. 4 distillate oil, constructed in 1997, and exhausting through stacks SV8 and SV9, respectively.
- (i) Cold-mix cutback asphalt production.

Above units are considered an affected facility under 40 CFR 60, Subpart I.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted emission units operating at this source during this review process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling tanks of automobiles, having a storage capacity less than or equal to 10,500 gallons.
- (b) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (c) The following VOC and HAP storage containers: vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.
- (d) A laboratory as defined in 326 IAC 2-7-1(21)(D).

Existing Approvals

The source has been operating under the previous FESOP 039-14150-03173, issued on August 20, 2001, with an expiration date of August 20, 2006, and the following amendments:

- (a) AA 039-18792-03173, issued on July 13, 2004;
- (b) AA 039-19611-03173, issued on October 18, 2004.

The source Identification number was changed from 039-03173 to 039-00665 to indicate that this is a stationary source because this source has never been relocated during the term of the permit, F039-14150-03173, therefore it is not a portable source pursuant to the definition of 326 IAC 2-1.1-1(15).

All conditions from previous approvals were incorporated into this FESOP except the following:

- (a) The Particulate Matter limit under 326 IAC 6-3-2 (65.8 pounds per hour) from the batch mixer exhausting through stack SV1 was not incorporated into this permit. The batch mixer exhausting through stack SV1 is subject to 40 CFR 60, Subpart I, which limits PM emissions to 0.04 gr/dscf which is more stringent than the 326 IAC 6-3-2 limit, therefore, the requirements of 326 IAC 6-3-2 do not need to be included in this permit.
- (b) The Used Oil Management requirements, pursuant to 326 IAC 13, burned in the aggregate dryer were not incorporated into this permit. The used oil management is regulated by special waste and industrial waste rules, therefore, these requirements do not need to be included in this permit.

- (c) Baghouse Inspections requirements for quarterly inspections of the baghouse controlling the dryer/burner were not incorporated into this permit. The detail of baghouse inspections should be included in the routine control device inspection requirements in the applicable Preventive Maintenance Plan, therefore, this condition is not included as a separate condition in this permit.
- (d) The recordkeeping requirements pursuant to 40 CFR 60.110b, Subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels) were not incorporated into this permit because the 40 CFR 60.110, Subpart Kb was amended and no longer applies to the one (1) split tank, 19A/19B. (See Federal Rule Applicability.)
- (e) The source batch mixer capacity is 383 tons per hour which is equal to 3,355,080 tons per year and it emits 671 tons per year of CO (see Appendix A TSD page 1 and 15).

$$\text{Maximum capacity} = 383 \text{ tons/hr} * 8760 \text{ hr/yr} = 3,355,080 \text{ tons per year}$$

A throughput limit of 1,000,000 tons per year has been added in order to limit CO emissions below 100 tons per year. Based on that, the pounds per hour limit of PM and PM10 were changed to pounds per ton coupled with tons per year of asphalt produced.

FESOP 14150 included a liquid binder usage limit of 1929 tons per year which is equal to VOC emissions of 96.1 tons per year. This limit was adjusted to account for the following VOC emissions:

The hot oil heater VOC emissions = 0.182 tons per year (also included in FESOP 14150).
The Batch mixer and dryer VOC emissions = 18.0 tons per year (only the waste oil VOC emissions of 3.6 tons per year was included in the FESOP 14150)
Load out or Silo VOC emissions = 7.0 tons per year (not included in FESOP 14150)
Load out and Storage VOC emissions = 13.5 tons per year (not included in FESOP 14150)
Other insignificant activities VOC emissions = 5.0 tons per year (not included in FESOP 14150)

Therefore, the VOC emissions from cold mix production was adjusted to 56.32 tons per year, in order to ensure that VOC emissions from the source are less than 100 tons per year.

The liquid binder limit was determined as follows:

Liquid binder usage limit (tons/yr)

$$= \frac{56.32 \text{ tons of allowable VOC emissions}}{0.08 \text{ tons VOC/ton liquid binder} * 0.623 \text{ (fraction of VOC that evaporates)}}$$
$$= 1130.5 \text{ tons per year}$$

Enforcement Issue

There are no enforcement actions pending.

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 administratively complete FESOP renewal application for the purposes of this review was received on November 16, 2005.

Emission Calculations

See appendix A of this document for detailed emission calculations (Pages 1 through 15).

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source, excluding the emission limits that were contained in the previous FESOP.

Pollutant	Unrestricted Potential Emissions (tons/yr)
PM	53962.1
PM ₁₀	7612.2
SO ₂	386.2
VOC	> 100
CO	676.7
NO _x	107.7

HAPs	Unrestricted Potential Emissions (tons/yr)
Acetaldehyde	0.5
Benzene	0.5
Ethylbenzene	3.7
Formaldehyde	1.2
Quinone	0.5
Toluene	1.7
Xylene	4.5
Arsenic	--
Cadmium	--
Chromium	--
Manganese	--
Mercury	--
Nickel	--
Selenium	--
Total	< 25

Note: -- negligible

The potential to emit (as defined in 326 IAC 2-7-1(29)) PM₁₀, VOC, NO_x, CO and SO₂ are greater than 100 tons per year. Base on that, the source would be subject to the provisions of 326 IAC 2-7. The source will be issued a FESOP because the source will limit its emissions below the Title V levels.

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. Since the source has not constructed any new emission units, the source's potential to emit is based on the emission units included in the original FESOP.

Process/emission unit	Potential To Emit (tons/year)						HAPs	
	PM	PM-10	SO ₂	VOC	CO	NO _x		
Batch mixer Dryer	102.8 ⁽¹⁾	63.9 ⁽²⁾	99.9 ⁽²⁾	18.0	91.85 ⁽²⁾	98.6 ⁽²⁾	<10	
Load-out or Silo	0.5	0.5	--	7.0	2.3	--		
Loadout-yard/storage	1.0	1.0	--	13.5		--		
Cold-mix	--	--	--	56.3 ⁽²⁾	--	--		
Convey/handling	4.6	0.5	--	--	--	--		
Paved/unpaved Road	136	28.9	--	--	--	--		
Hot oil heater	0.043	0.067	0.005	0.182	0.736	1.34		
Other Insignificant	5.0	5.0	--	5.0	5.0	--		
Total Emissions	249.9	99.5	99.9	99.98	99.9	99.9		<25
Major source threshold	250	100	100	100	100	100		25

Note:

- (1) Maximum allowable emissions in order to comply with 326 IAC 2-2 (PSD).
- (2) Maximum allowable emissions in order to comply with 326 IAC 2-8 (FESOP).

County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM _{2.5}	Attainment
PM ₁₀	Attainment
SO ₂	Attainment
NO ₂	Attainment
8-hour Ozone	Nonattainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and nitrogen oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability for the Entire Source Section.
- (b) Elkhart County has been designated as unclassifiable or attainment for PM_{2.5}. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM_{2.5} emissions. Therefore, until U.S. EPA adopts specific provisions for PSD review for PM_{2.5} emissions, it has directed states to regulate PM₁₀ emissions as a surrogate for PM_{2.5} emissions. See the State Rule Applicability – Entire Source Section.
- (c) Elkhart County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the

requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the Source Section.

- (d) Fugitive Emissions
Although this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, there is an applicable New Source Performance Standard that was in effect on August 7, 1980 (40 CFR 60, Subpart I). Therefore, the fugitive emissions, are counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD and Emission Offset, Part 70, or FESOP Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	< 250
PM ₁₀	< 100
SO ₂	< 100
VOC	< 100
CO	< 100
NO _x	< 100
Single HAP	< 10
Combination HAP	< 25

- (a) This existing source is not a major stationary source under 326 IAC 2-2 because no attainment regulated pollutant is emitted at a rate of two hundred fifty (250) tons per year or greater and it is not in one of the 28 listed source categories.
- (b) This existing source is not a major stationary source under 326 IAC 2-3 because no non-attainment regulated pollutant is emitted at a rate of one hundred (100) tons per year or greater and it is not in one of the 28 listed source categories.
- (c) The source continues to limit each regulated criteria pollutant emissions to less than 100 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7 and a FESOP will be issued.

Federal Rule Applicability

- (a) 40 CFR 60, Subpart I – Standards of Performance for Hot Mix Asphalt Facilities
This hot mix asphalt production source is subject to this rule because it manufactures hot mix asphalt by heating and drying aggregate and mixing with asphalt cements. Nonapplicable portions of this NSPS will not be included in this permit. Therefore, the requirements of 40 CFR 60, Subpart I are as follows:

40 CFR 60.90(a)-(b)
40 CFR 60.91(a)
40 CFR 60.92(a)(1)-(2)
40 CFR 60.93 (a), (b)(1)-(2)

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

- (b) 40 CFR 60, Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984.
The one (1) split tank, identified as 19A/19B, with a capacity of 25,000 gallons, is not subject to this rule because, although it has a storage capacity that is greater than the applicable capacity of 75 cubic meters (19,812 gallons), the material stored in this split tank has a maximum true vapor pressure that is less than fifteen kilopascals (15 kPa). Therefore, the requirements of 40 CFR 60, Subpart Kb are not included in this permit.
- (c) 40 CFR 60, Subpart OOO – Standards of Performance for Nonmettalic Mineral Processing Plants
The hot batch-mix asphalt production source is not subject to this rule because facilities that are subject to 40 CFR 60, Subpart I are not subject to the provisions of Subpart OOO. Therefore, the requirements of 40 CFR 60, Subpart OOO are not included in this permit.
- (d) 40 CFR 60, Subpart UU – Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture
The hot batch-mix asphalt production source is not subject to this rule because this NSPS applies only to asphalt roofing plants, petroleum refineries and other asphalt processing plants that blow asphalt for the manufacture of asphalt products. This source does not manufacture roofing products, is not a petroleum refinery and does not blow asphalt. Therefore, the requirements of 40 CFR 60, Subpart UU are not included in this permit.
- (e) 40 CFR 60, Subpart UUU – Standards of Performance for Calciners and Dryers in Mineral Industries
The hot batch-mix asphalt production source is not subject to this rule because this NSPS applies only to sources that process or produce alumina, ball clay, bentonite, diatomite, feldspar, fire clay, fuller's earth, gypsum, industrial sand, kaolin, lightweight aggregate, magnesium compounds, perlite, roofing granules, talc, titanium dioxide, and vermiculite. This source does not process or produce any of these materials. Therefore, the requirements of 40 CFR 60, Subpart UUU are not included in this permit.
- (f) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 20 and 40 CFR Part 61, 63) included in this permit.

State Rule Applicability – Entire Source

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

This source was constructed in 1969, it is not one of the 28 listed source categories, and the PTE of PM, PM₁₀, VOC and SO₂ was greater than two hundred fifty (250) tons per year at that time. On December 9, 1996, the FESOP permit 039-5488-03173 was issued to limit emissions of all criteria pollutants to less than PSD thresholds. The FESOP renewal, F 039-14150-03173, was issued on August 20, 2001 and on November 16, 2005, the source submitted a permit renewal application to continue operating under the FESOP requirements. Therefore the requirements of 326 IAC 2-2 are not applicable.

The PM emissions from the mixer and dryer shall be limited to 0.2056 pounds PM per ton of asphalt produced, and the amount of asphalt produced shall not exceed 1,000,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This limits the entire source PM to less than two hundred and fifty (250) tons per year. Compliance with this limit renders 326 IAC 2-2 (PSD) not applicable.

326 IAC 2-8-4 (FESOP) and 326 IAC 2-7 (Operating Permit)

The amount of PM₁₀, VOC, CO, SO₂ and NO_x emissions shall be limited to less than one hundred (100) tons per year to render 326 IAC 2-7 (Operating Permit) not applicable. Therefore, the following requirements are necessary:

- (a) The PM₁₀ emissions from the mixer and dryer shall not exceed 0.1278 pounds PM₁₀ per ton of asphalt produced, and the amount of asphalt produced shall not exceed 1,000,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This limit in conjunction with PM₁₀ emissions from other units, shall limit the entire source PM₁₀ emissions to less than one hundred (100) tons per year.
- (b) The CO emissions from the mixer and dryer shall not exceed 0.1837 pounds CO per ton of asphalt produced, and the amount of asphalt produced shall not exceed 1,000,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This limit in conjunction with CO emissions from other units, shall limit the entire source CO emissions to less than one hundred (100) tons per year.
- (c) Pursuant to 326 IAC 2-8-4, the input of waste oil to the dryer/burner shall be limited to less than 1,867,290 gallons per twelve (12) consecutive month period.

The SO₂ emissions shall be limited to 107 lb/Kgal of waste oil burned, 0.60 lb/million cubic feet of natural gas burned, 71 lb/Kgal of No. 2 distillate oil burned, 75 lb/Kgal of No. 4 distillate oil burned, 0.02 lb/Kgal of butane burned, 0.02 lb/Kgal of propane burned.

For purposes of determining compliance based on SO₂ emissions, each gallon of No.2 distillate oil shall be equivalent to 0.6636 gallons of waste oil, each gallon of No.4 distillate oil shall be equivalent to 0.7010 gallons of waste oil, each gallon of propane shall be equivalent to 0.000187 gallons of waste oil, each gallon of butane shall be equivalent to 0.000187 gallons of waste oil, and each million cubic feet of natural gas shall be equivalent to 5.607 gallons of waste oil.

Compliance with these limits shall ensure that the entire source SO₂ emissions are less than one hundred (100) tons per year, and shall render 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD) not applicable.

- (d) Pursuant to 326 IAC 2-8-4, the input of propane to the dryer/burner shall be limited to less than 10,378,947 gallons per twelve (12) consecutive month period.

The NO_x emissions shall be limited to 19 lb/Kgal of propane burned, 190 lb/million cubic feet of natural gas burned, 24 lb/Kgal of No. 2 distillate oil burned, 24 lb/Kgal of No. 4 distillate oil burned, 16 lb/Kgal of waste oil burned, 21 lb/Kgal of butane burned.

For purposes of determining compliance with the NO_x emission limits, each gallon of distillate oil shall be equivalent to 1.263 gallons of propane, each gallon of No.4 distillate oil shall be equivalent to 1.263 gallons of propane, each gallon of butane shall be equivalent to 1.105 gallons of propane, each gallon of waste 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.

Compliance with these limits shall ensure that the entire source NO_x emissions are less than one hundred (100) tons per year, and shall render 326 IAC 2-7 (Part 70) and 326 IAC 2-3 (Emission Offset) not applicable.

- (e) The usage of liquid binder in the production of cold mix cutback asphalt shall be limited to 1130.5 tons of liquid binder per twelve (12) consecutive month period, with compliance

determined at the end of each month, and the daily average VOC content of the binder shall not exceed eight (8.0%) percent and the VOC evaporation rate shall be less than 62.3% by weight.

Compliance with these limits, in conjunction with VOC emissions from all other emission units at the source, shall ensure that the entire source VOC emissions are less than one hundred (100) tons per year.

- (f) The PTE of any single HAP and combined HAPs is less than 10 and 25 per year. Therefore, the requirements of 326 IAC 2-7 are not applicable.

326 IAC 2-3 (Emission Offset)

The potential volatile organic compound (VOC) and nitrogen oxide (NOx) emissions are limited to less than one hundred (100) tons per year pursuant to 326 IAC 2-8-4 (FESOP). Therefore, the requirements of 326 IAC 2-3 (Emission Offset) are not applicable.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The source potential to emit is less than ten (10) tons per year of any single HAP and less than twenty-five (25) tons per year of any combination of HAP. Therefore, the requirements of 326 IAC 2.4-1 are not applicable.

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting) because it is not operated under 326 IAC 2-7, Part 70 Permit Program, and it does not emit lead in the ambient air at levels equal to or greater than five (5) tons per year. Therefore, the Emission Reporting is not applicable.

326 IAC 6-4 (Fugitive Dust Emissions)

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

326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties)

This source is not subject to this rule because it is not located in Lake, Porter, Clark or Floyd County.

326 IAC 8-6-1 (Organic Solvent Emissions Limitations)

The source commenced operation prior to October 7, 1974, therefore, the requirements of 326 IAC 8-6-1 (Organic Solvent Emissions Limitations) are not applicable.

326 IAC 6.5-1 (Particulate Matter Limitations Except Lake County)

The source is not located in the counties of Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne, therefore, the source is not subject to the requirements of 326 IAC 6.5-1 (Particulate Matter Limitations Except Lake County).

State Rule Applicability – Individual Facilities

326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations)

- (a) The one (1) hot oil heater, is not subject to this rule because it does not have the potential to emit twenty-five (25) tons per year or ten (10) pounds per hour of sulfur dioxide (SO₂).
- (b) The potential to emit of sulfur dioxide (SO₂) of the dryer burner is greater than twenty-five (25) tons per year or ten (10) pounds per hour. Therefore, pursuant to 326 IAC 7-1.1-2 the following applies:
- (1) the levels of sulfur dioxide emissions from the combustion of No.2 distillate and No.4 distillate fuel oils not to exceed 0.5 pounds per million British thermal units

of heat input (the equivalent of 0.5% sulfur content at a higher heating value of 0.138 MMBtu/gal and a maximum heat input rate of 117 million British thermal units per hour).

- (2) the levels of sulfur dioxide emissions from the combustion of residual waste oil not to exceed 1.6 pounds per million British thermal units of heat input (the equivalent of 1.062% sulfur content at a higher heating value of 0.142 MMBtu/gal and a maximum heat input rate of 117 million British thermal units per hour).

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

The dryer burner is subject to this rule because the potential to emit of SO₂ is greater than twenty-five (25) tons per year. This rule requires the source to submit to the IDEM, OAQ, upon request, records of sulfur content, heat content, fuel consumption, and sulfur dioxide emission rates based on a calendar-month average.

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

This rule applies to any facility or source existing as of January 1, 1980. No person shall not cause or allow the use of cutback asphalt or asphalt emulsion containing more than seven percent (7%) oil distillate by volume of emulsion for any paving application except the following purposes:

- (1) penetrating prime coating
- (2) stockpile storage
- (3) application during the months of November, December, January, February and March.

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

The rule applies to source located in Clark, Floyd, Lake or Porter County. Therefore, the requirements are not applicable.

Testing Requirements

CO, PM and PM10 testing is required for the batch dryer/mixer exhausting through stack SV1 in order to assure compliance with 326 IAC 2-8 (FESOP) and 326 IAC 2-2 (PSD).

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less 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 requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

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

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

The batch mixer/dryer burner have applicable compliance monitoring conditions as specified below:

- (a) Visible emission notations of the mixer/burner stack exhaust shall be performed at least 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 emission is observed, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. Failure to take response steps in accordance with Section C – Response to Excursions and Exceedances shall be considered a deviation from this permit.
- (f) The Permittee shall record the pressure drop across the baghouse used in conjunction with the mixer/dryer burner, at least once per day when the mixing/burning process is in operation. When for any one reading, the pressure drop across the bag collector 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 and Exceedances. A pressure reading that is outside of the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C – Response to Excursions and Exceedances, shall be considered a deviation from this permit.
- (g) The inlet temperature to the baghouse shall be maintained within a range of 200-400 degrees Fahrenheit to prevent overheating of the bags and to prevent low temperatures from mudding up the bags. The operational parameters shall be monitored for indications of bag failure. The thermocouple at the inlet shall have a temperature switch which automatically shuts the burner off if the high end range is exceeded. When the inlet temperature reading is outside the above mentioned range, the Permittee shall take reasonable steps in accordance with Section C – Response to Excursions and Exceedances. A reading that is outside of the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C – Response to Excursions and Exceedances, shall be considered a deviation from this permit.
- (h) Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.
- (i) The instrument used for determining the pressure shall comply with Section C – Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

(j) Broken or Failed Bag Detection:

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 emission 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).

These monitoring conditions are necessary because the baghouse for the mixer/dryer burner must operate properly to ensure compliance with 40 CFR 60, Subpart I, 326 IAC 2-2 (PSD) and 326 IAC 2-8-4 (FESOP).

Conclusion

The operation of this hot batch-mix asphalt production source shall be subject to the conditions of FESOP 039-22002-00665.

Appendix A: Emissions Calculations

Company Name: Rieth-Riley Construction Co., Inc.
Address, City IN Zip: 2500 West Lusher Avenue, Elkhart, Indiana 46517
Permit Number: F039-22002-00665
Pit ID: 039-00665
Reviewer: Lek R. Traivaranon
Date: July 9, 2007

Aggregate drying, hot screen and mixer

The following calculations determine the amount of emissions created by aggregate drying, hot screen and mixer based on 8760 hours of use and EPA SCC #3-05-002-47 and AP 42, Ch 11.1:

P M:	32 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	53681.3 tons/yr
		2000 lbs/ton		
P M-10:	4.5 lbs/ton x	<u>383 tons/hr x</u>	<u>8760 hrs/yr =</u>	7548.9 tons/yr
		2000 lbs/ton		
CO:	0.4 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	671.0 tons/yr
		2000 lbs/ton		
VOC:	0.036 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	60.4 tons/yr
		2000 lbs/ton		
Lead:	3.30E-06 lbs/ton x	<u>383 tons/hr x</u>	<u>8760 hrs/yr =</u>	0.006 tons/yr
		2000 lbs/ton		
HAPS:				
Non-PAH-HAPs				
Acetaldehyde 75-07-0	3.2E-04 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	0.5 tons/yr
		2000 lbs/ton		
Benzene 71-43-2	2.8E-04 lbs/ton x	<u>383 tons/hr x</u>	<u>8760 hrs/yr =</u>	0.5 tons/yr
		2000 lbs/ton		
Ethylbenzene 100-41-4	2.2E-03 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	3.7 tons/yr
		2000 lbs/ton		
Formaldehyde 50-00-0	7.4E-04 lbs/ton x	<u>383 tons/hr x</u>	<u>8760 hrs/yr =</u>	1.2 tons/yr
		2000 lbs/ton		
Quinone 106-51-4	2.7E-04 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	0.5 tons/yr
		2000 lbs/ton		
Toluene 108-88-3	1.0E-03 lbs/ton x	<u>383 tons/hr x</u>	<u>8760 hrs/yr =</u>	1.7 tons/yr
		2000 lbs/ton		
Xylene 1330-20-7	2.7E-03 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	4.5 tons/yr
		2000 lbs/ton		
Total non-PAH HAPs	7.5E-03 lbs/ton			12.6 tons/yr
PAH-HAPs				
2-Methylnaphthalene 91-57-6	7.1E-05 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	1.2E-01 tons/yr
		2000 lbs/ton		
Acenaphthene 83-32-9	9.0E-07 lbs/ton x	<u>383 tons/hr x</u>	<u>8760 hrs/yr =</u>	1.5E-03 tons/yr
		2000 lbs/ton		
Acenaphthylene 208-96-8	5.8E-07 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	9.7E-04 tons/yr
		2000 lbs/ton		
Anthracene 120-12-7	2.1E-07 lbs/ton x	<u>383 tons/hr x</u>	<u>8760 hrs/yr =</u>	3.5E-04 tons/yr
		2000 lbs/ton		
Benzo(a)anthracene 56-55-3	4.6E-09 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	7.7E-06 tons/yr
		2000 lbs/ton		
Benzo(a)pyrene 50-32-8	3.1E-10 lbs/ton x	<u>383 tons/hr x</u>	<u>8760 hrs/yr =</u>	5.2E-07 tons/yr
		2000 lbs/ton		

Appendix A: Emissions Calculations

PAH-HAPs continue

Benzo(b)fluoranthene 205-99-2	9.4E-09 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	1.6E-05 tons/yr
		2000 lbs/ton		
Benzo(g,h,i)perylene 1-1-24-2	5.0E-10 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	8.4E-07 tons/yr
		2000 lbs/ton		
Benzo(k)fluoranthene 207-08-9	1.3E-08 lbs/ton x	<u>383 tons/hr x</u>	<u>8760 hrs/yr =</u>	2.2E-05 tons/yr
		2000 lbs/ton		
Chrysene 218-01-9	3.8E-09 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	6.4E-06 tons/yr
		2000 lbs/ton		
Dibenz(a,h)anthracene 53-70-3	9.5E-11 lbs/ton x	<u>383 tons/hr x</u>	<u>8760 hrs/yr =</u>	1.6E-07 tons/yr
		2000 lbs/ton		
Fluoranthene 206-44-0	1.6E-07 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	2.7E-04 tons/yr
		2000 lbs/ton		
Fluorene 86-73-7	1.6E-06 lbs/ton x	<u>383 tons/hr x</u>	<u>8760 hrs/yr =</u>	2.7E-03 tons/yr
		2000 lbs/ton		
Indeno(1,2,3-cd)pyrene 193-39-5	3.0E-10 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	5.0E-07 tons/yr
		2000 lbs/ton		
Naphthalene 91-20-3	3.6E-05 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	6.0E-02 tons/yr
		2000 lbs/ton		
Phenanthrene 85-01-8	3.7E-05 lbs/ton x	<u>383 tons/hr x</u>	<u>8760 hrs/yr =</u>	6.2E-02 tons/yr
		2000 lbs/ton		
Pyrene 129-00-0	6.2E-08 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	1.0E-04 tons/yr
		2000 lbs/ton		
Total PAH - HAPs	0.0077 lbs/ton			0.2 tons/yr

Metal HAPs

Arsenic	4.6E-07 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	7.7E-04 tons/yr
		2000 lbs/ton		
Barium	1.5E-06 lbs/ton x	<u>383 tons/hr x</u>	<u>8760 hrs/yr =</u>	2.5E-03 tons/yr
		2000 lbs/ton		
Beryllium	1.5E-07 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	2.5E-04 tons/yr
		2000 lbs/ton		
Cadmium	6.1E-07 lbs/ton x	<u>383 tons/hr x</u>	<u>8760 hrs/yr =</u>	1.0E-03 tons/yr
		2000 lbs/ton		
Chromium	5.7E-07 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	9.6E-04 tons/yr
		2000 lbs/ton		
Hexavalent chromium	4.8E-08 lbs/ton x	<u>383 tons/hr x</u>	<u>8760 hrs/yr =</u>	8.1E-05 tons/yr
		2000 lbs/ton		
Manganese	6.9E-06 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	1.2E-02 tons/yr
		2000 lbs/ton		
Mercury	4.1E-07 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	6.9E-04 tons/yr
		2000 lbs/ton		
Nickel	3.0E-06 lbs/ton x	<u>383 tons/hr x</u>	<u>8760 hrs/yr =</u>	5.0E-03 tons/yr
		2000 lbs/ton		
Selenium	4.9E-07 lbs/ton x	<u>383.0 tons/hr x</u>	<u>8760 hrs/yr =</u>	8.2E-04 tons/yr
		2000 lbs/ton		
Total Metal HAPs	1.4E-05 lbs/ton			2.4E-02 tons/yr

**Total HAP
Single HAP (Xylene)**

**12.9 tons/yr
4.5 tons/yr**

Appendix A: Emissions Calculations

Combustion Fuels-Burner

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>117.000 MMBtu/hr * 8760 hrs/yr</u>	* Ef (lbs/MMcf) (tons/yr)
	1000 Btu/cf * 2000 lbs/ton	
	P M: 1.9 lbs/MMcf =	<u>0.974</u> tons/yr
	P M-10: 7.6 lbs/MMcf =	<u>3.895</u> tons/yr
	S O x: 0.6 lbs/MMcf =	<u>0.307</u> tons/yr
Post-NSPS = 190	N O x: 190.0 lbs/MMcf =	<u>97.37</u> tons/yr
	V O C: 5.5 lbs/MMcf =	<u>2.819</u> tons/yr
	C O: 84.0 lbs/MMcf =	<u>43.047</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 @ 0.5 % sulfur, based on 8760 hours of use and AP-42, Tables 1.3-1, 1.3-2, 1.3-3

	Pollutant: <u>117.0 MMBtu/hr * 8760 hrs/yr</u>	* Ef (lbs/1000 gal) = (tons/yr)
	138000.0 Btu/gal * 2000 lbs/ton	
	P M: 2.0 lbs/1000 gal =	<u>7.427</u> tons/yr
	PM-10: 3.3 lbs/1000 gal =	<u>12.254</u> tons/yr
	S O x: 71.0 lbs/1000 gal =	<u>263.657</u> tons/yr
	N O x: 24.0 lbs/1000 gal =	<u>89.123</u> tons/yr
	V O C: 0.20 lbs/1000 gal =	<u>0.743</u> tons/yr
	C O: 5.0 lbs/1000 gal =	<u>18.567</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>117.0 MMBtu/hr * 8760 hrs/yr</u>	* Ef (lbs/1000 gal) = (tons/yr)
	138000.0 Btu/gal * 2000 lbs/ton	
	P M: 2.0 lbs/1000 gal =	<u>7.427</u> tons/yr
	PM-10: 3.3 lbs/1000 gal =	<u>12.254</u> tons/yr
	S O x: 75.0 lbs/1000 gal =	<u>278.511</u> tons/yr
	N O x: 24.0 lbs/1000 gal =	<u>89.123</u> tons/yr
	V O C: 0.20 lbs/1000 gal =	<u>0.743</u> tons/yr
	C O: 5.0 lbs/1000 gal =	<u>18.567</u> tons/yr

Appendix A: Emissions Calculations

Dryer Burner (waste oil/atomizing burner)

The following calculations determine the amount of emissions created by waste fuel oil @ 1.0 % sulfur, based on 8760 hours of use and AP-42 Chapter 1.11 1.000 % Ash
0.010 % Lead

Pollutant:	<u>117.0</u> MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	<u>142000.0</u> Btu/gal * 2000 lbs/ton	
P M:	66.0 lbs/1000 gal =	<u>238.186</u> tons/yr
P M-10:	57.0 lbs/1000 gal =	<u>205.706</u> tons/yr
S O x:	107.0 lbs/1000 gal =	<u>386.149</u> tons/yr
N O x:	16.0 lbs/1000 gal =	<u>57.742</u> tons/yr
V O C:	1.00 lbs/1000 gal =	<u>3.609</u> tons/yr
C O:	2.1 lbs/1000 gal =	<u>7.579</u> tons/yr

Dryer Burner (butane)

The following calculations determine the amount of emissions created by butane gas @ 0.5 grains sulfur per 100 cubic feet, based on 8760 hours of use and AP-42, Table 1.5-1

Pollutant:	<u>117.0</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>2.997</u> tons/yr
PM-10:	0.6 lbs/1000 gal =	<u>2.997</u> tons/yr
S O x:	0.0 lbs/1000 gal =	<u>0.090</u> tons/yr
N O x:	21.0 lbs/1000 gal =	<u>104.889</u> tons/yr
V O C:	0.26 lbs/1000 gal =	<u>1.299</u> tons/yr
C O:	3.6 lbs/1000 gal =	<u>17.981</u> tons/yr

Dryer Burner (propane)

The following calculations determine the amount of emissions created by propane gas @ 0.2 grains sulfur per 100 cubic feet, based on 8760 hours of use and AP-42, Table 1.5-1

Pollutant:	<u>117.0</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>3.360</u> tons/yr
PM-10:	0.6 lbs/1000 gal =	<u>3.360</u> tons/yr
S O x:	0.0 lbs/1000 gal =	<u>0.112</u> tons/yr
N O x:	19.0 lbs/1000 gal =	<u>106.412</u> tons/yr
V O C:	0.25 lbs/1000 gal =	<u>1.400</u> tons/yr
C O:	3.2 lbs/1000 gal =	<u>17.922</u> tons/yr

Appendix A: Emissions Calculations

FUEL USAGE LIMITATION and EQUIVALENCY: BASED ON NOx

FUEL USAGE LIMITATION FOR BURNER (propane)

$$\begin{aligned}
 \text{Limited NOx emissions for Propane} &= 98.6 \text{ tons/yr} \\
 \text{Emission factor (lb/1000 gallon) for Propane Combustion} &= 19.0 \frac{\text{lbs}}{1000 \text{ gal}} \\
 \text{Therefore, fuel (propane) usage limit} & \\
 &= \frac{98.6 \frac{\text{tons}}{\text{yr}} \times 2000 \frac{\text{lb}}{\text{ton}}}{19.0 \frac{\text{lb}}{1000 \text{ gal}}} \\
 &= 10,378,947 \text{ Gal/yr}
 \end{aligned}$$

Equivalency Determination:
 Equivalency of other fuel : Propane = Emission Factor of other fuel : Emission Factor of Propane
 Equivalency for other fuel = Emission Factor of other fuel divided by the Emission Factor of propane

Equivalency for Natural Gas:

$$1 \text{ MMcf of Natural Gas} = \frac{190.00 \text{ lbs NOx}}{\text{MMcf}} \div \frac{19 \text{ lb}}{1000 \text{ gal}} = 10,000 \text{ gal of Propane}$$

Equivalency for #2 Oil

$$1 \text{ gallon of #2 oil} = \frac{24.00 \text{ lbs NOx}}{1000 \text{ gal}} \div \frac{19 \text{ lb}}{1000 \text{ gal}} = 1.2632 \text{ gal of Propane}$$

Equivalency for #4 Oil

$$1 \text{ gallon of #4 oil} = \frac{24.00 \text{ lbs NOx}}{1000 \text{ gal}} \div \frac{19 \text{ lb}}{1000 \text{ gal}} = 1.2632 \text{ gal of Propane}$$

Equivalency for waste oil

$$1 \text{ gallon of waste oil} = \frac{16.00 \text{ lbs NOx}}{1000 \text{ gal}} \div \frac{19 \text{ lb}}{1000 \text{ gal}} = 0.8421 \text{ gal of Propane}$$

Equivalency for butane

$$1 \text{ gallon of butane} = \frac{21.00 \text{ lbs NOx}}{1000 \text{ gal}} \div \frac{19 \text{ lb}}{1000 \text{ gal}} = 1.1053 \text{ gal of Propane}$$

Appendix A: Emissions Calculations

FUEL USAGE LIMITATION and EQUIVALENCY: BASED ON SO2

FUEL USAGE LIMITATION FOR BURNER (Waste Oil)

Limited SO2 emissions for Waste Oil = 99.9 tons/yr

Emission factor (lb/1000 gallon) for Propane Combustion = 107.0 $\frac{\text{lbs}}{1000 \text{ gal}}$

Therefore, fuel (propane) usage limit

$$= \frac{99.9 \frac{\text{tons}}{\text{yr}} * 2000 \frac{\text{lb}}{\text{ton}}}{107.0 \frac{\text{lb}}{1000 \text{ gal}}}$$

= 1,867,290 Gal/yr

Equivalency Determination:
 Equivalency of other fuel : Waste Oil = Emission Factor of other fuel : Emission Factor of Waste Oil
 Equivalency for other fuel = Emission Factor of other fuel divided by the Emission Factor of Waste Oil

Equivalency for Natural Gas

$$1 \text{ MMcf of Natural Gas} = \frac{0.60 \text{ lbs SO}_2}{\text{MMcf}} / \frac{107 \text{ lb}}{1000 \text{ gal}} = 5.6075 \text{ gal of Waste Oil}$$

Equivalency for #2 Oil

$$1 \text{ gallon of #2 oil} = \frac{71.00 \text{ lbs SO}_2}{1000 \text{ gal}} / \frac{107 \text{ lb}}{1000 \text{ gal}} = 0.6636 \text{ gal of Waste Oil}$$

Equivalency for #4 Oil

$$1 \text{ gallon of #4 oil} = \frac{75.00 \text{ lbs SO}_2}{1000 \text{ gal}} / \frac{107 \text{ lb}}{1000 \text{ gal}} = 0.7009 \text{ gal of Waste Oil}$$

Equivalency for butane

$$1 \text{ gallon of butane} = \frac{0.02 \text{ lbs SO}_2}{1000 \text{ gal}} / \frac{107 \text{ lb}}{1000 \text{ gal}} = 0.000187 \text{ gal of Waste Oil}$$

Equivalency for Propane

$$1 \text{ gallon of propane} = \frac{0.02 \text{ lbs SO}_2}{1000 \text{ gal}} / \frac{107 \text{ lb}}{1000 \text{ gal}} = 0.000187 \text{ gal of Waste Oil}$$

Appendix A: Emissions Calculations

326 IAC 7 Sulfur Content Limitation

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> lb/1000 gal =	<u>0.486</u>
			<u>0.486</u> % to comply with 326 IAC 7

Sulfur content must be less than or equal to and to limit SO2 emissions to 99.9 tons per year or less.

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>
			<u>1.062</u> % to comply with 326 IAC 7

Sulfur content must be less than or equal to and to limit SO2 emissions to 99.9 tons per year or less.

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>150.0</u> lbs/1000 gal =	<u>0.460</u>
			<u>0.460</u> % to comply with 326 IAC 7

Sulfur content must be less than or equal to and to limit SO2 emissions to 99.9 tons per year or less.

Material 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

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

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

$$P M : \frac{0.003 \text{ lbs/ton} \times 383.00 \text{ tons/hr} \times 8760 \text{ hrs/yr}}{2000 \text{ lbs/ton}} = 4.647 \text{ tons/yr}$$

$$P M-10: 10\% \text{ of PM} = 0.465 \text{ tons/yr}$$

Appendix A: Emissions Calculations

Hot Oil Heater

Hot Oil Heater on Gas

(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

$$\text{Pollutant: } \frac{2.000 \text{ MMBtu/hr} * 8760 \text{ hrs/yr}}{1000 \text{ Btu/cf}} * \text{Ef (lbs/MMcf)} = (\text{tons/yr})$$

P M:	1.9 lbs/MMcf =	<u>0.017</u> tons/yr
P M-10:	7.6 lbs/MMcf =	<u>0.067</u> tons/yr
S O x:	0.6 lbs/MMcf =	<u>0.005</u> tons/yr
N O x:	100.0 lbs/MMcf =	<u>0.876</u> tons/yr
V O C:	5.5 lbs/MMcf =	<u>0.048</u> tons/yr
C O:	84.0 lbs/MMcf =	<u>0.736</u> tons/yr

Hot Oil Heater (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 Ch. 1.5, Table 1.5-1

$$\frac{2.000 \text{ MMBtu/hr} * 8760 \text{ hrs/yr}}{102600.0 \text{ Btu/gal} * 2000 \text{ lbs/ton}} * \text{Ef (lbs/1000 gal)} = (\text{tons/yr})$$

P M:	0.5 lbs/1000 gal =	<u>0.043</u> tons/yr
PM-10:	0.5 lbs/1000 gal =	<u>0.043</u> tons/yr
S O x:	0.02 lbs/1000 gal =	<u>0.002</u> tons/yr
N O x:	15.0 lbs/1000 gal =	<u>1.281</u> tons/yr
V O C:	0.60 lbs/1000 gal =	<u>0.051</u> tons/yr
C O:	2.1 lbs/1000 gal =	<u>0.179</u> tons/yr

Hot Oil Heater (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 Ch. 1.5, Table 1.5-1

$$\frac{2.000 \text{ MMBtu/hr} * 8760 \text{ hrs/yr}}{91500.0 \text{ Btu/gal} * 2000 \text{ lbs/ton}} * \text{Ef (lbs/1000 gal)} = (\text{tons/yr})$$

P M:	0.4 lbs/1000 gal =	<u>0.038</u> tons/yr
PM-10:	0.4 lbs/1000 gal =	<u>0.038</u> tons/yr
S O x:	0.02 lbs/1000 gal =	<u>0.002</u> tons/yr
N O x:	14.0 lbs/1000 gal =	<u>1.340</u> tons/yr
V O C:	1.90 lbs/1000 gal =	<u>0.182</u> tons/yr
C O:	3.2 lbs/1000 gal =	<u>0.306</u> tons/yr

Appendix A: Emissions Calculations

Load-Out

Throughput: 383 tons/hr

	Emission Factor in lb/ton product	Potential Emissions in ton/yr
Total PM* $EF = 0.000181 + 0.00141(-V)e^{((0.0251)(T+460) - 20.43)}$	Total PM* 0.0005	0.88
Organic PM** $EF = 0.00141(-V)e^{((0.0251)(T+460) - 20.43)}$	Organic PM 0.0003	0.6
TOC*** $EF = 0.0172(-V)e^{((0.0251)(T+460) - 20.43)}$	TOC 0.0042	7.0
CO $EF = 0.00558(-V)e^{((0.0251)(T+460) - 20.43)}$	CO 0.0013	2.3

Where:

V = -0.5
T = 325

Methodology

EF = Emission Factor in lb/ton product

V = asphalt volatility. The default value of "-0.5" was used.

T = HMA mix temperature in °F. The default temperature of 325°F was used.

Emission Factors are from AP 42, Table 11.1-14, (SCC 3-05-002-14) 3/04

*Total PM is assumed to be predominantly PM_{2.5} since emissions consist of condensed vapors.

**Extractable organic PM, as measured by EPA Method 315.

***TOC as propane, as measured with EPA Method 25A sampling train or equivalent sampling train.

Potential Emissions (ton/yr) = throughput (ton/hr) x emission factor (lb/ton) x 8760 hr/yr x 1 ton/2000 lb

Appendix A: Emissions Calculations

Load-Out and Storage

Throughput: 383 tons/hr
 Emission Factor for organic volatile-based compounds in lb/ton product: 0.004

Pollutant	CASRN ¹	Speciation Profile for Load-Out and Storage Emissions (Compound / TOC ²)	Speciation Profile for Asphalt Storage Tank Emissions (Compound / TOC ²)	Load-Out and Yard Emissions (ton/yr)	Asphalt Storage Tank Emissions (ton/yr)
VOC ³		94%	100%	6.5599	6.9786
Non-VOC/non-HAPs					
Methane	74-82-8	6.5%	0.26%	0.4536	0.0181
Acetone	67-64-1	0.046%	0.055%	0.0032	0.0038
Ethylene	74-85-1	0.71%	1.1%	0.0495	0.0768
Total non-VOC/non-HAPs		7.3%	1.4%	0.5094	0.0977
Volatile Organic HAPs					
Benzene	71-43-2	0.052%	0.032%	0.0036	ND
Bromomethane	74-83-9	0.0096%	0.0049%	0.0007	0.0003
2-Butanone	78-93-3	0.049%	0.039%	0.0034	0.0027
Carbon Disulfide	75-15-0	0.013%	0.016%	0.0009	ND
Chloroethane	75-00-3	0.00021%	0.0040%	0.0000	0.0003
Chloromethane	74-87-3	0.015%	0.023%	0.0010	0.0016
Cumene	92-82-8	0.11%	ND ⁴	0.0077	ND
Ethylbenzene	100-41-4	0.28%	0.038%	0.0195	0.0027
Formaldehyde	50-00-0	0.088%	0.69%	0.0061	0.0482
n-Hexane	100-54-3	0.15%	0.10%	0.0105	0.0070
Isocotane	540-84-1	0.0018%	0.00031%	0.0001	0.0000
Methylene Chloride	75-09-2	0.0% ⁵	0.00027%	0.0000	0.0000
MTBE	596899	0.0% ⁵	ND ⁴	0.0000	ND
Styrene	100-42-5	0.0073%	0.0054%	0.0005	0.0004
Tetrachloroethene	127-18-4	0.0077%	ND ⁴	0.0005	ND
Toluene	100-88-3	0.21%	0.062%	0.0147	0.0043
1,1,1-Trichloroethane	71-55-6	0.0% ⁵	ND ⁴	0.0000	ND
Trichloroethene	79-01-6	0.0% ⁵	ND ⁴	0.0000	ND
Trichlorofluoromethane	75-69-4	0.0013%	ND ⁴	0.0001	ND
m-/p-Xylene	1330-20-7	0.41%	0.2%	0.0286	0.0140
o-Xylene	95-47-6	0.08%	0.057%	0.0056	0.0040
Total volatile organic HAPs		1.5%	1.3%	0.1047	0.0907

Methodology

Emission Factors are from AP 42, Table 11.1-16, 3/04

¹Chemical Abstract Service Registry Number

²Emission factor for compound is determined by multiplying the percentage presented for the compound by the emission factor for total organic compounds (TOC) as determined from Table 11.1-14.

³The VOC percentages are equal to 100 percent of TOC minus the methane, acetone, methylene chloride, and 1,1,1-trichloroethane percentages.

⁴ND = Measured data below detection limits.

⁵Values presented as 0.0% had background concentrations higher than the capture efficiency-corrected measured concentration.

Emissions (ton/yr) = throughput, ton/hr * Emission Factor, lb/ton * 8760 hr/yr * 1 ton/2000 lb

Appendix A: Emissions Calculations

Load-Out and Storage

Throughput: 383 tons/hr
 Emission Factor for organic particulate-based compounds in lb/ton product: 0.0003

Pollutant	CASRN ¹	Speciation Profile for Load-Out and Yard Emissions ² (Compound / Organic PM ³)	Speciation Profile for Asphalt Storage Tank Emissions (Compound / Organic PM ³)	Load-Out and Yard Emissions (ton/yr)	Asphalt Storage Tank Emissions (ton/yr)
PAH ⁴ HAPs					
Acenaphthene	83-32-9	0.26%	0.47%	0.0015	0.0027
Acenaphthylene	208-96-8	0.028%	0.014%	0.0002	0.0001
Anthracene	120-1207	0.070%	0.13%	0.0004	0.0007
Benzo(a)anthracene	56-55-3	0.019%	0.056%	0.0001	0.0003
Benzo(b)fluoranthene	205-99-2	0.0076%	ND ⁵	0.0000	ND
Benzo(k)fluoranthene	207-08-9	0.0022%	ND ⁵	0.0000	ND
Benzo(g,h,i)perylene	191-24-2	0.0019%	ND ⁵	0.0000	ND
Benzo(a)pyrene	50-32-8	0.0023%	ND ⁵	0.0000	ND
Benzo(e)pyrene	192-97-2	0.0078%	0.0095%	0.0000	0.0001
Chrysene	218-01-9	0.103%	0.21%	0.0006	0.0012
Dibenz(a,h)anthracene	53-70-3	0.00037%	ND ⁵	0.0000	ND
Flouranthene	206-44-0	0.050%	0.15%	0.0003	0.0009
Flourene	86-73-7	0.77%	1.01%	0.0044	0.0058
Indeno(1,2,3-cd)pyrene	193-39-5	0.00047%	ND ⁵	0.0000	ND
2-Methylnaphthalene	91-57-6	2.38%	5.27%	0.0136	0.0301
Naphthalene	91-20-3	1.25%	1.82%	0.0071	0.0104
Perylene	198-55-0	0.022%	0.030%	0.0001	0.0002
Phenanthrene	85-01-8	0.81%	1.80%	0.0046	0.0103
Pyrene	129-00-0	0.15%	0.44%	0.0009	0.0025
Total PAH HAPs		5.93%	11.40%	0.0338	0.0650
Other semi-volatile HAPs					
Phenol		1.18%	ND ⁵	0.0067	ND

Methodology

Emission Factors are from AP 42, Table 11.1-15, 3/04

¹Chemical Abstract Service Registry Number

²Emissions from loaded trucks during the period between load-out and the time the truck departs the plant.

³Emission factor for compound is determined by multiplying the percentage presented for the compound by the emission factor for

⁴PAH = Polycyclic Aromatic Hydrocarbon.

⁵ND = Measured data below detection limits.

Emissions (ton/yr) = throughput, ton/hr * Emission Factor, lb/ton * 8760 hr/yr * 1 ton/2000 lb

Appendix A: Emissions Calculations

**** 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 11.2.1.

A. Tri-axle Truck

<u>3.25</u> trips/hr x				
<u>0.30</u> miles/roundtrip x				
8760 hrs/yr =		<u>8541.0</u> miles per year		
For PM	For PM-10			
8.36	$E_f = \{k \cdot [(s/12)^{0.8}] \cdot [(W/3)^b] / [(Mdry/0.2)^c] \cdot [(365-p)/365]$			
10	= 1.79 lb/mile			
4.8	where k = 2.6 for PM-10 (k=10 for PM-30 or TSP)			
0.5	s = 4.8 t content of unpaved roads			
0.4	b = 0.4 for PM-10 (b = 0.5 for PM-30 or TSP)			
21	c = 0.3 for PM-10 (c = 0.4 for PM-30 or TSP)			
0.2	W = 21 average vehicle weight			
125	Mdry = 0.2 content, % (default is 0.2 for dry conditions)			
	p = 125 0.254mm of precipitation (See Figure 13.2.2-1)			
	<u>8.36 lb/mi x 8541 mi/yr =</u>	PM	<u>35.69</u> tons/yr	
	2000 lb/ton			
	<u>1.79 lb/mi x 8541 mi/yr =</u>	PM-10	<u>7.64</u> tons/yr	
	2000 lb/ton			

B. Front End Loader

<u>46.9</u> trips/hr x				
<u>0.050</u> miles/roundtrip x				
8760 hrs/yr =		<u>20542.2</u> miles per year		
For PM	For PM-10			
10.79	$E_f = \{k \cdot [(s/12)^{0.8}] \cdot [(W/3)^b] / [(Mdry/0.2)^c] \cdot [(365-p)/365]$			
10	= 2.19 lb/mile			
4.8	where k = 2.6 for PM-10 (k=10 for PM-30 or TSP)			
0.5	s = 4.8 t content of unpaved roads			
0.4	b = 0.4 for PM-10 (b = 0.5 for PM-30 or TSP)			
35	c = 0.3 for PM-10 (c = 0.4 for PM-30 or TSP)			
0.2	W = 35 average vehicle weight			
125	Mdry = 0.2 content, % (default is 0.2 for dry conditions)			
	p = 125 0.254mm of precipitation (See Figure 13.2.2-1)			
	<u>10.79 lb/mi x 20542.2 mi/yr =</u>	PM	<u>110.83</u> tons/yr	
	2000 lb/ton			
	<u>2.19 lb/mi x 20542.2 mi/yr =</u>	PM-10	<u>22.54</u> tons/yr	
	2000 lb/ton			

C. Semi Truck

<u>2.6</u> trips/hr x				
<u>0.3</u> miles/roundtrip x				
8760 hrs/yr =		<u>6832.8</u> miles per year		
For PM	For PM-10			
9.21	$E_f = \{k \cdot [(s/12)^{0.8}] \cdot [(W/3)^b] / [(Mdry/0.2)^c] \cdot [(365-p)/365]$			
10	= 1.93 lb/mile			
4.8	where k = 2.6 for PM-10 (k=10 for PM-30 or TSP)			
0.5	s = 4.8 t content of unpaved roads			
0.4	b = 0.4 for PM-10 (b = 0.5 for PM-30 or TSP)			
25.5	c = 0.3 for PM-10 (c = 0.4 for PM-30 or TSP)			
0.2	W = 25.5 average vehicle weight			
125	Mdry = 0.2 content, % (default is 0.2 for dry conditions)			
	p = 125 0.254mm of precipitation (See Figure 13.2.2-1)			
	<u>9.21 lb/mi x 6832.8 mi/yr =</u>	PM	<u>31.47</u> tons/yr	
	2000 lb/ton			
	<u>1.93 lb/mi x 6832.8 mi/yr =</u>	PM-10	<u>6.61</u> tons/yr	
	2000 lb/ton			

Appendix A: Emissions Calculations

D. Misc Vehicles

6.5 trips/hr x
0.3 miles/roundtrip x
 8760 hrs/yr = 17082.0 miles per year

For PM	For PM-10
6.05	$E_f = \{k^*[(s/12)^{0.8}] * [(W/3)^b] / [(Mdry/0.2)^c]\} * [(365-p)/365]$
10	= 1.38 lb/mile
4.8	where k = 2.6 r for PM-10 (k=10 for PM-30 or TSP)
0.5	s = 4.8 t content of unpaved roads
0.4	b = 0.4 M-10 (b = 0.5 for PM-30 or TSP)
11.0	c = 0.3 M-10 (c = 0.4 for PM-30 or TSP)
0.2	W = 11.0 iverage vehicle weight
125	Mdry = 0.2 content, % (default is 0.2 for dry conditions)
	p = 125 .254mm of precipitation (See Figure 13.2.2-1)
	<u>6.05</u> lb/mi x <u>17082</u> mi/yr = <u>PM</u> <u>51.67</u> tons/yr
	2000 lb/ton
	<u>1.38</u> lb/mi x <u>17082</u> mi/yr = <u>PM-10</u> <u>11.80</u> tons/yr
	2000 lb/ton

E. Misc Vehicles

4.33 trips/hr x
0.3 miles/roundtrip x
 8760 hrs/yr = 11379.2 miles per year

For PM	For PM-10
7.30	$E_f = \{k^*[(s/12)^{0.8}] * [(W/3)^b] / [(Mdry/0.2)^c]\} * [(365-p)/365]$
10	= 1.60 lb/mile
4.8	where k = 2.6 r for PM-10 (k=10 for PM-30 or TSP)
0.5	s = 4.8 t content of unpaved roads
0.4	b = 0.4 M-10 (b = 0.5 for PM-30 or TSP)
16.0	c = 0.3 M-10 (c = 0.4 for PM-30 or TSP)
0.2	W = 16.0 iverage vehicle weight
125	Mdry = 0.2 content, % (default is 0.2 for dry conditions)
	p = 125 .254mm of precipitation (See Figure 13.2.2-1)
	<u>7.30</u> lb/mi x <u>11379.24</u> mi/yr = <u>PM</u> <u>41.51</u> tons/yr
	2000 lb/ton
	<u>1.60</u> lb/mi x <u>11379.24</u> mi/yr = <u>PM-10</u> <u>9.13</u> tons/yr
	2000 lb/ton

All Trucking

Total PM:	<u>271.17</u> tons/yr	50% control efficiency	After control	Total PM:	135.6 tons/yr
Total PM-10:	<u>57.71</u> tons/yr		After control	Total PM-10:	28.9 tons/yr

Appendix A: Emissions Calculations

** storage **

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.

$$\begin{aligned}
 E_f &= 1.7 \cdot (s/1.5) \cdot (365-p) / 235 \cdot (f/15) \\
 &= 1.74 \text{ lbs/acre/day for sand} \\
 &= 1.16 \text{ lbs/acre/day for stone} \\
 &= 1.16 \text{ lbs/acre/day for slag} \\
 &= 1.16 \text{ lbs/acre/day for gravel} \\
 &= 1.16 \text{ lbs/acre/day for RAP} \\
 \text{where } s &= 1.5 \text{ \% silt for sand} \\
 s &= 1 \text{ \% silt of stone} \\
 s &= 1 \text{ \% silt of slag} \\
 s &= 1 \text{ \% silt of gravel} \\
 s &= 1 \text{ \% silt for RAP} \\
 p &= 125 \text{ days of rain greater than or equal to 0.01 inches} \\
 f &= 15 \text{ \% of wind greater than or equal to 12 mph}
 \end{aligned}$$

$$\begin{aligned}
 E_p (\text{storage}) &= E_f \cdot sc \cdot (20 \text{ cuft/ton}) \cdot (365 \text{ days/yr}) \\
 &= (2000 \text{ lbs/ton}) \cdot (43560 \text{ sqft/acre}) \cdot (25 \text{ ft}) \\
 &= 0.204 \text{ tons/yr for sand} \\
 &= 0.543 \text{ tons/yr for stone} \\
 &= 0 \text{ tons/yr for slag} \\
 &= 0.272 \text{ tons/yr for gravel} \\
 &= 0.369 \text{ tons/yr for RAP} \\
 \text{Total PM:} &= 1.387 \text{ tons/yr}
 \end{aligned}$$

$$\begin{aligned}
 \text{where } sc &= 35,000 \text{ tons storage capacity for sand} \\
 sc &= 140,000 \text{ tons storage capacity for stone} \\
 sc &= 0,000 \text{ tons storage capacity for slag} \\
 sc &= 70,000 \text{ tons storage capacity for gravel} \\
 sc &= 95,000 \text{ tons storage capacity for RAP}
 \end{aligned}$$

$$\begin{aligned}
 \text{P M-10:} & \quad 35\% \text{ of PM} = 0.071 \text{ tons/yr for sand} \\
 & \quad 35\% \text{ of PM} = 0.19 \text{ tons/yr for stone} \\
 & \quad 35\% \text{ of PM} = 0 \text{ tons/yr for slag} \\
 & \quad 35\% \text{ of PM} = 0.095 \text{ tons/yr for gravel} \\
 & \quad 35\% \text{ of PM} = 0.129 \text{ tons/yr for RAP} \\
 \text{Total PM-10:} &= 0.485 \text{ tons/yr}
 \end{aligned}$$

Appendix A: Emissions Calculations

Company Name: Rieth-Riley Construction Co., Inc.
 Address, City IN Zip: 2500 West Lusher Avenue, Elkhart, Indiana 46517
 Permit Number: F039-22002-03173
 Plt ID: 039-03173
 Reviewer: Lek R. Traivaranon
 Date: July 9, 2007

Source Emissions after control

In order to comply with FESOP requirements, the source must limit the emissions as follows:

Aggregate drying, hot screen and mixer

P M: 0.2056 lbs/ton x $\frac{1,000,000 \text{ tons/yr}}{2000 \text{ lbs/ton}}$ = 102.8 tons/yr
 P M-10: 0.1278 lbs/ton x $\frac{1,000,000 \text{ tons/yr}}{2000 \text{ lbs/ton}}$ = 63.9 tons/yr
 CO: 0.1837 lbs/ton x $\frac{1,000,000 \text{ tons/yr}}{2000 \text{ lbs/ton}}$ = 91.85 tons/yr
 VOC: 0.036 lbs/ton x $\frac{1,000,000 \text{ tons/yr}}{2000 \text{ lbs/ton}}$ = 18.00 tons/yr

NOx: See page 5 of 15 of this Appendix A = 98.6 tons/yr or
 Propane = 10,378,947 gals/yr

SO2: See page 6 of 15 of this Appendix A = 99.9 tons/yr or
 Waste oil = 1,867,290 gals/yr

All Trucking

Total PM: 271.17 tons/yr x 50% = 135.6 tons/yr
 Total PM-10: 71.71 tons/yr x 50% = 35.9 tons/yr