



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: February 20, 2009

RE: Rieth-Riley Construction Co., Inc / 141-27073-00027

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

Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures
FNPER.dot12/03/07



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Edward J Clements
Rieth-Riley Construction Co., Inc,
PO Box 477
Goshen, IN 46527

February 20, 2009

Re: 141-27073-00027
First Significant Revision to
F141-22022-00027

Dear Mr. Clements:

Rieth-Riley Construction Co., Inc, was issued their Second Federally Enforceable State Operating Permit (FESOP) Renewal No. F141-22022-00027 on June 30, 2006 for a stationary hot mix asphalt production source located at 25200 State Road 23, South Bend, Indiana 46614.

On October 6, 2008, the Office of Air Quality (OAQ) received an application from the source requesting to:

1. replace their existing four hundred twenty-five (425) tons per hour (TPH) mixing drum with a four hundred fifty (450) TPH mixing drum;
2. replace their existing one hundred twenty-five (125) million British thermal units per hour (mmBtu/hr) hot oil heating system burner with a one hundred fifty (150) mmBtu/hr hot oil heating system burner;
3. replace their existing baghouse with a ninety thousand (90,000) actual cubic feet per minute (acfm) baghouse
4. install one (1) new thirty thousand (30,000) gallon liquid asphalt cement tank equipped with one (1), two (2.0) mmBtu/hr hot oil heating system burner;
5. revise the existing waste oil sulfur and chlorine content limitations listed in the permit, and add fuel usage limitations for their back up fuels to accommodate the replacement of the mixer and existing hot oil heating system burner, addition of the new hot oil heating system burner and updates to AP-42 emission factors; and
6. extend the Second FESOP Renewal permit term to ten (10) years.

The attached Technical Support Document (TSD) provides additional explanation of the changes to the source/permit. Pursuant to the provisions of 326 IAC 2-8-11.1, these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-8-11.1(f). Pursuant to the provisions of 326 IAC 2-8-11.1, a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Attached please find the entire revised permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Ms. Hannah Desrosiers, of my staff, at 317-234-5374 or 1-800-451-6027, and ask for extension 4-5374.

Sincerely,



Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

Attachments: technical support documents and revised permit

IC/hld

cc: File - St. Joseph County
St. Joseph County Health Department
U.S. EPA, Region V
Air Compliance Section
IDEM Northern Regional Office
Compliance Data Section
Technical Support and Modeling
Permits Administrative and Development
Billing, Licensing, and Training Section



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

**Rieth-Riley Construction Co., Inc,
25200 State Road 23
South Bend, Indiana 46614**

(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 provision of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; and 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

Operation Permit No.: F141-22022-00027	
Original Issued by: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: June 30, 2006 Expiration Date: June 30, 2016

First Significant Permit Revision No.: F141-27073-00027	
Issued by:  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: February 20, 2009 Expiration Date: June 30, 2016

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SECTION A SOURCE SUMMARY

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

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

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

Authorized individual:	Environmental Engineer
Source Address:	25200 State Road 23, South Bend, Indiana 46614
Mailing Address:	PO Box 477, Goshen, Indiana 46527
General Source Phone:	(574) 875-5183
SIC Code:	2951
Source Location Status:	St. Joseph Nonattainment for 8-hour Ozone Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD and Emission Offset Rules; Minor Source, Section 112 of the Clean Air Act

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) aggregate rotary dryer and drum hot-mix unit (dryer/mixer), identified as DRUM, approved for construction in 2009, with a maximum capacity of four hundred fifty (450) tons of asphalt per hour, processing slag in the aggregate mix, equipped with one (1) dryer/mixer burner, having a maximum heat input capacity of one hundred fifty (150) MMBtu per hour, firing waste oil as primary fuel, using No. 2 fuel oil, No. 4 fuel oil, natural gas, propane gas, and butane gas as backup fuels, equipped with a ninety thousand (90,000) actual cubic feet per minute (acfm) baghouse for particulate control and exhausting through Stack SV1.
- (b) One (1) hot oil heater, identified as 14A, constructed in 1988, with a maximum heat input capacity of 2.0 MMBtu per hour, firing No. 2 fuel oil as primary fuel, using butane gas and propane gas as backup fuels, and exhausting through Stack SV2.
- (c) One (1) hot oil heater, identified as 14B, approved for construction in 2009, with a maximum heat input capacity of two (2.0) MMBtu per hour, firing No. 2 fuel oil as primary fuel, using butane gas and propane gas as backup fuels, and exhausting through Stack SV10.
- (d) Two (2) tanks, identified as 13A and 13B, storing liquid asphalt, constructed in 1987, with a maximum capacity of 20,000 gallons each, and exhausting through Stacks SV5 and SV7.
- (e) One (1) tank, identified as 13C, storing liquid asphalt, constructed in 1965, with a maximum capacity 25,000 gallons, and exhausting through stack SV6.
- (f) One (1) tank for storing liquid asphalt, identified as 13D, approved for construction in 2008, with a maximum capacity of thirty thousand (30,000) gallons, and exhausting through Stack SV11.

- (g) One (1) tank, identified as 11, storing waste oil or No. 4 distillate oil, constructed in 1987, with a maximum capacity of 17,000 gallons, and exhausting through Stack SV8.
- (h) One (1) tank, identified as 12, storing No. 2 distillate oil, constructed in 1987, with a maximum capacity 25,000 gallons, and exhausting through stack SV9.
- (i) Cold-mix cutback asphalt production, constructed in 1988, with a maximum capacity of 372 tons of aggregate per hour.

Under 40 CFR 60, Subpart I, this is considered an affected facility.

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

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

- (a) Two (2) A.C. tank heaters, firing No. 2 fuel oil as primary fuel, firing propane gas and butane gas as backup fuels, with a maximum heat input capacity of 0.48 million British thermal units per hour, each.
- (b) The following VOC and HAP storage containers: vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids.

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 Permit No Defense [IC 13]

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.

B.2 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.3 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5]

- (a) This permit, F141-22022-00027, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue, in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

B.4 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.5 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.6 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.7 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.8 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.9 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 the "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.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 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.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

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

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
MC 61-53 IGCN 1003
100 North Senate Avenue
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, IDEM, OAQ, may be required to determine the compliance status of the source.

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

B.13 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 the "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.14 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 technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:
- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section) or,

Telephone No.: 317-233-0178 (ask for Compliance Section)
Facsimile No.: 317-233-6865
Northern Regional Office: 574-245-4875

- (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
MC 61-53 IGCN 1003
100 North Senate Avenue
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 the "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.15 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions established prior to F141-22022-00027 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.16 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 Provision), 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
MC 61-53 IGCN 1003
100 North Senate Avenue
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 need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "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.17 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 FESOP 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 the "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.18 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 the "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
Indianapolis, IN 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 needed to process the application.

B.19 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
Indianapolis, Indiana 46204-2251

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

(c) The Permittee may implement the 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.20 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without 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
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 emissions trades that are subject to 326 IAC 2-8-15(b) through (d). The Permittee shall make such records available, upon reasonable request, to 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.21 Permit Revision 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.22 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-17-3-2][IC13-30-3-1]

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

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

B.23 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
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require the certification by the "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.24 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 317-233-4320 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.25 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

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

C.1 Overall Source Limit [326 IAC 2-8]

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

(a) Pursuant to 326 IAC 2-8:

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

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

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

C.2 Opacity [326 IAC 5-1]

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

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 Open Burning [326 IAC 4-1] [IC 13-17-9]

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

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

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

C.5 Fugitive Dust Emissions [326 IAC 6-4]

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

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

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), a fugitive particulate matter emissions control plan shall be submitted within ninety (90) days after issuance of this permit.

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

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

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

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 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
MC 61-52 IGCN 1003
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The

notifications do not require a certification by the "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. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

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
MC 61-53 IGCN 1003
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "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 the "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 upon issuance of this permit. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

Unless otherwise specified in the approval for the new emissions unit, 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 instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

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

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

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

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) These ERPs shall be submitted for approval to:

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

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

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

- (c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAQ, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

C.15 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

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

C.16 Response to Excursions and 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;
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
 - (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

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

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the

Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred 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 the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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

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

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

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "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
MC 61-53 IGCN 1003
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

Stratospheric Ozone Protection

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

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

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

SECTION D.1

FACILITY OPERATION CONDITIONS

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

- (a) One (1) aggregate rotary dryer and drum hot-mix unit (dryer/mixer), identified as DRUM, approved for construction in 2009, with a maximum capacity of four hundred fifty (450) tons of asphalt per hour, processing slag in the aggregate mix, equipped with one (1) dryer/mixer burner, having a maximum heat input capacity of one hundred fifty (150) MMBtu per hour, firing waste oil as primary fuel, using No. 2 fuel oil, No. 4 fuel oil, natural gas, propane gas, and butane gas as backup fuels, equipped with a ninety thousand (90,000) actual cubic feet per minute (acfm) baghouse for particulate control and exhausting through Stack SV1.
- (b) One (1) hot oil heater, identified as 14A, constructed in 1988, with a maximum heat input capacity of 2.0 MMBtu per hour, firing No. 2 fuel oil as primary fuel, using butane gas and propane gas as backup fuels, and exhausting through Stack SV2.
- (c) One (1) hot oil heater, identified as 14B, approved for construction in 2009, with a maximum heat input capacity of two (2.0) MMBtu per hour, firing No. 2 fuel oil as primary fuel, using butane gas and propane gas as backup fuels, and exhausting through Stack SV10.
- (d) Two (2) tanks, identified as 13A and 13B, storing liquid asphalt, constructed in 1987, with a maximum capacity of 20,000 gallons each, and exhausting through Stacks SV5 and SV7.
- (e) One (1) tank, identified as 13C, storing liquid asphalt, constructed in 1965, with a maximum capacity 25,000 gallons, and exhausting through stack SV6.
- (f) One (1) tank for storing liquid asphalt, identified as 13D, approved for construction in 2008, with a maximum capacity of thirty thousand (30,000) gallons, and exhausting through Stack SV11.
- (g) One (1) tank, identified as 11, storing waste oil or No. 4 distillate oil, constructed in 1987, with a maximum capacity of 17,000 gallons, and exhausting through Stack SV8.
- (h) One (1) tank, identified as 12, storing No. 2 distillate oil, constructed in 1987, with a maximum capacity 25,000 gallons, and exhausting through stack SV9.
- (i) Cold-mix cutback asphalt production, constructed in 1988, with a maximum capacity of 372 tons of aggregate per hour.

Under 40 CFR 60, Subpart I, this is considered an affected facility.

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

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

D.1.1 Particulate Matter (PM) Limitation [326 IAC 2-2]

- (a) Pursuant to 326 IAC 2-8-4, the amount of asphalt processed shall not exceed 1,000,000 tons per three hundred sixty-five (365) consecutive day period, with compliance determined at the end of each month.
- (b) PM emissions from the dryer/mixer shall not exceed 0.233 pounds per ton of asphalt processed.

Compliance with these limits, combined with the potential to emit PM from all other emission units at this source, will limit the source-wide total potential to emit of PM to less than two hundred fifty

tons (250) per three hundred sixty-five (365) consecutive day period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.2 Particulate (PM10), Volatile Organic Compound (VOC) Carbon Monoxide (CO) and Sulfur Dioxide (SO2) Limitations [326 IAC 2-8-4] [326 IAC 2-2]

- (a) Pursuant to 326 IAC 2-8-4, the amount of asphalt processed shall not exceed 1,000,000 tons per three hundred sixty-five (365) consecutive day period, with compliance determined at the end of each month.
- (b) PM10 emissions from the dryer/mixer shall not exceed one hundred fifty-three ten-thousandths (0.153) pounds of PM10 per ton of asphalt produced.
- (c) VOC emissions from the dryer/mixer shall not exceed forty-nine ten-thousandths (0.049) pounds of VOC per ton of asphalt produced.
- (d) CO emissions from the dryer/mixer shall not exceed one hundred ninety thousandths (0.190) pounds of CO per ton of asphalt produced.
- (e) Pursuant to 326 IAC 2-8-4, the amount of slag used shall not exceed two hundred seventy thousand one hundred seventy-five (270,175) tons per three hundred sixty-five (365) consecutive day period, with compliance determined at the end of each month.
- (f) The slag shall have a sulfur content less than or equal to one and fifty hundredths percent (1.50%) by weight, with compliance demonstrated on a thirty (30) day calendar-month average.
- (g) SO2 emissions from the slag used in the dryer/mixer shall not exceed seventy-four hundredths (0.74) pounds of SO2 per ton of slag processed.

Compliance with these limits, combined with the PM10, VOC, CO, and SO2 emissions from all other units at this source, will limit source-wide PM10, VOC, CO, SO2 emissions, each, to less than one hundred (100) tons per three hundred sixty-five (365) consecutive day period. Compliance with these limits will render 326 IAC 2-7 (Part 70 Permit Program), and 326 IAC 2-2 (PSD), not applicable.

D.1.3 Fuel Limitations [326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-4.1]

The fuel combusted in the dryer/mixer burner and all other combustion equipment shall be limited as follows:

- (a) No. 2, and No. 4 fuel oils shall each have a sulfur content less than or equal to fifty hundredths percent (0.50%) by weight,
- (b) Waste oils shall have a sulfur content less than or equal to one percent (1.00%) by weight and a chlorine content less than or equal to forty hundredths percent (0.40%) by weight,
- (c) The HCl emissions from the dryer/mixer shall not exceed two hundred sixty-four hundred-thousandths (0.0264) pounds of HCl per gallon of waste oil burned, and
- (d) Single Fuel Usage Limitations:

When combusting only one type of fuel per three hundred sixty-five (365) consecutive day period in the dryer/mixer burner and all other combustion equipment, the usage of fuel shall be limited as follows:

- (1) Natural gas usage shall not exceed 691 million cubic feet per three hundred and sixty-five (365) consecutive day period, with compliance determined at the end of each day,

- (2) No. 2 fuel oil usage shall not exceed 2,262,000 gallons per three hundred and sixty-five (365) consecutive day period, with compliance determined at the end of each day,
- (3) No. 4 fuel oil usage shall not exceed 2,367,000 gallons per three hundred and sixty-five (365) consecutive day period, with compliance determined at the end of each day,
- (4) Propane usage shall not exceed 14,712,928 gallons per three hundred and sixty-five (365) consecutive day period, with compliance determined at the end of each day,
- (5) Butane usage shall not exceed 12,900,000 gallons per three hundred and sixty-five (365) consecutive day period, with compliance determined at the end of each day,
- (6) Waste oil usage shall be determined using the following equations:

$$U = W_A * S_A$$

$$U = W_A * Cl_A$$

where:

U = Waste oil usage;

W_A = actual gallons of waste oil used in the last three hundred sixty-five (365) days, with less than or equal to one percent (1.00%) by weight sulfur content and less than or equal to forty hundredths percent (0.40%) chlorine content;

S_A = actual percent (%) sulfur content of waste oil; and

Cl_A = actual percent (%) chlorine content of waste oil.

The limit on waste oil usage will be dictated by the sulfur content and by the chlorine content. However, waste oil usage shall in no case exceed 750,000 gallons at the maximum allowable sulfur content (one percent (1.00%)) and chlorine content (forty hundredths percent (0.40%)) per three hundred and sixty-five (365) consecutive day period, with compliance determined at the end of each day.

(e) Multiple Fuel Usage Limitation:

When combusting more than one fuel per three hundred sixty-five (365) consecutive day period in the dryer/mixer burner and all other combustion equipment, emissions from the dryer/mixer and all other combustion equipment shall be limited as follows:

- (1) Sulfur dioxide (SO₂) emissions from the dryer/mixer and all other combustion equipment shall be less than one hundred (100) tons per three hundred sixty-five (365) consecutive day period, with compliance determined at the end of each month;
- (2) Hydrogen Chloride (HCl) emissions from the dryer/mixer and all other combustion equipment shall be less than ten (10) tons per three hundred sixty-five (365) consecutive day period, with compliance determined at the end of each month; and
- (3) Nitrogen oxides (NO_x) emissions from the dryer/mixer and all other combustion equipment shall be less than one hundred (100) tons per three hundred sixty-five (365) consecutive day period, with compliance determined at the end of each month.

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

D.1.4 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-2]

- (a) Pursuant to 326 IAC 7-1.1-2, the sulfur content of the No. 2 and No. 4 distillate oils shall not exceed five tenth (0.5) pounds per MMBtu, which is equivalent to five tenths percent (0.5%) by weight. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.
- (b) Pursuant to 326 IAC 7-1.1-2, the sulfur content of the waste oil shall not exceed one and six tenths (1.6) pounds per MMBtu, which is equivalent to one and sixty-two thousandths percent (1.062%) by weight, with compliance demonstrated on a calendar month average.

D.1.5 Volatile Organic Compounds (VOC) [326 IAC 2-8-4] [326 IAC 2-2]

The usage of liquid binder in the production of cold mix cutback asphalt shall be limited such that VOC emissions do not exceed fifty-two and fifty hundredths (52.50) tons per 365 consecutive day period with compliance determined at the end of each day. Compliance with this limit renders 326 IAC 2-7 (Part 70) not applicable.

D.1.6 Volatile Organic Compounds (VOC) [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 or asphalt emulsion containing more than seven percent (7%) oil distillate by volume of emulsion for any paving application except the following purposes:

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

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

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the mixer/burner and any control devices.

Compliance Determination Requirements

D.1.8 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

- (a) Within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008, the Permittee shall perform PM2.5, PM and PM10 testing for the dryer/mixer, dryer/mixer burner and 90,000 acfm baghouse, in order to demonstrate compliance with Conditions D.1.1(b) and D.1.2(b), utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM10 and PM2.5, each, includes filterable and condensable PM. Testing shall be conducted in accordance with Section C-Performance Testing.
- (b) Within five (5) years from the issuance date of this revision (SPR 141-270073-00027), the Permittee shall perform SO2 testing for the dryer/mixer, in order to demonstrate compliance with Conditions D.1.2(f) and D.1.2(g), utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the

date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

D.1.9 Single Fuel and Slag Usage Limitations

- (a) In order to comply with Conditions D.1.2(e), D.1.2(f), and D.1.3(d) when adding slag to the aggregate mix, and when combusting waste oil in the dryer/mixer burner and all other combustion equipment, the Permittee shall limit slag usage, and waste oil usage in the dryer/mixer burner and all other combustion equipment, according to the following formulas:

- (1) Sulfur dioxide emission calculation

$$S = \frac{U(E_U) + L(E_L)}{2,000 \text{ lbs/ton}}$$

where:

S = tons of sulfur dioxide emissions for three hundred sixty-five (365) consecutive day period;

U = gallons of waste oil as defined in condition D.1.3(d)(6); and

L = tons of slag used in the last three hundred sixty-five (365) consecutive days, with less than or equal to one and fifty hundredths percent (1.50%) sulfur content;

Emission Factors for Sulfur Dioxide

E_U = one hundred forty-seven thousandths (0.147) pounds per gallon of waste oil.

E_L = seventy-four hundredths (0.74) pounds per ton of slag processed.

Compliance with this limit, combined with the SO₂ emissions from all other units at this source, will limit the source-wide SO₂ emissions to less than one hundred (100) tons per three hundred sixty-five (365) consecutive day period and shall render 326 IAC 2-7 (Part 70 Permit Program), and 326 IAC 2-2 (PSD), not applicable.

- (2) Hydrogen chloride emission calculation

$$\text{HCl} = \frac{U(E_{Cl})}{[2000 \text{ lbs/ ton}]}$$

where:

U = gallons of waste oil as defined in condition D.1.3(d)(6);

Emission Factors for Hydrogen Chloride

E_{Cl} = sixty-six thousandths (0.066) pounds per gallon of waste oil.

Compliance with this limit, combined with the HCl emissions from all other emission units at this source, will limit the source-wide HCl emissions to less than ten (10) tons per three hundred sixty-five (365) consecutive day period and total combined HAP emissions shall be limited to less than twenty-five (25) tons per three hundred sixty-five (365) consecutive day period, and render 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable.

D.1.10 Multiple Fuel and Slag Usage Limitations

- (a) In order to comply with Conditions D.1.2(e), D.1.2(g), and D.1.3(e) when adding slag to the aggregate mix, and when combusting more than one fuel per three hundred sixty-five (365) consecutive day period in the dryer/mixer burner and all other combustion

equipment, the Permittee shall limit slag usage, and fuel usage in the dryer/mixer burner and all other combustion equipment, according to the following formulas:

(1) Sulfur Dioxide emission calculation

$$S = \frac{G(E_G) + O(E_O) + F(E_F) + (P)(E_P) + B(E_B) + U(E_U) + L(E_L)}{2,000 \text{ lbs/ton}}$$

where:

S = tons of sulfur dioxide emissions for three hundred sixty-five (365) consecutive day period;

G = million cubic feet of natural gas used in last three hundred sixty-five (365) days;

O = gallons of No. 2 fuel oil used in last three hundred sixty-five (365) days, with less than or equal to fifty hundredths percent (0.50%) sulfur content;

F = gallons of No. 4 fuel oil used in last three hundred sixty-five (365) days, with less than or equal to fifty hundredths percent (0.50%) sulfur content;

P = gallons of propane used in the last three hundred sixty-five (365) days, with less than or equal to twenty thousandths (0.20) grains per one hundred (100) cubic feet of sulfur in content;

B = gallons of butane used in the last three hundred sixty-five (365) days, with less than or equal to twenty thousandths (0.20) grains per one hundred (100) cubic feet of sulfur in content;

U = gallons of waste oil as defined in condition D.1.3(d)(6);

L = tons of slag used in the last three hundred sixty-five (365) consecutive days, with less than or equal to one and fifty hundredths percent (1.50%) sulfur content.

Emission Factors for Sulfur Dioxide

E_G = six tenths (0.6) pounds per million cubic feet of natural gas;

E_O = seven hundred eighty-five hundred-thousandths (0.0785) pounds per gallon of No. 2 fuel oil;

E_F = seventy-five ten-thousandths (0.075) pounds per gallon of No. 4 fuel oil;

E_P = two millionths (0.00002) pounds per gallon of propane;

E_B = two millionths (0.00002) pounds per gallon of butane; and

E_U = one hundred forty-seven thousandths (0.147) pounds per gallon of waste oil.

E_L = seventy-four hundredths (0.74) pounds per ton of slag processed.

Compliance with these limits, combined with the SO₂ emissions from all other units at this source, will limit the source-wide SO₂ emissions to less than one hundred (100) tons per three hundred sixty-five (365) consecutive day period and shall render 326 IAC 2-7 (Part 70 Permit Program), and 326 IAC 2-2 (PSD), not applicable.

(2) Hydrogen chloride emission calculation

$$\text{HCl} = \frac{U(E_{Cl})}{[2000 \text{ lbs/ ton}]}$$

where:

U = gallons waste oil as defined in condition D.1.3(d)(6);

Emission Factors for Hydrogen Chloride

E_{Cl} = sixty-six thousandths (0.066) pounds per gallon of waste oil.

Compliance with this limit, combined with the HCl emissions from all other emission units at this source, will limit the source-wide HCl emissions to less than ten (10) tons per three hundred sixty-five (365) consecutive day period and total

combined HAP emissions shall be limited to less than twenty-five (25) tons per three hundred sixty-five (365) consecutive day period, and render 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable.

(3) Nitrogen oxides emission calculation

$$N = \frac{G(E_G) + O(E_O) + F(E_F) + P(E_P) + B(E_B) + U(E_U)}{2,000 \text{ lbs/ton}}$$

where:

N = tons of nitrogen oxides emissions for a three hundred sixty-five (365) consecutive day period;

G = million cubic feet of natural gas used in the last three hundred sixty-five (365) days;

O = gallons of No. 2 fuel oil used in last three hundred sixty-five (365) days;

F = gallons of No. 4 fuel oil used for last three hundred sixty-five (365) days;

P = gallons of propane used in the last three hundred sixty-five (365) days;

B = gallons of butane used in the last three hundred sixty-five (365) days; and

U = gallons waste oil as defined in condition D.1.3(d)(6);

Emission Factors for nitrogen oxides

E_G = two hundred eighty (280) pounds per million cubic feet of natural gas;

E_O = twenty-four ten-thousandths (0.024) pounds per gallon of No. 2 fuel oil;

E_F = forty-seven ten-thousandths (0.047) pounds per gallon of No. 4 fuel oil;

E_P = thirteen hundredths (0.013) pounds per gallon of propane;

E_B = fifteen hundredths (0.015) pounds per gallon of butane; and

E_U = nineteen ten-thousandths (0.019) pounds per gallon of waste oil.

Compliance with these limits, combined with the NO_x emissions from all other units at this source, will limit source-wide NO_x emissions to less than one hundred (100) tons per three hundred sixty-five (365) consecutive day period. Compliance with these limits will render 326 IAC 2-7 (Part 70 Permit Program), and 326 IAC 2-2 (PSD), not applicable.

D.1.11 Sulfur Dioxide (SO₂) Emissions and Sulfur Content

(a) Compliance with the slag limitations established in Conditions D.1.2(f) and D.1.2(g) shall be determined utilizing one of the following options. Pursuant to 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements), compliance shall be demonstrated on a thirty (30) day calendar-month average.

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

(2) Analyzing a sample of the slag delivery to determine the sulfur content of the slag, 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.

Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the one hundred fifty (150) 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, or other procedures approved by IDEM, OAQ.

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

- (b) Compliance with the fuel limitations established in Conditions D.1.3(a), D.1.3(b), and D.1.4 shall be determined utilizing one of the following options. Pursuant to 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements), compliance shall be demonstrated on a thirty (30) day calendar-month average.
- (1) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million British thermal units heat input by:
- (A) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
- (B) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
- (i) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
- (ii) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (2) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 125 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 (1) or (2) above shall not be refuted by evidence of compliance pursuant to the other method.

D.1.12 Hydrogen Chloride (HCl) Emissions and Chlorine Content

In order to comply with Conditions D.1.3(b) and D.1.3(c), the Permittee shall demonstrate that the chlorine content of the fuel used for the dryer/mixer burner all other fuel combustion equipment does not exceed forty hundredths of a percent (0.40%) by weight, when combusting waste oil, by providing a vendor analysis of each fuel delivery accompanied by a vendor certification.

D.1.13 Particulate Control [326 IAC 2-8-6(6)]

Pursuant to F 141-14093-00027, issued on August 21, 2001, and 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/burner at all times that the mixer/burner are in operation and exhausting to the outside atmosphere.

D.1.14 Volatile Organic Compounds (VOC)

The Permittee shall determine compliance with the VOC emissions limitation in condition D.1.5 based on the following equation: Emissions of VOC (tons) = Amount of diluent Used (tons) x Weight % VOC in diluent.

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

D.1.15 Visible Emissions Notations

- (a) Visible emission notations of the conveyers, material transfer points, and the mixer/burner stack exhaust shall be performed at least once per day during normal daylight operations when exhausting to the atmosphere. 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.

D.1.16 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouses used in conjunction with the mixer/burner, at least once per day when the mixing/burning process is in operation when venting to the atmosphere. 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.

D.1.17 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the 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)] [326 IAC 2-8-16]

D.1.18 Cutback Asphalt Production Rate [326 IAC 2-8-4][326 IAC 2-3]

To document compliance with Conditions D.1.5 and D.1.6, the Permittee shall maintain daily records at the source of the following values:

- (a) Amount of liquid binder used in the production of cold mix cutback asphalt; and
- (b) Average diluent content of the liquid binder.

D.1.19 Record Keeping Requirements[326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-3][326 IAC 7-1.1-2]
[326 IAC 7-2-1]

- (a) To document compliance with Conditions D.1.1, D.1.2(a), D.1.2(b), D.1.2(c), and D.1.2(d), the Permittee shall maintain records of the amount of asphalt produced per day.
- (b) To document compliance with Conditions D.1.2(e) the Permittee shall maintain records of the amount of slag used per day. For the annual slag limit, the compliance determination period is the most recent 365 day period.
- (c) To document compliance with Conditions D.1.2(f) and D.1.2(g), the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken daily and shall be complete and sufficient to establish compliance with the SO₂ emission limits established in Conditions D.1.2(f) and D.1.2(g). For the sulfur content limit, the compliance determination period is each calendar month.
 - (1) Calendar dates covered in the compliance determination period;
 - (2) Actual slag usage, sulfur content and equivalent sulfur dioxide emission rates for all slag used at the source per month;
 - (3) A certification, signed by the owner or operator, that the records of the slag supplier certifications represent all of the slag used during the period; and

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

- (4) Slag supplier certifications;
 - (5) The name of the slag supplier; and
 - (6) A statement from the slag supplier that certifies the sulfur content of the slag.
- (d) To document compliance with Conditions D.1.3 and D.1.4, the Permittee shall maintain records in accordance with (1) through (7) below. Records maintained for (1) through (7) shall be taken daily and shall be complete and sufficient to establish compliance with the SO₂, HCl and NO_x emission limits established in Conditions D.1.3 and D.1.4. For the annual fuel limits, the compliance determination period is the most recent 365 day period. For the sulfur content limit, the compliance determination period is each calendar month.
 - (1) Calendar dates covered in the compliance determination period;
 - (2) Actual fuel usage, sulfur content, heat content, and equivalent sulfur dioxide emission rates for each fuel used at the source per month;
 - (3) Actual waste oil usage, chlorine content, and equivalent hydrogen chloride (HCl) emission rate per month;
 - (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 No. 2 and No. 4 fuel oils, and the waste oil, and the chlorine content of waste oil.
- (e) To document compliance with Conditions D.1.3(e) and D.1.10 when combusting more than one fuel per three hundred sixty-five (365) consecutive day period in the dryer/mixer burner and all other combustion equipment, the Permittee shall maintain records of actual fuel usage and equivalent sulfur dioxide, hydrogen chloride, and nitrogen oxides emission rates for each fuel used at the source per month.
- (f) The Permittee shall maintain records sufficient to verify compliance with the procedures specified in Condition D.1.11 and D.1.12. Records shall be maintained for a period of five (5) years and shall be made available upon request by IDEM, OAQ.
- (g) To document compliance with Condition D.1.15, 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 (e.g., the plant did not operate that day).
- (h) To document compliance with Condition D.1.16, 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, (e.g., the dryer/mixer did not operate that day).
- (i) The Permittee shall maintain records of all recording/monitoring data and support information in accordance with Section C - General Record Keeping Requirements, of this permit. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

D.1.20 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1(a), D.1.1(b), D.1.2(a), D.1.2(b), D.1.2(c), D.1.2(d), D.1.2(e), D.1.2(g), D.1.3(d), D.1.3(e), D.1.4(a), D.1.4(b) D.1.5, D.1.9, and D.1.10 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.1.21 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.1.22 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: 25200 State Road 23, South Bend, Indiana 46614
Mailing Address: PO Box 477, Goshen, Indiana 46527
FESOP No.: F141-22022-00027

**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: 25200 State Road 23, South Bend, Indiana 46614
Mailing Address: PO Box 477, Goshen, Indiana 46527
FESOP No.: F141-22022-00027

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 Usage Report (Submit Report Quarterly)

Source Name: Rieth-Riley Construction Co., Inc.
 Source Address: 25200 State Road 23, South Bend, Indiana 46614
 Mailing Address: PO Box 477, Goshen, Indiana 46527
 FESOP No.: F141-22022-00027
 Facility: Mixer/burner
 Parameter: Amount of asphalt produced
 Limit: 1,000,000 tons per 365 consecutive day period with compliance determined at the end of each day.

Month: _____ Year: _____

Day	This day (tons)	Previous 364 days (tons)	365 day Total (tons)	Day	This day (tons)	Previous 364 days (tons)	365 day Total (tons)
1				17			
2				18			
3				19			
4				20			
5				21			
6				22			
7				23			
8				24			
9				25			
10				26			
11				27			
12				28			
13				29			
14				30			
15				31			
16							

- 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
Page 1 of 5

Source Name: Rieth-Riley Construction Co., Inc.
Source Location: 25200 State Road 23, South Bend, Indiana 46614
Mailing Address: PO Box 477, Goshen, Indiana 46527
FESOP No.: F141-27073-00027

Facilities: Dryer/mixer burner and all other combustion equipment

Parameters: **Fuel Usage and Sulfur Dioxide (SO₂) Emissions**

Limit: Sulfur dioxide (SO₂) emissions shall be less than 100 tons per 365 consecutive day period based on the following equation:

$$S = \frac{G(E_G) + O(E_O) + F(E_F) + (P)(E_P) + B(E_B) + U(E_U) + L(E_L)}{2,000 \text{ lbs/ton}}$$

where:

- S = tons of sulfur dioxide emissions for 365 consecutive day period;
- G = million cubic feet of natural gas used in last 365 days;
- O = gallons of No. 2 fuel oil used in last 365 days with less than or equal to 0.50% sulfur content;
- F = gallons of No. 4 fuel oil used in last 365 days with less than or equal to 0.50% sulfur content;
- P = gallons of propane used in the last 365 days with less than or equal to 0.20 grains per 100 cubic feet of sulfur content;
- B = gallons of butane used in the last 365 days with less than or equal to 0.20 grains per 100 cubic feet of sulfur content;
- U = gallons waste oil as defined in condition D.1.3(d)(6); and
- L = tons of slag used in the last 365 days with less than or equal to one and fifty hundredths percent (1.50%) sulfur content.

Emission Factors for Sulfur dioxide

- E_G = 0.6 pounds per million cubic feet of natural gas;
- E_O = 0.0785 pounds per gallon of No. 2 fuel oil;
- E_F = 0.075 pounds per gallon of No. 4 fuel oil;
- E_P = 0.00002 pounds per gallon of propane;
- E_B = 0.00002 pounds per gallon of butane; and
- E_U = 0.147 pounds per gallon of waste oil.
- E_L = 0.74 pounds per ton of slag processed.

QUARTER: _____ MONTH: _____ YEAR: _____

- 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.

FESOP Fuel Usage, Slag Usage, and Sulfur Dioxide (SO2) Emissions Reporting Form

QUARTER: _____ MONTH: _____ YEAR: _____

Day	Sulfur Content of Slag (%)	Slag				Total SO2 Emissions for All Fuels and Slag Used (N) (tons per 365 days)
		Column 1	Column 2	Column 1 + Column 2	Equation Results	
		Slag Usage This Day (tons)	Slag Usage Previous 364 days (tons)	Slag Usage 365 day Total (tons)	SO2 Emissions (tons per 365 days)	
1	≤ 1.50%					
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
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31						

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

FESOP Quarterly Report

Page 1 of 4

Source Name: Rieth-Riley Construction Co., Inc.
Source Location: 25200 State Road 23, South Bend, Indiana 46614
Mailing Address: PO Box 477, Goshen, Indiana 46527
FESOP No.: F141-27073-00027

Facilities: Dryer/mixer burner and all other combustion equipment

Parameters: **Fuel Usage and Nitrogen Oxides (NOx) Emissions**

Limit: NOx emissions shall be less than 100 tons per three hundred sixty-five (365) consecutive day period based on the following equation:

$$N = \frac{G(E_G) + O(E_O) + F(E_F) + P(E_P) + B(E_B) + U(E_U)}{2,000 \text{ lbs/ton}}$$

where:

N = tons of nitrogen oxide emissions for a 365 consecutive day period;
G = million cubic feet of natural gas used in the last 365 days;
O = gallons of No. 2 fuel oil used in last 365 days;
F = gallons of No. 4 fuel oil used for last 365 days;
P = gallons of propane used in the last 365 days;
B = gallons of butane used in the last 365 days; and
U = gallons used/waste oil as defined in condition D.1.3(d)(6).

Emission Factors for Nitrogen oxides

E_G = 280 pounds per million cubic feet of natural gas;
 E_O = 0.024 pounds per gallon of No. 2 fuel oil;
 E_F = 0.047 pounds per gallon of No. 4 fuel oil;
 E_P = 0.013 pounds per gallon of propane;
 E_B = 0.015 pounds per gallon of butane; and
 E_U = 0.019 pounds per gallon of used/waste oil.

QUARTER: _____ MONTH: _____ YEAR: _____

- 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

Page 1 of 2

Source Name: Rieth-Riley Construction Co., Inc.
Source Location: 25200 State Road 23, South Bend, Indiana 46614
Mailing Address: PO Box 477, Goshen, Indiana 46527
FESOP No.: F141-27073-00027

Facilities: Dryer/mixer burner and all other combustion equipment

Parameters: **Fuel Usage and Hydrogen Chloride (HCl) Emissions**

Limit: HCl emissions shall be less than 10 tons per three hundred sixty-five (365) consecutive day period based on the following equation:

$$\text{HCl} = \frac{U(E_{\text{Cl}})}{[2000 \text{ lbs/ ton}]}$$

where:

U = gallons used/waste oil as defined in condition D.1.3(d)(6).

Emission Factors for Hydrogen Chloride

$E_{\text{Cl}} = 0.066$ pounds per gallon of waste oil.

QUARTER: _____ MONTH: _____ YEAR: _____

- 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.

FESOP Fuel Usage and Hydrogen Chloride (HCL) Emissions Reporting Form Page 2 of 2

QUARTER: _____ MONTH: _____ YEAR: _____

Used/Waste Oil \leq 0.40 wt% chlorine					
Day	Chlorine Content of Fuel (%)	Column 1	Column 2	Column 1 + Column 2	Equation Results
		Fuel Usage This Day (gal)	Fuel Usage Previous 364 days (gal)	Fuel Usage 365 day Total (gal)	Total HCl Emissions from Waste Oil (tons per 365 days)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

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

FESOP Usage Report (Submit Report Quarterly)

Source Name: Rieth-Riley Construction Co., Inc.
 Source Address: 25200 State Road 23, South Bend, Indiana 46614
 Mailing Address: PO Box 477, Goshen, Indiana 46527
 FESOP No.: F141-22022-00027
 Facility: Cutback Asphalt Process
 Parameter: Volatile Organic Compound (VOC) emissions
 Limit: 52.50 tons of VOC emitted per 365 consecutive day period with compliance determined at the end of each day, where VOC emissions (tons) = Amount of diluent Used (tons) x Weight % VOC in diluent.

Month: _____ Year: _____

Day	This day (tons)	Previous 364 days (tons)	365 day Total (tons)	Day	This day (tons)	Previous 364 days (tons)	365 day Total (tons)
1				17			
2				18			
3				19			
4				20			
5				21			
6				22			
7				23			
8				24			
9				25			
10				26			
11				27			
12				28			
13				29			
14				30			
15				31			
16							

- 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**

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

Source Name: Rieth-Riley Construction Co., Inc.
Source Address: 25200 State Road 23, South Bend, Indiana 46614
Mailing Address: PO Box 477, Goshen, Indiana 46527
FESOP No.: F141-22022-00027

Months: _____ to _____ Year: _____

Page 1 of 2

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

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

Source Background and Description

Source Name:	Rieth-Riley Construction Co., Inc.
Source Location:	25200 State Road 23, South Bend, Indiana 46614
County:	St. Joseph
SIC Code:	2951
Operation Permit No.:	F 141-22022-00027
Operation Permit Issuance Date:	June 30, 2006
Significant Permit Revision No.:	F 141-27073-00027
Permit Reviewer:	Hannah L. Desrosiers

On January 03, 2009, the Office of Air Quality (OAQ) had a notice published in South Bend Tribune, South Bend, Indiana, stating that Rieth-Riley Construction Co., Inc. had applied for a significant permit revision of their Second FESOP Renewal to replace their existing four hundred twenty-five (425) tons per hour (TPH) mixing drum with a four hundred fifty (450) TPH mixing drum, replace their existing one hundred twenty-five (125) million British thermal units per hour (mmBtu/hr) hot oil heating system burner with a one hundred fifty (150) mmBtu/hr hot oil heating system burner, replace their existing baghouse with a ninety thousand (90,000) actual cubic feet per minute (acfm) baghouse, and to install one (1) new thirty thousand (30,000) gallon liquid asphalt cement tank equipped with one (1), two (2.0) mmBtu/hr hot oil heating system burner. Additionally, as a result of the replacement of the mixer and existing hot oil heating system burner, addition of the new hot oil heating system burner and updates to AP-42 emission factors, the source has applied to revise the waste oil sulfur and chlorine content limitations listed in the permit, and add fuel usage limitations for their back up fuels. Finally, the source has requested that their permit term be extended to ten (10) years.

The notice also stated that the OAQ proposed to issue the significant permit revision for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments and Responses

No comments were received during the public notice period.

Additional Changes

IDEM, OAQ has decided to make additional revisions to the permit. Since the OAQ prefers that all Technical Support Documents (TSDs) reflect the permit that was on public notice, no change will be made to the original TSD, or Appendix A of the TSD. This addendum is being used to document the indicated revisions as described below, with deleted language as ~~strikeouts~~ and new language **bolded**.

The following permit requirements and conditions have been revised and/or added as needed to account for additional SO₂ emissions generated by the addition of slag to the aggregate mix. Testing performed on similar operations at another Rieth-Riley facility has shown that slag emits higher SO₂ emissions than were previously accounted for. Emission Factors developed during testing were applied to the emissions from this source, as shown in ATSD Addendum A, and form the basis for the new SO₂ limitations.

1. The emission unit descriptions for the dryer/mixer unit have been revised in Sections A.2 and D.1 of the permit (pages 4 and 22 of 50) to include information pertaining to the use of slag in the aggregate mix, and an updated approval date for construction, as follows:

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) aggregate rotary dryer and drum hot-mix unit (dryer/mixer), identified as DRUM, approved for construction in ~~2009~~ 2008, with a maximum capacity of four hundred fifty (450) tons of asphalt per hour, **processing slag in the aggregate mix**, equipped with one (1) dryer/mixer burner, having a maximum heat input capacity of one hundred fifty (150) MMBtu per hour, firing waste oil as primary fuel, using No. 2 fuel oil, No. 4 fuel oil, natural gas, propane gas, and butane gas as backup fuels, equipped with a ninety thousand (90,000) actual cubic feet per minute (acfm) baghouse for particulate control and exhausting through Stack SV1.
- (c) One (1) hot oil heater, identified as 14B, approved for construction in ~~2009~~ 2008, with a maximum heat input capacity of two (2.0) MMBtu per hour, firing No. 2 fuel oil as primary fuel, using butane gas and propane gas as backup fuels, and exhausting through Stack SV10

SECTION D.1 FACILITY OPERATION CONDITIONS

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

- (a) One (1) aggregate rotary dryer and drum hot-mix unit (dryer/mixer), identified as DRUM, approved for construction in ~~2009~~ 2008, with a maximum capacity of four hundred fifty (450) tons of asphalt per hour, **processing slag in the aggregate mix**, equipped with one (1) dryer/mixer burner, having a maximum heat input capacity of one hundred fifty (150) MMBtu per hour, firing waste oil as primary fuel, using No. 2 fuel oil, No. 4 fuel oil, natural gas, propane gas, and butane gas as backup fuels, equipped with a ninety thousand (90,000) actual cubic feet per minute (acfm) baghouse for particulate control and exhausting through Stack SV1.
- (c) One (1) hot oil heater, identified as 14B, approved for construction in ~~2009~~ 2008, with a maximum heat input capacity of two (2.0) MMBtu per hour, firing No. 2 fuel oil as primary fuel, using butane gas and propane gas as backup fuels, and exhausting through Stack SV10

2. Slag usage (ton/yr) and emissions (lb/ton) limitations have been added to Section D.1.2 of the permit (page 23 of 50). Additionally, the existing PM10, VOC, and CO emission limitations in sections D.1.1(b), and D.1.2(a) through (d), and the waste oil definition found in section D.1.3(d)(6) have been corrected, as follows:

D.1.1 Particulate Matter (PM) Limitation [326 IAC 2-2]

- (b) PM emissions from the dryer/mixer shall ~~not exceed~~ **be less than two hundred thirty-three thousandths (0.233) pounds per ton of asphalt processed.**

D.1.2 Particulate (PM10), Volatile Organic Compound (VOC) and Carbon Monoxide (CO), and Sulfur Dioxide (SO2) Limitations [326 IAC 2-8-4] [326 IAC 2-2]

- (a) Pursuant to 326 IAC 2-8-4, the amount of asphalt processed shall not exceed 1,000,000 tons per three hundred sixty-five (365) consecutive day period, with compliance determined at the end of each month.
- (b) PM10 emissions from the dryer/mixer shall ~~not exceed~~ **be limited to less than one hundred fifty-three ten-thousandths (0.153) pounds of PM10 per ton of asphalt produced.**
- (c) VOC emissions from the dryer/mixer shall ~~not exceed~~ **limited to less than forty-nine ten-thousandths (0.049) pounds of VOC per ton of asphalt produced.**

- (d) CO emissions from the dryer/mixer shall ~~not exceed~~ be limited to less than one hundred ninety thousandths (0.190) pounds of CO per ton of asphalt produced.
- (e) **Pursuant to 326 IAC 2-8-4, the amount of slag used shall not exceed two hundred seventy thousand one hundred seventy-five (270,175) tons per three hundred sixty-five (365) consecutive day period, with compliance determined at the end of each month.**
- (f) **The slag shall have a sulfur content less than or equal to one and fifty hundredths percent (1.50%) by weight, with compliance demonstrated on a thirty (30) day calendar-month average.**
- (g) **SO2 emissions from the slag used in the dryer/mixer shall not exceed seventy-four hundredths (0.74) pounds of SO2 per ton of slag processed.**

Compliance with these limits, combined with the PM10, VOC, ~~and~~ CO, **and SO2** emissions from all other units at this source, will limit source-wide PM10, VOC, ~~and~~ CO, **and SO2** emissions, each, to less than one hundred (100) tons per three hundred sixty-five (365) consecutive day period. Compliance with these limits will render 326 IAC 2-7 (Part 70 Permit Program), and 326 IAC 2-2 (PSD), not applicable.

...

D.1.3 Fuel Limitations [326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-4.1]

The fuel combusted in the dryer/mixer burner and all other combustion equipment shall be limited as follows:

...

(d) Single Fuel Usage Limitations:

...

- (6) Waste oil usage shall be determined using the following equations:

$$U = W_A * S_A$$

$$U = W_A * Cl_A$$

where:

U = Waste oil usage

W_A = actual gallons of waste oil used in the last three hundred sixty-five (365) days, with less than **or equal to** one percent (1.00%) by weight sulfur content and less than forty hundredths percent (0.40%)chlorine content.

...

- 3. Compliance determination (including testing), recordkeeping and reporting requirements have been added to Sections D.1.8(b), D.1.9(a)(1), D1.10(a)(1), D.1.19(a) and D.1.20, of the permit (pages 25-27, 30 and 31 of 50). Additionally, the waste oil usage definition in Sections D.1.9(a)(1) and (2), and Sections D1.10(a)(1), (2) and (3) have been revised for clarification, as follows:

D.1.8 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

- (a) Within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008, the Permittee shall perform PM2.5, PM and PM10 testing for the dryer/mixer, dryer/mixer burner and 90,000 acfm baghouse, in order to demonstrate compliance with Conditions D.1.1(b) and D.1.2(b), utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM10 and PM2.5, each, includes filterable and condensable PM. Testing shall be conducted in accordance with Section C- Performance Testing.
- (b) **Within five (5) years from the issuance date of this revision (SPR 141-270073-00027),**

the Permittee shall perform SO₂ testing for the dryer/mixer, in order to demonstrate compliance with Conditions D.1.2(f) and D.1.2(g), utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

D.1.9 Single Fuel and Slag Usage Limitations

(a) In order to comply with Conditions **D.1.2(e), D.1.2(f), and D.1.3(d)** when **adding slag to the aggregate mix, and when** combusting waste oil in the dryer/mixer burner and all other combustion equipment, the Permittee shall limit **slag usage, and** waste oil usage in the dryer/mixer burner and all other combustion equipment, according to the following formulas:

(1) Sulfur dioxide emission calculation

$$S = \frac{U(E_U) + L(E_L)}{2,000 \text{ lbs/ton}}$$

where:

...

U = gallons of waste oil as defined in condition D.1.3(d)(6) used in the last three hundred sixty five (365) days, with less than or equal to one percent (1.00%) sulfur content; and

L = tons of slag used in the last three hundred sixty-five (365) consecutive days, with less than or equal to one and fifty hundredths percent (1.50%) sulfur content;

Emission Factors for Sulfur Dioxide

...

E_L = seventy-four hundredths (0.74) pounds per ton of slag processed.

...

(2) Hydrogen chloride emission calculation

...

where:

U = gallons waste oils as defined in condition D.1.3(d)(6) used in the last three hundred sixty five (365) days;

...

D.1.10 Multiple Fuel and Slag Usage Limitations

(a) In order to comply with Conditions **D.1.2(e), D.1.2(g), and D.1.3(e)** when **adding slag to the aggregate mix, and when** combusting more than one fuel per three hundred sixty-five (365) consecutive day period in the dryer/mixer burner and all other combustion equipment, the Permittee shall limit **slag usage, and** fuel usage in the dryer/mixer burner and all other combustion equipment, according to the following formulas:

(1) Sulfur Dioxide emission calculation

$$S = \frac{G(E_G) + O(E_O) + F(E_F) + (P)(E_P) + B(E_B) + U(E_U) + L(E_L)}{2,000 \text{ lbs/ton}}$$

where:

...

U = gallons of waste oil as defined in condition D.1.3(d)(6) used in the last three hundred sixty five (365) days, with less than or equal to one percent (1.00%) sulfur content; and

L = tons of slag used in the last three hundred sixty-five (365) consecutive

days, with less than or equal to one and fifty hundredths percent (1.50%) sulfur content.

Emission Factors for Sulfur Dioxide

...

E_L = seventy-four hundredths (0.74) pounds per ton of slag processed.

...

(2) Hydrogen chloride emission calculation

...

where:

U = gallons waste oils **as defined in condition D.1.3(d)(6)** ~~used in the last three hundred sixty five (365) days;~~

...

(3) Nitrogen oxides emission calculation

...

where:

U = gallons waste oils **as defined in condition D.1.3(d)(6)** ~~used in the last three hundred sixty five (365) days;~~

...

D.1.11 Sulfur Dioxide (SO₂) Emissions and Sulfur Content

(a) **Compliance with the slag limitations established in Conditions D.1.2(f) and D.1.2(g) shall be determined utilizing one of the following options. Pursuant to 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements), compliance shall be demonstrated on a thirty (30) day calendar-month average.**

(1) **Providing vendor analysis of slag delivered, if accompanied by a vendor certification; or**

(2) **Analyzing a sample of the slag delivery to determine the sulfur content of the slag, 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.**

Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the one hundred fifty (150) 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, or other procedures approved by IDEM, OAQ.

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

(b) **Compliance with the fuel limitations established in Conditions D.1.3(a), D.1.3(b), and D.1.4 shall be determined utilizing one of the following options. Pursuant to 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements), compliance shall be demonstrated on a thirty (30) day calendar-month average.**

(1a) **Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million British thermal units heat input by:**

(A4) **Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or**

(B2) **Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.**

- (iA) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
- (iiB) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (2b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 150 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 (1a) or (2b) above shall not be refuted by evidence of compliance pursuant to the other method.

...

D.1.19 Record Keeping Requirements[326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-3][326 IAC 7-1.1-2]
[326 IAC 7-2-1]

- (a) To document compliance with Conditions D.1.1, ~~and~~ **D.1.2(a), D.1.2(b), D.1.2(c), and D.1.2(d)**, the Permittee shall maintain records of the amount of asphalt produced per day.
- (b) **To document compliance with Conditions D.1.2(e) the Permittee shall maintain records of the amount of slag used per day. For the annual slag limit, the compliance determination period is the most recent 365 day period.**
- (c) **To document compliance with Conditions D.1.2(f) and D.1.2(g), the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken daily and shall be complete and sufficient to establish compliance with the SO₂ emission limits established in Conditions D.1.2(f) and D.1.2(g). For the sulfur content limit, the compliance determination period is each calendar month.**
 - (1) **Calendar dates covered in the compliance determination period;**
 - (2) **Actual slag usage, sulfur content and equivalent sulfur dioxide emission rates for all slag used at the source per month;**
 - (3) **A certification, signed by the owner or operator, that the records of the slag supplier certifications represent all of the slag used during the period; and**

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

- (4) **Slag supplier certifications;**
- (5) **The name of the slag supplier; and**
- (6) **A statement from the slag supplier that certifies the sulfur content of the slag.**

Note: All existing permit conditions have been renumbered accordingly.

...

D.1.20 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1(a), D.1.1(b), D.1.2(a), D.1.2(b), D.1.2(c), D.1.2(d), **D.1.2(e), D.1.2(g)**, D.1.3(d), D.1.3(e), D.1.4(a), D.1.4(b) D.1.5, D.1.9, and D.1.10 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).

...

4. Finally, the quarterly report forms have been updated to include slag usage, and correct the waste oil usage definition, as follows:

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

FESOP Quarterly Report
Page 1 of 54

Source Name: Rieth-Riley Construction Co., Inc.
Source Location: 25200 State Road 23, South Bend, Indiana 46614
Mailing Address: PO Box 477, Goshen, Indiana 46527
FESOP No.: F141-27073-00027

Facilities: Dryer/mixer burner and all other combustion equipment

Parameters: Fuel Usage and Sulfur Dioxide (SO₂) Emissions

Limit: Sulfur dioxide (SO₂) emissions shall be less than 100 tons per 365 consecutive day period based on the following equation:

$$S = \frac{G(E_G) + O(E_O) + F(E_F) + (P)(E_P) + B(E_B) + U(E_U) + L(E_L)}{2,000 \text{ lbs/ton}}$$

where:

- S = tons of sulfur dioxide emissions for 365 consecutive day period;
- G = million cubic feet of natural gas used in last 365 days;
- O = gallons of No. 2 fuel oil used in last 365 days with less than or equal to 0.50% sulfur content;
- F = gallons of No. 4 fuel oil used in last 365 days with less than or equal to 0.50% sulfur content;
- P = gallons of propane used in the last 365 days with less than or equal to 0.20 grains per 100 cubic feet of sulfur content;
- B = gallons of butane used in the last 365 days with less than or equal to 0.20 grains per 100 cubic feet of sulfur content; ~~and~~
- U = gallons of waste oil **as defined in condition D.1.3(d)(6)** ~~used in the last three hundred sixty five (365) days, with less than or equal to one percent (1.00%) sulfur content; and~~
- L = tons of slag used in the last 365 days with less than or equal to one and fifty hundredths percent (1.50%) sulfur content;**

Emission Factors for Sulfur dioxide

- E_G = 0.6 pounds per million cubic feet of natural gas;
- E_O = 0.0785 pounds per gallon of No. 2 fuel oil;
- E_F = 0.075 pounds per gallon of No. 4 fuel oil;
- E_P = 0.00002 pounds per gallon of propane;
- E_B = 0.00002 pounds per gallon of butane; ~~and~~
- E_U = 0.147 pounds per gallon of waste oil-; **and**
- E_L = 0.74 pounds per ton of slag processed.**

QUARTER: _____ MONTH: _____ YEAR: _____

- 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.

FESOP Fuel Usage, Slag Usage, and Sulfur Dioxide (SO2) Emissions Reporting Form

QUARTER: _____ MONTH: _____ YEAR: _____

Day	Slag					Total SO2 Emissions for All Fuels and Slag Used (N) (tons per 365 days)
	Column 1	Column 2	Column 1 + Column 2	Equation Results	Sulfur Content of Slag (%)	
	Slag Usage This Day (tons)	Slag Usage Previous 364 days (tons)	Slag Usage 365 day Total (tons)	SO2 Emissions (tons per 365 days)		
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16	≤ 1.50%					
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

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

FESOP Quarterly Report

Page 1 of 4

Source Name: Rieth-Riley Construction Co., Inc.
Source Location: 25200 State Road 23, South Bend, Indiana 46614
Mailing Address: PO Box 477, Goshen, Indiana 46527
FESOP No.: F141-27073-00027

Facilities: Dryer/mixer burner and all other combustion equipment

Parameters: **Fuel Usage and Nitrogen Oxides (NOx) Emissions**

Limit: NOx emissions shall be less than 100 tons per three hundred sixty-five (365) consecutive day period based on the following equation:

$$N = \frac{G(E_G) + O(E_O) + F(E_F) + P(E_P) + B(E_B) + U(E_U)}{2,000 \text{ lbs/ton}}$$

where:

N = tons of nitrogen oxide emissions for a 365 consecutive day period;
G = million cubic feet of natural gas used in the last 365 days;
O = gallons of No. 2 fuel oil used in last 365 days;
F = gallons of No. 4 fuel oil used for last 365 days;
P = gallons of propane used in the last 365 days;
B = gallons of butane used in the last 365 days; and
U = gallons of waste oils **as defined in condition D.1.3(d)(6)**
~~used in the last 365 days.~~

Emission Factors for Nitrogen oxides

E_G = 280 pounds per million cubic feet of natural gas;
 E_O = 0.024 pounds per gallon of No. 2 fuel oil;
 E_F = 0.047 pounds per gallon of No. 4 fuel oil;
 E_P = 0.013 pounds per gallon of propane;
 E_B = 0.015 pounds per gallon of butane; and
 E_U = 0.019 pounds per gallon of used/waste oil.

QUARTER: _____ MONTH: _____ YEAR: _____

- 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

Page 1 of 2

Source Name: Rieth-Riley Construction Co., Inc.
Source Location: 25200 State Road 23, South Bend, Indiana 46614
Mailing Address: PO Box 477, Goshen, Indiana 46527
FESOP No.: F141-27073-00027

Facilities: Dryer/mixer burner and all other combustion equipment

Parameters: **Fuel Usage and Hydrogen Chloride (HCl) Emissions**

Limit: HCl emissions shall be less than 10 tons per three hundred sixty-five (365) consecutive day period based on the following equation:

$$\text{HCl} = \frac{U(E_{\text{Cl}})}{[2000 \text{ lbs/ ton}]}$$

where:

U = gallons waste oils **as defined in condition D.1.3(d)(6)**
~~used in the 365 days~~

Emission Factors for Hydrogen Chloride

$E_{\text{Cl}} = 0.066$ pounds per gallon of waste oil.

QUARTER: _____ MONTH: _____ YEAR: _____

- 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.

IDEM Contact

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

**Appendix A: Emissions Calculations
Unlimited/Uncontrolled Emission Summary**

Company Name: Rieth-Riley Construction Co., Inc.
 Source Location: 25200 State Road 23, South Bend, Indiana 46614
 Permit Number: F 141-22022-00027
 Revision No.: F 141-27073-00027
 Reviewer: Hannah L. Desrosiers
 Date Submitted: October 6, 2008

Asphalt Plant Maximum Capacity

Maximum Hourly Asphalt Production =	450	ton/hr							
Maximum Annual Asphalt Production =	3,942,000	ton/yr							
Equivalent Annual Slag Usage =	1,655,640	ton/yr		1.50	% sulfur				
Maximum Fuel Input Rate =	155	MMBtu/hr	<i>Total input rate of all fuel combustion equipment combined (i.e., dryer burner, heaters, generators)</i>						
Equivalent Natural Gas Usage =	1,332	MMCF/yr							
Equivalent No. 2 Fuel Oil Usage =	9,510,857	gal/yr, and		0.50	% sulfur				
Equivalent No. 4 Fuel Oil Usage =	9,510,857	gal/yr, and		0.50	% sulfur				
Equivalent Propane Usage =	14,712,928	gal/yr, and		0.20	gr/100 ft ³ sulfur				
Equivalent Butane Usage =	13,670,637	gal/yr, and		0.20	gr/100 ft ³ sulfur				
Equivalent Used/Waste Oil Usage =	9,510,857	gal/yr, and		1.00	% sulfur	0.50	% ash	0.40	% chlorine,
								0.01	% lead

Unlimited/Uncontrolled Emissions

Process Description	Unlimited/Uncontrolled Potential to Emit (tons/year)							
	Criteria Pollutants					Hazardous Air Pollutants		
	PM	PM10	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Case HAP
Ducted Emissions								
Fuel Combustion (worst case)	310.35	247.31	712.85	227.92	7.67	58.55	133.71	128.02 (hydrogen chloride)
Dryer/Mixer	55,188.00	12,811.50	1,458.54	108.41	63.07	256.23	21.01	6.11 (formaldehyde)
Worst Case Emissions	55,188.00	12,811.50	1,458.54	227.92	63.07	256.23	133.71	128.02 (hydrogen chloride)
Fugitive Emissions								
Asphalt Load-Out, Silo Filling, On-Site Yard	2.18	2.18	0	0	33.76	5.68	0.56	0.17 (formaldehyde)
Hot Oil Heating System	0	0	0	0	4.1E-03	0.19	4.1E-03	2.6E-03 (naphthalene)
Material Storage Piles	0.50	0.17	0	0	0	0	0	0
Material Processing and Handling	12.73	6.02	0	0	0	0	0	0
Material Crushing, Screening, and Conveying	62.54	22.84	0	0	0	0	0	0
Paved and Unpaved Roads (worst case)	279.98	71.36	0	0	0	0	0	0
Cold Mix Asphalt Production	0	0	0	0	47,372.99	0	12,356.63	4,263.57 (xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	negl.	0	negl.	negl.
Total Fugitive Emissions	357.94	102.58	0	0	47,406.75	5.87	12,357.20	4,263.57 (xylenes)
Totals Unlimited/Uncontrolled PTE	55,545.94	12,914.08	1,458.54	227.92	47,469.82	262.10	12,490.91	4,263.57 (xylenes)

negl = negligible

**Appendix A: Emissions Calculations
Dryer/Mixer Process Emissions
Volatile Organic Compounds and Hazardous Air Pollutants**

Company Name: Rieth-Riley Construction Co., Inc.
Source Location: 25200 State Road 23, South Bend, Indiana 46614
Permit Number: F 141-22022-00027
Revision No.: F 141-27073-00027
Reviewer: Hannah L. Desrosiers
Date Submitted: October 6, 2008

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

Maximum Annual Asphalt Production = **3,942,000** ton/yr

Criteria Pollutant	Uncontrolled Emission Factors (lb/ton)				Unlimited/Uncontrolled Potential to Emit (tons/yr)				Worse Case PTE
	Drum-Mix Plant (dryer/mixer)				Drum-Mix Plant (dryer/mixer)				
	Natural Gas	No. 2 Fuel Oil	No. 6 Fuel Oil or Waste Oil	Slag *	Natural Gas	No. 2 Fuel Oil	No. 6 Fuel Oil or Waste Oil	Slag **	
PM	28	28	28	0	55,188.0	55,188.0	55,188.0	0	55,188.0
PM10	6.5	6.5	6.5	0	12,811.5	12,811.5	12,811.5	0	12,811.5
SO2	0.0034	0.011	0.058	0.74	6.7	21.7	114.3	1,458.5	1,458.5
NOx	0.026	0.055	0.055	0	51.2	108.4	108.4	0	108.4
VOC	0.032	0.032	0.032	0	63.1	63.1	63.1	0	63.1
CO	0.13	0.13	0.13	0	256.2	256.2	256.2	0	256.2
Hazardous Air Pollutant									
HCl	0	0	2.10E-04	0	0	0	4.14E-01	0	0.41
Antimony	1.80E-07	1.80E-07	1.80E-07	0	3.55E-04	3.55E-04	3.55E-04	0	3.55E-04
Arsenic	5.60E-07	5.60E-07	5.60E-07	0	1.10E-03	1.10E-03	1.10E-03	0	1.10E-03
Beryllium	negl	negl	negl	0	negl	negl	negl	0	0
Cadmium	4.10E-07	4.10E-07	4.10E-07	0	8.08E-04	8.08E-04	8.08E-04	0	8.08E-04
Chromium	5.50E-06	5.50E-06	5.50E-06	0	1.08E-02	1.08E-02	1.08E-02	0	0.01
Cobalt	2.60E-08	2.60E-08	2.60E-08	0	5.12E-05	5.12E-05	5.12E-05	0	5.12E-05
Lead	6.20E-07	1.50E-05	1.50E-05	0	1.22E-03	2.96E-02	2.96E-02	0	0.03
Manganese	7.70E-06	7.70E-06	7.70E-06	0	1.52E-02	1.52E-02	1.52E-02	0	0.02
Mercury	2.40E-07	2.60E-06	2.60E-06	0	4.73E-04	5.12E-03	5.12E-03	0	5.12E-03
Nickel	6.30E-05	6.30E-05	6.30E-05	0	0.12	0.12	0.12	0	0.12
Selenium	3.50E-07	3.50E-07	3.50E-07	0	6.90E-04	6.90E-04	6.90E-04	0	6.90E-04
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	0	0.08	0.08	0.08	0	0.08
Acetaldehyde	0	0	1.30E-03	0	0	0	2.56	0	2.56
Acrolein	0	0	2.60E-05	0	0	0	5.12E-02	0	0.05
Benzene	3.90E-04	3.90E-04	3.90E-04	0	0.77	0.77	0.77	0	0.77
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0	0.47	0.47	0.47	0	0.47
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	0	6.11	6.11	6.11	0	6.11
Hexane	9.20E-04	9.20E-04	9.20E-04	0	1.81	1.81	1.81	0	1.81
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0	0.09	0.09	0.09	0	0.09
MEK	0	0	2.00E-05	0	0	0	0.04	0	0.04
Propionaldehyde	0	0	1.30E-04	0	0	0	0.26	0	0.26
Quinone	0	0	1.60E-04	0	0	0	0.32	0	0.32
Toluene	1.50E-04	2.90E-03	2.90E-03	0	0.30	5.72	5.72	0	5.72
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0	0.37	1.73	1.73	0	1.73
Xylene	2.00E-04	2.00E-04	2.00E-04	0	0.39	0.39	0.39	0	0.39

Total HAPs 21.01
Worst Single HAP 6.11 (formaldehyde)

Methodology

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-3, 11.1-7, 11.1-8, 11.1-10, and 11.1-12

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

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

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

Abbreviations

VOC - Volatile Organic Compounds
HCl = Hydrogen Chloride
SO2 = Sulfur Dioxide

HAP = Hazardous Air Pollutant
PAH = Polyaromatic Hydrocarbon

Appendix A: Emissions Calculations
Limited Emission Summary

Company Name: Rieth-Riley Construction Co., Inc.
 Source Location: 25200 State Road 23, South Bend, Indiana 46614
 Permit Number: F 141-22022-00027
 Revision No.: F 141-27073-00027
 Reviewer: Hannah L. Desrosiers
 Date Submitted: October 6, 2008

Asphalt Plant Limitations

Annual Asphalt Production Limitation =	1,000,000	ton/yr	<i>value set in order to limit source-wide CO to less than 100 tons/year</i>		
Slag Usage Limitation* =	270,175	ton/yr	1.50	% sulfur	* assumes that 42% of aggregate used in mix is slag.
Natural Gas Limitation =	691	MMCF/yr			
No. 2 Fuel Oil Limitation =	2,262,000	gal/yr, and	0.50	% sulfur	
No. 4 Fuel Oil Limitation =	2,367,000	gal/yr, and	0.50	% sulfur	
Propane Limitation =	14,712,928	gal/yr, and	0.20	gr/100 ft3 sulfur	
Butane Limitation =	12,900,000	gal/yr, and	0.20	gr/100 ft3 sulfur	
Used/Waste Oil Limitation =	750,000	gal/yr, and	1.00	% sulfur	0.50 % ash 0.400 % chlorine, 0.010 % lead
PM Dryer/Mixer Limitation =	0.233	lb/ton of asphalt production	<i>value set in order to limit source-wide PM to less than 250 tons/year</i>		
PM10 Dryer/Mixer Limitation =	0.153	lb/ton of asphalt production	<i>value set in order to limit source-wide PM-10 to less than 100 tons/year</i>		
CO Dryer/Mixer Limitation =	0.190	lb/ton of asphalt production	<i>note AP-42 uncontrolled emission factor for CO is 0.13 lb/ton</i>		
VOC Dryer/Mixer Limitation =	0.049	lb/ton of asphalt production	<i>note AP-42 uncontrolled emission factor for VOC is 0.032 lb/ton</i>		
Cold Mix Asphalt VOC Usage Limitation =	52.50	tons/yr	<i>value set in order to limit source-wide VOC to less than 100 tons/year and source-wide HAPs to less than 10/25 tons/year</i>		

Limited/Controlled Emissions

Process Description	Limited/Controlled Potential Emissions							
	(tons/year)							
	Criteria Pollutants					Hazardous Air Pollutants		
	PM	PM10	SO2	NOx	VOC	CO	Total HAPs	"Worst" Case Single HAP
Ducted Emissions								
Fuel Combustion (worst case)	24.31	19.64	99.96	99.93	7.59	57.00	11.07	9.90 (hydrogen chloride)
Dryer/Mixer (process)	116.50	76.50	99.96	27.50	24.50	95.00	5.33	1.55 (formaldehyde)
Worst Case Emissions	116.50	76.50	99.96	99.93	24.50	95.00	11.07	9.90 (hydrogen chloride)
Fugitive Emissions								
Asphalt Load-Out, Silo Filling, On-Site Yard	0.55	0.55	0	0	8.57	1.44	0.14	0.04 (formaldehyde)
Hot Oil Heating System (process)	0	0	0	0	4.1E-03	0.19	4.1E-03	2.6E-03 (naphthalene)
Material Storage Piles	1.60	0.56	0	0	0	0	0	0
Material Processing and Handling	3.23	1.53	0	0	0	0	0	0
Material Crushing, Screening, and Conveying	15.87	5.80	0	0	0	0	0	0
Unpaved Roads (worst case)	70.90	14.90	0	0	0	0	0	0
Cold Mix Asphalt Production	0	0	0	0	52.50	0	13.69	4.73 (xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	negl.	0	negl.	negl.
Total Fugitive Emissions	92.15	23.34	0	0	61.07	1.63	13.84	4.73 (xylenes)
Totals Limited/Controlled Emissions	208.65	99.84	99.96	99.93	85.57	96.63	24.91	9.90 (hydrogen chloride)

negl = negligible

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

Company Name: Rieth-Riley Construction Co., Inc.
 Source Location: 25200 State Road 23, South Bend, Indiana 46614
 Permit Number: F 141-22022-00027
 Revision No.: F 141-27073-00027
 Reviewer: Hannah L. Desrosiers
 Date Submitted: October 6, 2008

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

Annual Asphalt Production Limitation = 1,000,000 ton/yr
Slag Usage Limitation * = 270,175 ton/yr 1.50% sulfur *assumes that 42% of aggregate used in mix is slag.
 PM Dryer/Mixer Limitation = 0.233 lb/ton of asphalt production
 PM10 Dryer/Mixer Limitation = 0.153 lb/ton of asphalt production
 CO Dryer/Mixer Limitation = 0.190 lb/ton of asphalt production
 VOC Dryer/Mixer Limitation = 0.049 lb/ton of asphalt production

Criteria Pollutant	Emission Factor or Limitation (lb/ton)				Limited/Controlled Potential to Emit (tons/yr)				Worse Case PTE
	Drum-Mix Plant (dryer/mixer, controlled by fabric filter)				Drum-Mix Plant (dryer/mixer, controlled by fabric filter)				
	Natural Gas	No. 2 Fuel Oil	No. 6 Fuel Oil or Waste Oil	Slag **	Natural Gas	No. 2 Fuel Oil	No. 6 Fuel Oil or Waste Oil	Slag ***	
PM	0.233	0.233	0.233	0	116.5	116.5	116.5	0	116.5
PM10	0.153	0.153	0.153	0	76.5	76.5	76.5	0	76.5
SO2	0.0034	0.011	0.058	0.74	1.7	5.5	29.0	99.96	99.96
NOx	0.026	0.055	0.055	0	13.0	27.5	27.5	0	27.5
VOC	0.049	0.049	0.049	0	24.5	24.5	24.5	0	24.5
CO	0.19	0.19	0.19	0	95.0	95.0	95.0	0	95.0
Hazardous Air Pollutant									
HCl	0	0	2.10E-04	0	0	0	0.11	0	0.11
Antimony	1.80E-07	1.80E-07	1.80E-07	0	9.00E-05	9.00E-05	9.00E-05	0	9.00E-05
Arsenic	5.60E-07	5.60E-07	5.60E-07	0	2.80E-04	2.80E-04	2.80E-04	0	2.80E-04
Beryllium	negl	negl	negl	0	negl	negl	negl	0	0
Cadmium	4.10E-07	4.10E-07	4.10E-07	0	2.05E-04	2.05E-04	2.05E-04	0	2.05E-04
Chromium	5.50E-06	5.50E-06	5.50E-06	0	2.75E-03	2.75E-03	2.75E-03	0	2.75E-03
Cobalt	2.60E-08	2.60E-08	2.60E-08	0	1.30E-05	1.30E-05	1.30E-05	0	1.30E-05
Lead	6.20E-07	1.50E-05	1.50E-05	0	3.10E-04	7.50E-03	7.50E-03	0	7.50E-03
Manganese	7.70E-06	7.70E-06	7.70E-06	0	3.85E-03	3.85E-03	3.85E-03	0	3.85E-03
Mercury	2.40E-07	2.60E-06	2.60E-06	0	1.20E-04	1.30E-03	1.30E-03	0	1.30E-03
Nickel	6.30E-05	6.30E-05	6.30E-05	0	3.15E-02	3.15E-02	3.15E-02	0	3.15E-02
Selenium	3.50E-07	3.50E-07	3.50E-07	0	1.75E-04	1.75E-04	1.75E-04	0	1.75E-04
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	0	2.00E-02	2.00E-02	2.00E-02	0	2.00E-02
Acetaldehyde	0	0	1.30E-03	0	0	0	0.65	0	0.65
Acrolein	0	0	2.60E-05	0	0	0	1.30E-02	0	1.30E-02
Benzene	3.90E-04	3.90E-04	3.90E-04	0	0.20	0.20	0.20	0	0.20
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0	0.12	0.12	0.12	0	0.12
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	0	1.55	1.55	1.55	0	1.55
Hexane	9.20E-04	9.20E-04	9.20E-04	0	0.46	0.46	0.46	0	0.46
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0	0.02	0.02	0.02	0	0.02
MEK	0	0	2.00E-05	0	0	0	0.01	0	0.01
Propionaldehyde	0	0	1.30E-04	0	0	0	0.07	0	0.07
Quinone	0	0	1.60E-04	0	0	0	0.08	0	0.08
Toluene	1.50E-04	2.90E-03	2.90E-03	0	0.08	1.45	1.45	0	1.45
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0	0.10	0.44	0.44	0	0.44
Xylene	2.00E-04	2.00E-04	2.00E-04	0	0.10	0.10	0.10	0	0.10

Total HAPs 5.33
 Worst Single HAP 1.55 (formaldehyde)

Methodology

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-3, 11.1-7, 11.1-8, 11.1-10, and 11.1-12

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

Limited/Controlled Potential to Emit (tons/yr) = (Annual Asphalt Production Limitation (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)

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

Abbreviations

VOC - Volatile Organic Compounds
 HCl = Hydrogen Chloride
 SO2 = Sulfur Dioxide

HAP = Hazardous Air Pollutant
 PAH = Polyaromatic Hydrocarbon

Indiana Department of Environmental Management Office of Air Quality

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

Source Description and Location

Source Name:	Rieth-Riley Construction Co., Inc.
Source Location:	25200 State Road 23, South Bend, Indiana 46614
County:	St. Joseph
SIC Code:	2951
Operation Permit No.:	F 141-22022-00027
Operation Permit Issuance Date:	June 30, 2006
Significant Permit Revision No.:	F 141-27073-00027
Permit Reviewer:	Hannah L. Desrosiers

On October 6, 2008, the Office of Air Quality (OAQ) has received an application from Rieth-Riley Construction Co., Inc. related to a modification to their existing stationary hot mix asphalt production source.

Existing Approvals

The source was issued Second FESOP Renewal No. 141-22022-00027 on June 30, 2006.

County Attainment Status

The source is located in St. Joseph County. Pursuant to 326 IAC 1-4-77, the following attainment status designations are applicable to St. Joseph County:

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective July 19, 2007, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
<ul style="list-style-type: none"> ➤ ¹ Attainment effective October 18, 2000, for the 1-hour ozone standard for the South Bend-Elkhart area, including St. Joseph County, and is a maintenance area for the 1-hour ozone National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour standard was revoked effective June 15, 2005. ➤ Unclassifiable or attainment effective April 5, 2005, for PM_{2.5}. 	

*These documents are incorporated by reference. Copies referenced in this section may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center-North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

(a) **Ozone Standards**

Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. St. Joseph County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (b) **PM2.5**
St. Joseph County has been classified as attainment for PM2.5. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, and the effective date of these rules was July 15th, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM2.5 emissions until 326 IAC 2-2 is revised.

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

Fugitive Emissions

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

Status of the Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed revision, after consideration of all enforceable limits established in the effective permits:

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Process/Emission Unit	Potential To Emit of the Entire Source prior to the Revision (tons/year)							
	PM	PM10*	SO2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Ducted Emissions								
Fuel Combustion (worst case)	52.12	12.1	93.3	98.0	3.86	46.0	**	**
Dryer/Mixer	116.72	78.5	**	**	**	**	14.2	**
Worst Case PTE	116.72 ⁽¹⁾	78.5 ⁽²⁾	93.3 ⁽²⁾	98.0 ⁽²⁾	3.86	46.0	14.2	0
Fugitive Emissions								
Asphalt Load-Out and On-Site Yard	0	0	0	0	0	0	0.135	negl.
Hot Oil Heating System	0.13	0.21	4.51	1.34	0.18	0.32	0	0
Material Storage Piles	0.499	0.174	0	0	0	0	0	0
Material Screening, Conveying, Processing and Handling	60.61	6.06	0	0	0	0	0	0
Cold Mix Asphalt	0	0	0	0	<95.94 ⁽²⁾	0	0	0
Unpaved Roads	70.9	14.9	0	0	0	0	0	0
Insignificant Activities and other Fugitive emissions	1.14	0.2	2.13	0.643	0.023	0.150	0	0
Volatile Organic Liquid Storage Vessels **	0	0	0	0	negl.	0	negl.	negl.
Total Fugitive Emissions	132.83	21.54	6.64	1.98	96.14	0.47	negl.	negl.
Total PTE of Entire Source	< 250	< 100	< 100	< 100	46.5	< 100	Total <25	Single <10
Title V Major Source Thresholds	NA	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	NA	NA
Emission Offset Major Source Thresholds	NA	NA	NA	NA	NA	NA	NA	NA
(1) = Avoidance limit pursuant to 326 IAC 2-2 (PSD). (2) = Limits pursuant to 326 IAC 2-8 (FESOP). negl. = negligible NOTE: The values in this table are a composite of the information provided in the TSD and TSD Addendum for Permit Renewal #141-22022-00027. * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. ** Pollutant emissions not calculated for Permit Renewal #141-22022-00027. *** Fugitive emissions from each of the volatile organic liquid storage tanks were calculated using the EPA Tanks 4.0.9d program and were determined to be negligible.								

- (a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no attainment regulated pollutant is emitted at a rate of two hundred fifty tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (b) This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the Permittee has accepted limits on HAPs emissions to less than ten (10) tons per year for any single

HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by Rieth-Riley Construction Co., Inc. on October 6, 2008, relating to the replacement of the following existing emission units; the four hundred twenty-five (425) TPH mixing drum is being replaced with a four hundred fifty (450) TPH mixing drum, the existing one hundred twenty-five (125) MMBtu/hr drum/mixer burner is being replaced with a one hundred fifty (150) MMBtu/hr burner, and the existing baghouse is being replaced with a ninety thousand (90,000) acfm baghouse. The source is also planning to install one (1), new, thirty thousand (30,000) gallon liquid asphalt cement tank equipped with a two (2.0) MMBtu/hr hot oil heating system burner. Finally, the source has requested that the Second FESOP Renewal permit term be extended to ten (10) years.

The following is a list of the new emission unit(s) and pollution control device(s):

- (a) One (1) aggregate rotary dryer and drum hot-mix unit (dryer/mixer), identified as DRUM, approved for construction in 2008, with a maximum capacity of four hundred fifty (450) tons of asphalt per hour, equipped with one (1) dryer/mixer burner, having a maximum heat input capacity of one hundred fifty (150) MMBtu per hour, firing waste oil as primary fuel, using No. 2 fuel oil, No. 4 fuel oil, natural gas, propane gas, and butane gas as backup fuels, equipped with a ninety thousand (90,000) actual cubic feet per minute (acfm) baghouse for particulate control and exhausting through Stack SV1.
- (b) One (1) hot oil heater, identified as 14B, approved for construction in 2008, with a maximum heat input capacity of two (2.0) MMBtu per hour, firing No. 2 fuel oil as primary fuel, using butane gas and propane gas as backup fuels, and exhausting through Stack SV10.
- (c) One (1) tank for storing liquid asphalt, identified as 13D, approved for construction in 2008, with a maximum capacity of thirty thousand (30,000) gallons, and exhausting through Stack SV11.

Upon review of the permit, OAQ, in collaboration with the source, has determined that the following additional revisions were required to maintain the Source's FESOP Status:

- (a) Due to the increase in throughput capacity of the dryer/mixer, the increase in maximum heat input capacity of the burner, the addition of the new hot oil heater, EPA updates to AP-42 emission factors, and the calculation of process emissions for the dryer/mixer and hot oil heating systems;
 - (1) The existing pound per ton Particulate Matter less than 10 microns in diameter (PM10) emission limitation for the dryer/mixer process has been revised ensure that PM10 emissions do not exceed the Title V major source threshold of one hundred (100) tons per year;
 - (2) The existing fuel usage limitations for the waste oil and propane gas have each been revised, and new limitations have been added for No. 2 fuel oil, No. 4 fuel oil, natural gas, and butane gas;
 - (3) Pound per ton Volatile Organic Compound (VOC) and Carbon Monoxide (CO) emission limitations have been added for the dryer/mixer process ensure that VOC and CO emissions do not exceed the Title V major source thresholds of one hundred (100) tons per year, each;
 - (4) The existing waste oil sulfur and chlorine content limitations have been revised to allow the source to vary the amount of waste oil used based on the actual sulfur and chlorine content in each fuel delivery. The permit will contain "worst case"

concentration limitations and fuel usage limitations that shall not be exceeded, to ensure that the Sulfur Dioxide (SO₂) and Hydrogen Chloride (HCL) emissions do not exceed the Title V major source thresholds of one hundred (100) tons per year for SO₂ and ten (10) tons per year for HCL, however, using an equivalency calculation they will be able to utilize more fuel when the concentrations of SO₂ and HCL are lower. The source will be required to track the equivalent fuel usage on a daily basis in order to ensure compliance with the revised limits.

- (5) The existing cold mix asphalt Volatile Organic Compound (VOC) limit has been revised to ensure that VOC emissions do not exceed the Title V major source thresholds of one hundred (100) tons per year; and

Enforcement Issues

There are no pending enforcement actions related to this revision.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – FESOP Revision
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This FESOP is being revised through a FESOP Significant Permit Revision pursuant to 326 IAC 2-8-11.1(g)(2) because it involves adjustment to the existing source-wide emissions limitations to maintain the FESOP status of the source (see PTE of the Entire Source After The Issuance of the FESOP Revision Section).

PTE of the Entire Source After Issuance of the FESOP Revision
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The table below summarizes the potential to emit of the entire source (*reflecting adjustment of existing limits*), with updated emissions shown as **bold** values and previous emissions shown as ~~strike through~~ values.

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Process/Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)							
	PM	PM10*	SO2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Ducted Emissions								
Fuel Combustion (worst case)	24.31 52.42	19.64 42.4	99.96 93.3	99.93 98.0	7.59 3.86	57.00 46.0	11.07 **	9.90 (hydrogen chloride) **
Dryer/Mixer (process)	116.50 116.72	76.50 78.5	29.00 **	27.50 **	24.50 **	95.00 **	5.33 14.2	1.55 (formaldehyde) **
Worst Case PTE	116.50 116.72 ⁽¹⁾	76.50 78.5 ⁽²⁾	99.96 93.3 ⁽²⁾	99.93 98.0 ⁽²⁾	24.50 ⁽²⁾ 3.86	95.00 ⁽²⁾ 46.0	11.07 ⁽²⁾ 14.2	9.90 (hydrogen chloride) **
Fugitive Emissions								
Asphalt Load-Out and On-Site Yard	0.55 0	0.55 0	0	0	8.57 0	1.44 0	0.14 0.135	0.04 (formaldehyde) negl.
Hot Oil Heating System (process)	0 0.13	0 0.21	0 4.54	0 1.34	4.1E-03 0.18	0.19 0.32	4.1E-03 0	2.6E-04 (naphthalene) 0
Material Storage Piles	1.60 0.499	0.56 0.174	0	0	0	0	0	0
Material Screening, Conveying, Processing and Handling	19.10 60.64	7.33 6.06	0	0	0	0	0	0
Cold Mix Asphalt	0	0	0	0	52.50 <95.94 ⁽²⁾	0	13.69 0	4.73 (xylenes) 0
Unpaved Roads (worst case)	70.9	14.9	0	0	0	0	0	0
Insignificant Activities and other Fugitive emissions	0 4.14	0 0.2	0 2.13	0 0.643	0 0.023	0 0.150	0	0
Volatile Organic Liquid Storage Vessels **	0	0	0	0	negl.	0	negl.	negl.
Total Fugitive Emissions	92.15 132.83	23.34 21.54	0 6.64	0 1.98	61.07 96.14	1.63 0.47	13.84 negl.	4.73 (xylenes) negl.
Total PTE of Entire Source	208.65 <250	99.84 <100	99.96 <100	99.93 <100	85.57 46.5	96.63 <100	24.91 Total <25	9.90 Single <10
Title V Major Source Thresholds	NA	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	NA	NA
Emission Offset Major Source Thresholds	NA	NA	NA	NA	NA	NA	NA	NA
(1) = Avoidance limit pursuant to 326 IAC 2-2 (PSD). (2) = Limits pursuant to 326 IAC 2-8 (FESOP). negl. = negligible NOTE: The values in this table are a composite of the information provided in the TSD and TSD Addendum for Permit Renewal #141-22022-00027. * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. ** Values not available. *** Fugitive emissions from each of the volatile organic liquid storage tanks were calculated using the EPA Tanks 4.0.9d program and were determined to be negligible.								

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

Process/Emission Unit	Potential To Emit of the Entire Source After Issuance of Revision (tons/year)							
	PM	PM10*	SO2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Ducted Emissions								
Fuel Combustion (worst case)	24.31	19.64	99.96	99.93	7.59	57.00	11.07	9.90 (hydrogen chloride)
Dryer/Mixer	116.50	76.5	29.00	27.50	24.50	95.00	5.33	1.55 (formaldehyde)
Worst Case PTE	116.50 ⁽¹⁾	76.5 ⁽²⁾	99.96 ⁽²⁾	99.93 ⁽²⁾	24.50 ⁽²⁾	95.00 ⁽²⁾	11.07 ⁽²⁾	9.90 (hydrogen chloride)
Fugitive Emissions								
Asphalt Load-Out and On-Site Yard	0.55	0.55	0	0	8.57	1.44	0.14	0.04 (formaldehyde)
Hot Oil Heating System	0	0	0	0	4.1E-03	0.19	4.1E-03	2.6E-04 (naphthalene)
Material Storage Piles	1.60	0.56	0	0	0	0	0	0
Material Screening, Conveying, Processing and Handling	19.10	7.33	0	0	0	0	0	0
Cold Mix Asphalt	0	0	0	0	52.50 ⁽²⁾	0	13.69	4.73 (xylenes)
Unpaved Roads	70.9	14.9	0	0	0	0	0	0
Insignificant Activities and other Fugitive emissions	0	0	0	0	0	0	0	0
Volatile Organic Liquid Storage Vessels **	0	0	0	0	negl.	0	negl.	negl.
Total Fugitive Emissions	92.15	23.34	0	0	61.07	1.63	13.84	4.73 (xylenes)
Total PTE of Entire Source	208.65	99.84	99.96	99.93	85.57	96.63	24.91	9.90
Title V Major Source Thresholds	NA	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	NA	NA
Emission Offset Major Source Thresholds	NA	NA	NA	NA	NA	NA	NA	NA
(1) = Avoidance limit pursuant to 326 IAC 2-2 (PSD). (2) = Limits pursuant to 326 IAC 2-8 (FESOP). negl. = negligible NOTE: The values in this table are a composite of the information provided in the TSD and TSD Addendum for Permit Renewal #141-22022-00027. * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. ** Values not available. *** Fugitive emissions from each of the volatile organic liquid storage tanks were calculated using the EPA Tanks 4.0.9d program and were determined to be negligible.								

(a) FESOP Status

This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP).

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

Note: The limits are specified in terms of three hundred and sixty-five (365) consecutive days to maintain the same period as already specified in the existing permit.

(1) Single Fuel Limitations

When combusting only one type of fuel per three hundred sixty-five (365) consecutive day period in the dryer/mixer burner and all other combustion equipment, the usage of fuel shall be limited as follows:

- (A) Natural gas usage shall not exceed 691 million cubic feet per three hundred and sixty-five (365) consecutive day period, with compliance determined at the end of each day. This is a new natural gas limit;
- (B) No. 2 fuel oil usage shall not exceed 2,262,000 gallons per three hundred and sixty-five (365) consecutive day period, with compliance determined at the end of each day, This is a new No. 2 fuel oil limit;
- (C) No. 4 fuel oil usage shall not exceed 2,367,000 gallons per three hundred and sixty-five (365) consecutive day period, with compliance determined at the end of each day, This is a new No. 4 fuel oil limit;
- (D) Propane usage shall not exceed 14,712,928 gallons per three hundred and sixty-five (365) consecutive day period, with compliance determined at the end of each day, This is a new propane limit;
- (E) Butane usage shall not exceed 12,900,000 gallons per three hundred and sixty-five (365) consecutive day period, with compliance determined at the end of each day, This is a new butane limit;
- (F) Since the Permittee has requested the option to vary the amount (gallons per year) of waste oil used based on the actual sulfur and chlorine content in each fuel delivery, waste oil usage shall be determined using the following equations:

$$U = W_A * S_A$$

$$U = W_A * Cl_A$$

where:

U = Waste oil usage

W_A = actual gallons of waste oil used in the last three hundred sixty-five (365) days, with less than one percent (1.00%) by weight sulfur content and less than forty hundredths percent (0.40%) chlorine content.

S_A = actual percent (%) sulfur content of waste oil.

Cl_A = actual percent (%) chlorine content of waste oil.

The limit on waste oil usage will sometimes be dictated by the sulfur content and other times be dictated by the chlorine content. However, waste oil usage shall in no case exceed 750,000 gallons at the maximum allowable sulfur content (one percent

(1.00%)) and chlorine content (forty hundredths percent (0.40%)) per three hundred and sixty-five (365) consecutive day period, with compliance determined at the end of each day. This waste oil limit was changed from 1,743,925 gallons per year.

(2) Multiple Fuel Limitations

The existing permit specifies the compliance in terms of fuel equivalency, however, the source has indicated that compliance be demonstrated by equation, as follows;

(A) Pursuant to 326 IAC 2-8-4, Sulfur Dioxide (SO₂) emissions from the dryer/mixer shall be limited to less than one hundred (100) tons per three hundred sixty-five (365) consecutive day period, as follows:

- (i) The sulfur content of the waste oil shall not exceed one percent (1.00%) by weight.
- (ii) The sulfur content of the No. 2 and No. 4 fuel oils, each, shall not exceed fifty hundredths percent (0.50%) by weight.
- (iii) Compliance shall be determined using the following equation:

$$S = \frac{G(E_G) + O(E_O) + F(E_F) + (P)(E_P) + B(E_B) + U(E_U)}{2,000 \text{ lbs/ton}}$$

where:

S = tons of sulfur dioxide emissions for three hundred sixty-five (365) consecutive day period;

G = million cubic feet of natural gas used in last three hundred sixty-five (365) days;

O = gallons of No. 2 fuel oil used in last three hundred sixty-five (365) days with less than or equal to fifty hundredths percent (0.50%) sulfur content;

F = gallons of No. 4 fuel oil used in last three hundred sixty-five (365) days with less than or equal to fifty hundredths percent (0.50%) sulfur content;

P = gallons of propane used in the last three hundred sixty-five (365) days with less than or equal to twenty thousandths (0.20) grains per one hundred (100) cubic feet of sulfur in content;

B = gallons of butane used in the last three hundred sixty-five (365) days with less than or equal to twenty thousandths (0.20) grains per one hundred (100) cubic feet of sulfur in content; and

U = gallons of waste oil used in the last three hundred sixty-five (365) days, with less than one percent (1.00%) by weight sulfur content.

Emission Factors for Sulfur dioxide

E_G = six tenths (0.6) pounds per million cubic feet of natural gas;

E_O = seven hundred eighty-five hundred-thousandths (0.0785) pounds per gallon of No. 2 fuel oil;

E_F = seventy-five ten-thousandths (0.075) pounds per gallon of No. 4 fuel oil;

E_P = two millionths (0.00002) pounds per gallon of propane;

E_B = two millionths (0.00002) pounds per gallon of butane; and

E_U = one hundred forty-seven thousandths (0.147) pounds per gallon of

waste oil.

Compliance with these limits, combined with the SO₂ emissions from all other units at this source, will limit the source-wide SO₂ emissions to less than one hundred (100) tons per three hundred sixty-five (365) consecutive day period and shall render 326 IAC 2-7 (Part 70 Permit Program), and 326 IAC 2-2 (PSD), not applicable.

See Appendix A for the detailed calculations.

(B) Pursuant to 326 IAC 2-8-4, Hydrogen Chloride (HCl) emissions from the dryer/mixer shall be limited to less than ten (10) tons per three hundred sixty-five (365) consecutive day period, and total combined HAP emissions shall be limited to less than twenty-five (25) tons per three hundred sixty-five (365) consecutive day period, as follows:

- (i) The chlorine content of the waste oil used in the dryer/mixer burner and all other fuel combustion equipment shall not exceed forty hundredths of a percent (0.40%) by weight.
- (ii) The HCl emissions from the dryer/mixer burner shall be limited to less than two hundred sixty-four hundred-thousandths (0.0264) pounds of HCl per gallon of waste oil burned.
- (iii) Compliance shall be determined using the following equation:

$$\text{HCl} = \frac{U(E_{\text{Cl}})}{[2000 \text{ lbs/ ton}]}$$

where:

U = gallons waste oils used in the last three hundred sixty-five (365) days

Emission Factors for Hydrogen Chloride

E_{Cl} = sixty-six thousandths (0.066) pounds per gallon of waste oil.

Compliance with these limits, combined with the HAP emissions from all other emission units at this source, will limit the source-wide HCl emissions to less than ten (10) tons per three hundred sixty-five (365) consecutive day period and total combined HAP emissions shall be limited to less than twenty-five (25) tons per three hundred sixty-five (365) consecutive day period, and render 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable.

See Appendix A for the detailed calculations.

(C) Pursuant to 326 IAC 2-8-4, Nitrogen Oxides (NO_x) emissions from the dryer/mixer shall be limited to less than one hundred (100) tons per three hundred sixty-five (365) consecutive day period, as follows:

- (i) The total usage of butane gas and butane gas equivalents for the dryer/mixer burner and all other fuel combustion equipment shall be limited to less than 12,900,000 gallons, or equivalent, per three hundred sixty-five (365) consecutive day period with compliance determined at the end of each day.

Compliance shall be determined using the following equation:

$$N = \frac{G(E_G) + O(E_O) + F(E_F) + P(E_P) + B(E_B) + U(E_U)}{2,000 \text{ lbs/ton}}$$

where:

N = tons of nitrogen oxide emissions for a three hundred sixty-five (365) consecutive day period;

G = million cubic feet of natural gas used in the last three hundred sixty-five (365) days;

O = gallons of No. 2 fuel oil used in last three hundred sixty-five (365) days;

F = gallons of No. 4 fuel oil used for last three hundred sixty-five (365) days;

P = gallons of propane used in the last three hundred sixty-five (365) days;

B = gallons of butane used in the last three hundred sixty-five (365) days; and

U = gallons waste oils used in the last three hundred sixty-five (365) days.

Emission Factors for Nitrogen oxides

E_G = two hundred eighty (280) pounds per million cubic feet of natural gas;

E_O = twenty-four ten-thousandths (0.024) pounds per gallon of No. 2 fuel oil;

E_F = forty-seven ten-thousandths (0.047) pounds per gallon of No. 4 fuel oil;

E_P = thirteen hundredths (0.013) pounds per gallon of propane;

E_B = fifteen hundredths (0.015) pounds per gallon of butane; and

E_U = nineteen ten-thousandths (0.019) pounds per gallon of waste oil.

Compliance with these limits, combined with the NOx emissions from all other units at this source, will limit source-wide NOx emissions to less than one hundred (100) tons per three hundred sixty-five (365) consecutive day period. Compliance with these limits will render 326 IAC 2-7 (Part 70 Permit Program), and 326 IAC 2-2 (PSD), not applicable.

See Appendix A for the detailed calculations.

- (3) Pursuant to 326 IAC 2-8-4, Particulate Matter less than ten (10) microns in diameter (PM10), Volatile Organic Compound (VOC), and Carbon Monoxide (CO) emissions from the dryer/mixer shall be limited as follows:
 - (A) The asphalt production rate shall continue to be limited to less than one million (1,000,000) tons per three hundred sixty-five (365) consecutive day period with compliance determined at the end of each day. This limit did not change from the existing permit.
 - (B) PM10 emissions from the dryer/mixer shall be limited to less than one hundred fifty-three ten-thousandths (0.153) pounds of PM10 per ton of asphalt produced. This PM10 emission limit was changed from one hundred fifty-seven ten-thousandths (0.157) pounds per ton.
 - (C) VOC emissions from the dryer/mixer shall limited to less than forty-nine ten-thousandths (0.049) pounds of VOC per ton of asphalt produced.

- (D) CO emissions from the dryer/mixer shall continue to be limited to less than one hundred ninety thousandths (0.190) pounds of CO per ton of asphalt produced.

Compliance with these limits, combined with the PM10, VOC and CO emissions from all other units at this source, will limit source-wide PM10, VOC and CO emissions, each, to less than one hundred (100) tons per three hundred sixty-five (365) consecutive day period. Compliance with these limits will render 326 IAC 2-7 (Part 70 Permit Program), and 326 IAC 2-2 (PSD), not applicable.

See Appendix A for the detailed calculations.

- (4) Pursuant to 326 IAC 2-8-4, the Volatile Organic Compound (VOC) emissions from the cold mix cutback asphalt production shall be limited as follows:

- (A) The usage of liquid binder in the production of cold mix cutback asphalt shall be limited such that VOC emissions do not exceed fifty-two and fifty hundredths (52.50) tons per three hundred sixty-five (365) consecutive day period with compliance determined at the end of each day. This VOC emission limit was changed from ninety-five and ninety-four hundredths (95.94) tons per year.

Compliance with this limit, combined with the VOC emissions from all other emission units at this source, will continue to limit source-wide VOC emissions to less than one hundred (100) tons per three hundred sixty-five (365) consecutive day period, and render 326 IAC 2-7 (Part 70 Permit Program), 326 IAC 2-2 (PSD)), and 326 IAC 2-3 (Emission Offset) not applicable.

See Appendix A for the detailed calculations.

(b) PSD Minor Source

This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be limited to less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

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

- (1) The asphalt production rate shall continue to be limited to less than one million (1,000,000) tons per three hundred sixty-five (365) consecutive day period with compliance determined at the end of each day.
- (2) PM emissions from the dryer/mixer shall continue to be limited to less than two hundred thirty-three thousandths (0.233) pounds of PM per ton of asphalt produced. This limit did not change from the existing permit.

Compliance with these limits, combined with the potential to emit PM from all other emission units at this source, will limit the source-wide total potential to emit of PM to less than two hundred fifty tons per three hundred sixty-five (365) consecutive day period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

See Appendix A for detailed calculations.

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Federal Rule Applicability Determination

The following federal rules are applicable to the proposed revision:

New Source Performance Standards (NSPS)

- (a) The one (1) new thirty thousand (30,000) gallon liquid asphalt storage tank with the two (2.0) MMBtu/hr burner, identified as 13D, is not subject to the New Source Performance Standard for Volatile Organic Liquid Storage Vessels, 326 IAC 12, (40 CFR Part 60.110, Subpart Kb), because while the maximum capacity of the storage tank is greater than 75 m³ (19,813 gallons) but less than 151 m³ (39,890 gallons), the liquid stored in the tank has a maximum true vapor pressure of less than 15.0 kPa. Therefore, pursuant to 40 CFR 60.110b(b), the Tank# 13D is exempt from this rule and the requirements are not included in this revision.
- (b) There are no other New Source Performance Standards (NSPS)(40 CFR Part 60) included for this proposed revision. The source shall continue to comply with the applicable federal requirements and permit conditions contained in FESOP Renewal No. 141-22022-00027, issued on June 30, 2006.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included for this proposed revision.

Compliance Assurance Monitoring (CAM)

- (d) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The following state rules are applicable to the proposed revision:

- (a) 326 IAC 2-8-4 (FESOP)
This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will continue to be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP). See PTE of the Entire Source After Issuance of the FESOP Revision Section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will still be limited to less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the FESOP Revision Section above.
- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The unlimited potential to emit of HCl from burning waste oil in the dryer/mixer burner is greater than ten (10) tons per year. However, the source shall limit the potential to emit of HCl from the dryer/mixer to less than ten (10) tons per year. Therefore, the proposed revision is not subject to the requirements of 326 IAC 2-4.1. See PTE of the Entire Source After Issuance of the FESOP Revision Section above.
- (d) 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)
The dryer/mixer burner is subject to 326 IAC 7-1.1, because it has potential SO₂ emissions of greater than twenty-five (25) tons per year (limited potential emissions are ninety-nine and ninety-six

hundredths (99.96) tons per year). Pursuant to this rule, sulfur dioxide emissions from the dryer/mixer burner shall be limited to five-tenths (0.5) pounds per million Btu for distillate oil combustion (including No. 2 and No. 4 fuel oils) and one and six-tenths (1.6) pounds per million Btu heat input for waste oil combustion.

- (e) **326 IAC 8-1-6 (BACT)**
 The dryer/mixer has a limited potential to emit of twenty-four and fifty hundredths (24.50) tons per year of VOC, based on a limited throughput of one million (1,000,000) tons per twelve (12) consecutive month period and a VOC limit of forty-nine ten-thousandths (0.049) pound of VOC per ton of hot mix asphalt produced. Compliance with these limits will render the requirements of 326 IAC 8-1-6 not applicable to the dryer/mixer.
- (f) **326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)**
 Pursuant to 326 IAC 8-4-1 (Applicability) and 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities), all petroleum liquid storage vessels with capacities greater than one hundred fifty thousand (150,000) liters (39,000 gallons) containing VOC whose true vapor pressure is greater than 10.5 kPa (1.52 psi) shall comply with the requirements for external fixed and floating roof tanks and the specified record keeping and reporting requirements. Tank# 13D has a maximum capacity of less than 39,000 gallons. Therefore, the requirements of this rule are not applicable to Tank# 13D and are not included in this revision.
- (g) **326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)**
 The source is not subject to this rule because it is not located in Clark, Floyd, Lake, or Porter County.

 There are no other 326 IAC 8 Rules that are applicable to this revision.
- (h) **326 IAC 12 (New Source Performance Standards)**
 See Federal Rule Applicability Section of this TSD.
- (i) **326 IAC 20 (Hazardous Air Pollutants)**
 See Federal Rule Applicability Section of this TSD.

Compliance Determination, Monitoring and Testing Requirements

- (a) The dryer/mixer has applicable compliance determination conditions as specified below:

Emission Unit	Control Device	Time frame for Testing	Pollutant	Frequency of Testing	Limit or Requirement
aggregate hot-mix drum dryer/mixer	90,000 acfm baghouse	180 days after publication of revised test method.	PM, PM ₁₀ , PM _{2.5}	Once every five (5) years	0.153 lb PM ₁₀ /ton of asphalt; and 0.233 lb PM/PM _{2.5} /ton of asphalt

- (1) PM_{2.5} and PM/PM₁₀ testing shall be performed for new 90,000 acfm baghouse, used in conjunction with the new aggregate drum hot-mix dryer/mixer, within one hundred and eighty (180) days of publication of the new or revised condensable PM test method(s) referenced in the U.S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), signed on May 8th, 2008. This testing shall be conducted utilizing methods as approved by the Commissioner. This 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. PM₁₀ and PM_{2.5} includes filterable and condensable PM.

In order to comply with the PM, PM₁₀, and PM_{2.5} limitations in the permit, new ninety thousand (90,000) acfm baghouse for the aggregate dryer/mixer, shall be in operation and control emissions from the aggregate dryer/mixer at all times when the aggregate dryer/mixer is in operation.

- (2) Fuel characteristics (i.e., sulfur and chlorine content) and usage rate will be used to verify compliance with SO₂, NO_x, and HCl emission limitations.
 - (3) Asphalt production rate will be used to verify compliance with PM, PM₁₀, VOC and CO emission limitations.
 - (4) Amount of diluent used and the weight % VOC in diluent will be used to verify compliance with cold mix cutback asphalt VOC emission limitation.
- (b) The hot-mix drum aggregate dryer/mixer and baghouse stack exhaust, identified as SV-1, have applicable compliance monitoring conditions as specified below:

Control	Parameter	Frequency	Range	Excursions and Exceedances
Baghouse for the dryer/mixer stack (SV-1)	Water Pressure Drop	Once per day	2.0 to 8.0 inches	Response Steps
	Visible Emissions	Once per day	< 30% for any (1) 6min avg period < 60% for more than 15 minutes	Response Steps
	Bags in Baghouse	as needed	normal/abnormal	Response Steps

These monitoring conditions are necessary because the new 90,000 acfm baghouse used in conjunction with the new aggregate drum hot-mix dryer/mixer must operate properly to ensure continued compliance with 40 CFR 60, Subpart I, 326 IAC 2-8 (FESOP), and the limits that render 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70 Permit Program) not applicable.

Existing compliance requirements not addressed in this TSD will not change as a result of this revision. The source shall continue to comply with the applicable requirements and permit conditions as contained in FESOP No: 141-22022-00027, issued on June 30, 2006.

Air Quality Impacts from Minor Sources

- (a) Modeling Overview
 Pursuant to 326 IAC 2-1.1-5, IDEM, OAQ, has conducted a modeling analysis of the Limited Potential to Emit (PTE) criteria pollutants from this proposed modification to estimate whether the Limited PTE criteria pollutants will cause or contribute to a violation of any National Ambient Air Quality Standard (NAAQS).
- (b) Modeling Results
 The modeling results, included as Attachment B to this TSD, indicate that the Limited PTE criteria pollutants from this modification will not exceed the National Ambient Air Quality Standards (NAAQS).

Proposed Changes

1. The following changes listed below are due to the proposed revision:
 - (a) The expiration date on the cover page has been extended by five (5) years.
 - (b) Sections A.2 and D.1 have been revised so that the source's listing of emission units and pollution control devices reflect the replacement of the existing mixing drum, burner, and baghouse, and the installation of the new liquid asphalt cement tank and new hot oil heating system burner.
 - (c) Condition B.3 has been revised to reflect the ten (10) year permit term.

- (d) Condition D.1.1 has been revised to separate the criteria pollutant limitations based on PSD major source thresholds from those based on Title V major source thresholds.
- (1) Condition D.1.1 continues to limit PM to less than 250 tons per year, and the corresponding, existing pound per ton emission limit remains unchanged.
 - (2) The existing Title V major source avoidance limit for PM10 emissions from the dryer/mixer has been addressed as a separate new condition, D.1.2. Additionally, VOC and CO process emissions from the dryer/mixer shall also be limited to less than the Title V major source thresholds of one hundred (100) tons per year and will be addressed in condition, D.1.2. Therefore, the existing pound per ton emission limit for PM10 has been revised and new pound per ton emission limits have been added for VOC and CO.
 - (3) Each condition, D.1.1 and D.1.2, will include the existing annual asphalt production of 1,000,000 tons per year.
- (e) Conditions D.1.2 and D.1.4 have been combined, and modified, to limit the source's emissions based on fuel usage and content, as follows;
- (1) The existing sulfur content limits have been revised and listed as "worst case", shall not be exceeded, limitations to allow the source to vary the amount of waste oil used based on the actual sulfur content in each fuel delivery.
 - (2) New "worst case", percent by weight and pounds per gallon, shall not be exceeded; chlorine content limits have been added to allow the source to vary the amount of waste oil used based on the actual chlorine content in each fuel delivery.
 - (3) The existing individual (i.e., single) fuel usage limitations for the waste oil and propane gas have each been revised, and new limitations have been added for No. 2 fuel oil, No. 4 fuel oil, natural gas, and butane gas;
 - (A) The revised waste oil limitation allows the source to vary the amount (gallons per year) of waste oil used based on the actual sulfur and chlorine content in each fuel delivery. Using an equivalency calculation to determine compliance, they will be able to utilize more fuel when the concentrations of SO₂ and HCl are lower and less fuel when the concentrations of SO₂ and HCl are higher. The source will be required to track the equivalent fuel usage on a daily basis in order to ensure compliance with the new limit.
 - (4) New tons per year emission limitations for multiple fuel usage have been added to limit SO₂, HCl, and NO_x emissions to less than the Title V major source thresholds of one hundred (100) tons per year, each, for SO₂ and NO_x, and ten (10) tons per year for HCl.

This condition has been renumbered as D.1.3.
- (f) Condition D.1.3 has been renumbered as condition D.1.4.
- (g) Condition D.1.5, VOC emission limits for cold mix cutback asphalt, has been revised to accommodate the addition of the dryer/mixer process emissions and to ensure that the entire source does not exceed the Title V major source VOC threshold of one hundred (100) tons per year.
- (h) Condition D.1.8, Testing Requirements, has been revised to institute new testing for the newly installed dryer/mixer and baghouse to determine compliance with the existing and

revised PM and PM10 pound per ton and ton per year emission limitations. Additionally, the language has been updated to reflect the New PM2.5 testing requirement instituted by EPA on May 8, 2008.

- (i) New compliance determination requirements, numbered as Conditions D.1.9 and D.1.10, have been added to the permit as a result of the revised sulfur and chlorine content limits, and revised and new fuel usage limits found in Condition D.1.3.
 - (1) The source will be required to track equivalent fuel usage on a daily basis in order to ensure compliance with the revised limits and using an equivalency calculation they will be able to utilize more fuel when the concentrations of SO₂ and HCL are lower.
- (j) Condition D.1.9 has been renumbered as condition D.1.11, and revised to reference the new and renumbered conditions that form the source's SO₂ limitations.
- (k) Condition D.1.12 has been added requiring the source to obtain vendor certification, for each fuel delivery, to ensure the chlorine content of the waste oil does not exceed 0.40% by weight.
- (l) Conditions D.1.10 through D.1.17 have been renumbered as conditions D.1.3 through D.1.20, accordingly, with no other changes.
- (m) Conditions D.1.19 Record Keeping Requirements, formerly D.1.16, and D.1.20 Reporting Requirements, formerly D.1.17, have been revised to accommodate all aforementioned revisions.
- (n) Conditions D.1.19(e) and (f), Record Keeping Requirements, have been updated to include additional guidance relating to how to document occasions when visible emissions and pressure drop readings might not be taken.
- (o) The existing Quarterly FESOP Usage Forms for Waste Oil Usage and Propane Usage have been deleted and replaced with three new forms intended to assist the source in tracking fuel usage and varying SO₂ and HCL contents in each waste oil delivery, as required by conditions D.1.9 and D.1.12, to ensure compliance with conditions D.1.3(d) and D.1.3(e), as follows;
 - (1) FESOP Fuel Usage and Nitrogen Oxides (NO_x) Emissions Reporting Form;
 - (2) FESOP Fuel Usage and Sulfur Dioxide (SO₂) Emissions Reporting Form; and
 - (3) FESOP Fuel Usage and Hydrogen Chloride (HCL) Emissions Reporting Form.

2. Language deleted from the permit appears as ~~strikethrough~~ text and new language appears as **bold** text, as follows:

...

The expiration date on the cover page has been extended by five (5) years as follows:

Issuance Date: June 30, 2006
Expiration Date: June 30, **2016** ~~2011~~

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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) aggregate rotary dryer and drum hot-mix unit (dryer/mixer), identified as DRUM, approved for construction in 2008, with a maximum capacity of four hundred fifty (450) tons of asphalt per hour, equipped with one (1) dryer/mixer burner, having a maximum heat input capacity of one hundred fifty (150) MMBtu per hour, firing waste oil as primary fuel, using No. 2 fuel oil, No. 4 fuel oil, natural gas, propane gas, and butane gas as backup fuels, equipped with a ninety thousand (90,000) actual cubic feet per minute (acfm) baghouse for particulate control and exhausting through Stack SV1.**

~~(a) One (1) drum mixer, approved for construction in 2008 constructed in 1988, with a maximum capacity of 425 tons per hour of liquid asphalt, equipped with a baghouse for particulate control and exhausting through stack SV1.~~

~~(b) One (1) drum mixer/burner, constructed in 2001, with a maximum heat input capacity of one hundred fifty (150) 125 MMBtu per hour, firing waste oil as primary fuel, using No. 2 fuel oil, No. 4 fuel oil, natural gas, propane gas, and butane gas as backup fuels, equipped with a baghouse for particulate control and exhausting through Stack SV1.~~

~~(b e) One (1) hot oil heater, identified as 14A, constructed in 1988, with a maximum heat input capacity of 2.0 MMBtu per hour, firing No. 2 fuel oil as primary fuel, using butane gas and propane gas as backup fuels, and exhausting through Stack SV2.~~

~~(c) One (1) hot oil heater, identified as 14B, approved for construction in 2008, with a maximum heat input capacity of two (2.0) MMBtu per hour, firing No. 2 fuel oil as primary fuel, using butane gas and propane gas as backup fuels, and exhausting through Stack SV10.~~

...

~~(f) One (1) tank for storing liquid asphalt, identified as 13D, approved for construction in 2008, with a maximum capacity of thirty thousand (30,000) gallons, and exhausting through Stack SV11.~~

~~(g f)~~

~~(hg)~~

~~(i h)~~

...

B.3 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5]

(a) This permit, F141-22022-00027, is issued for a fixed term of ~~five (5) ten (10)~~ years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

...

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SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Hot Mix Asphalt
(a) One (1) aggregate rotary dryer and drum hot-mix unit (dryer/mixer), identified as DRUM, approved for construction in 2008, with a maximum capacity of four hundred fifty (450) tons of asphalt per hour, equipped with one (1) dryer/mixer burner, having a maximum heat input capacity of one hundred fifty (150) MMBtu per hour, firing waste oil as primary fuel, using No. 2 fuel oil, No. 4 fuel oil, natural gas, propane gas, and butane gas as backup fuels, equipped with a ninety thousand (90,000) actual cubic feet per minute (acfm) baghouse for particulate control and exhausting through Stack SV1.
(a) One (1) drum mixer, approved for construction in 2008 constructed in 1988, with a maximum capacity of 425 tons per hour of liquid asphalt, equipped with a baghouse for particulate control and exhausting through stack SV1.
(b) One (1) drum mixer/ burner, constructed in 2001, with a maximum heat input capacity of one hundred fifty (150) 125 MMBtu per hour, firing waste oil as primary fuel, using No. 2 fuel oil, No. 4 fuel oil, natural gas, propane gas, and butane gas as backup fuels, equipped with a baghouse for particulate control and exhausting through Stack SV1.
(b e) One (1) hot oil heater, identified as 14A , constructed in 1988, with a maximum heat input capacity of 2.0 MMBtu per hour, firing No. 2 fuel oil as primary fuel, using butane gas and propane gas as backup fuels, and exhausting through Stack SV2.
(c) One (1) hot oil heater, identified as 14B, approved for construction in 2008, with a maximum heat input capacity of two (2.0) MMBtu per hour, firing No. 2 fuel oil as primary fuel, using butane gas and propane gas as backup fuels, and exhausting through Stack SV10.
...
(f) One (1) tank for storing liquid asphalt, identified as 13D, approved for construction in 2008, with a maximum capacity of thirty thousand (30,000) gallons, and exhausting through Stack SV11.
(g f)
(hg)
(i h)
...

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 shall not exceed 0.233 pounds PM per ton and 0.157 pounds PM10 per ton of asphalt produced, and the amount of asphalt produced shall not exceed 1,000,000 tons per 365 consecutive day period with compliance determined at the end of each day. This limits the entire source PM emissions to less than two hundred fifty (250) tons per year and the entire source PM10 emissions to less than one hundred (100) tons per year. Compliance with these limits render 326 IAC 2-2 (PSD) not applicable for PM and PM10 and 326 IAC 2-7 (Part 70) not applicable for PM10.~~

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D.1.1 Particulate Matter (PM) Limitation [326 IAC 2-2]

- (a) Pursuant to 326 IAC 2-8-4, the amount of asphalt processed shall not exceed 1,000,000 tons per three hundred sixty-five (365) consecutive day period, with compliance determined at the end of each month.
- (b) PM emissions from the dryer/mixer shall be less than 0.233 pounds per ton of asphalt processed.

Compliance with these limits, combined with the potential to emit PM from all other emission units at this source, will limit the source-wide total potential to emit of PM to less than two hundred fifty tons (250) per three hundred sixty-five (365) consecutive day period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.2 Particulate (PM10), Volatile Organic Compound (VOC) and Carbon Monoxide (CO) Limitations [326 IAC 2-8-4] [326 IAC 2-2]

- (a) Pursuant to 326 IAC 2-8-4, the amount of asphalt processed shall not exceed 1,000,000 tons per three hundred sixty-five (365) consecutive day period, with compliance determined at the end of each month.
- (b) PM10 emissions from the dryer/mixer shall be limited to less than one hundred fifty-three ten-thousandths (0.153) ~~0.157~~ pounds of PM10 per ton of asphalt produced.
- (c) VOC emissions from the dryer/mixer shall limited to less than forty-nine ten-thousandths (0.049) pounds of VOC per ton of asphalt produced.
- (d) CO emissions from the dryer/mixer shall be limited to less than one hundred ninety thousandths (0.190) pounds of CO per ton of asphalt produced.

Compliance with these limits, combined with the PM10, VOC and CO emissions from all other units at this source, will limit source-wide PM10, VOC and CO emissions, each, to less than one hundred (100) tons per three hundred sixty-five (365) consecutive day period. Compliance with these limits will render 326 IAC 2-7 (Part 70 Permit Program), and 326 IAC 2-2 (PSD), not applicable.

~~D.1.2 Sulfur Dioxide (SO₂) [326 IAC 2-8-4][326 IAC 2-2]~~

- ~~(a) Pursuant to 326 IAC 2-8-4, the waste oil used in the burner shall be limited to less than 1,743,925 gallons per 365 consecutive day period with compliance determined at the end of each day. Compliance with this limit renders 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70) not applicable.~~
- ~~(b) Pursuant to 326 IAC 2-8-4, the sulfur content of the waste oil shall not exceed one percent (1.0%) by weight, with compliance demonstrated on a calendar month average.~~
- ~~(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.~~

D.1.3 Fuel Limitations [326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-4.1]

The fuel combusted in the dryer/mixer burner and all other combustion equipment shall be limited as follows:

- (a) No. 2, and No. 4 fuel oils shall each have a sulfur content less than or equal to fifty

hundredths percent (0.50%) by weight,

- (b) Waste oils shall have a sulfur content less than or equal to one percent (1.00%) by weight and a chlorine content less than or equal to forty hundredths percent (0.40%) by weight,**
- (c) The HCl emissions from the dryer/mixer shall not exceed two hundred sixty-four hundred-thousandths (0.0264) pounds of HCl per gallon of waste oil burned, and**
- (d) Single Fuel Usage Limitations:**

When combusting only one type of fuel per three hundred sixty-five (365) consecutive day period in the dryer/mixer burner and all other combustion equipment, the usage of fuel shall be limited as follows:

- (1) Natural gas usage shall not exceed 691 million cubic feet per three hundred and sixty-five (365) consecutive day period, with compliance determined at the end of each day,**
- (2) No. 2 fuel oil usage shall not exceed 2,262,000 gallons per three hundred and sixty-five (365) consecutive day period, with compliance determined at the end of each day,**
- (3) No. 4 fuel oil usage shall not exceed 2,367,000 gallons per three hundred and sixty-five (365) consecutive day period, with compliance determined at the end of each day,**
- (4) Propane usage shall not exceed 14,712,928 gallons per three hundred and sixty-five (365) consecutive day period, with compliance determined at the end of each day,**
- (5) Butane usage shall not exceed 12,900,000 gallons per three hundred and sixty-five (365) consecutive day period, with compliance determined at the end of each day,**
- (6) Waste oil usage shall be determined using the following equations:**

$$U = W_A * S_A$$

$$U = W_A * Cl_A$$

where:

U = Waste oil usage

W_A = actual gallons of waste oil used in the last three hundred sixty-five (365) days, with less than one percent (1.00%) by weight sulfur content.

S_A = actual percent (%) sulfur content of waste oil.

Cl_A = actual percent (%) chlorine content of waste oil.

The limit on waste oil usage will sometimes be dictated by the sulfur content and other times be dictated by the chlorine content. However, waste oil usage shall in no case exceed 750,000 gallons at the maximum allowable sulfur content (one percent (1.00%)) and chlorine content (forty hundredths percent (0.40%)) per three hundred and sixty-five (365) consecutive day period, with compliance determined at the end of each day. This waste oil limit was

changed from 1,743,925 gallons per year.

(e) **Multiple Fuel Usage Limitation:**

When combusting more than one fuel per three hundred sixty-five (365) consecutive day period in the dryer/mixer burner and all other combustion equipment, emissions from the dryer/mixer and all other combustion equipment shall be limited as follows:

- (1) **Sulfur dioxide (SO₂) emissions from the dryer/mixer and all other combustion equipment shall be less than one hundred (100) tons per three hundred sixty-five (365) consecutive day period, with compliance determined at the end of each month;**
- (2) **Hydrogen Chloride (HCl) emissions from the dryer/mixer and all other combustion equipment shall be less than ten (10) tons per three hundred sixty-five (365) consecutive day period, with compliance determined at the end of each month; and**
- (3) **Nitrogen oxides (NO_x) emissions from the dryer/mixer and all other combustion equipment shall be less than one hundred (100) tons per three hundred sixty-five (365) consecutive day period, with compliance determined at the end of each month.**

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

~~D.1.4 3 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-2]~~

...

~~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 propane used in the burner shall be limited to less than 10,315,800 gallons per 365 consecutive day period with compliance determined at the end of each day. Compliance with this limit renders 326 IAC 2-7 (Part 70) not applicable.~~
- ~~(b) For purposes of determining compliance based on NO_x emissions, 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.~~

~~D.1.5 Volatile Organic Compounds (VOC) [326 IAC 2-8-4][326 IAC 2-3][326 IAC 2-2]~~

~~The usage of liquid binder in the production of cold mix cutback asphalt shall be limited such that VOC emissions do not exceed **fifty-two and fifty hundredths (52.50)** 95.94 tons per 365 consecutive day period with compliance determined at the end of each day. Compliance with this limit renders 326 IAC 2-7 (Part 70) not applicable.~~

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Compliance Determination Requirements

D.1.8 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

Within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008 after issuance of this permit, the Permittee shall perform **PM2.5**, PM and PM10 testing for the **dryer/mixer, dryer/mixer burner and 90,000 acfm baghouse**, in order to demonstrate compliance with Conditions D.1.1(b) and D.1.2(b), utilizing methods as approved by the Commissioner. **These tests** This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. **PM10 and PM2.5, each**, includes filterable and condensable PM40. Testing shall be conducted in accordance with Section C- Performance Testing.

D.1.9 Single Fuel Usage Limitation

(a) In order to comply with Condition D.1.3(d) when combusting waste oil in the dryer/mixer burner and all other combustion equipment, the Permittee shall limit waste oil usage in the dryer/mixer burner and all other combustion equipment according to the following formulas:

(1) Sulfur dioxide emission calculation

$$S = \frac{U(E_U)}{2,000 \text{ lbs/ton}}$$

where:

S = tons of sulfur dioxide emissions for three hundred sixty-five (365) consecutive day period; and

U = gallons of waste oil used in the last three hundred sixty-five (365) days with less than or equal to one percent (1.00%) sulfur content;

Emission Factors for Sulfur Dioxide

E_U = one hundred forty-seven thousandths (0.147) pounds per gallon of waste oil.

Compliance with this limit, combined with the SO₂ emissions from all other units at this source, will limit the source-wide SO₂ emissions to less than one hundred (100) tons per three hundred sixty-five (365) consecutive day period and shall render 326 IAC 2-7 (Part 70 Permit Program), and 326 IAC 2-2 (PSD), not applicable.

(2) Hydrogen chloride emission calculation

$$HCl = \frac{U(E_{Cl})}{[2000 \text{ lbs/ ton}]}$$

where:

U = gallons waste oils used in the last three hundred sixty-five (365) days

Emission Factors for Hydrogen Chloride

E_{Cl} = sixty-six thousandths (0.066) pounds per gallon of waste oil.

Compliance with this limit, combined with the HCl emissions from all other emission units at this source, will limit the source-wide HCl emissions to less than ten (10) tons per three hundred sixty-five (365) consecutive day period and total combined HAP emissions shall be limited to less than twenty-five (25)

tons per three hundred sixty-five (365) consecutive day period, and render 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable.

D.1.10 Multiple Fuel Usage Limitations

(a) In order to comply with Condition D.1.3(e) when combusting more than one fuel per three hundred sixty-five (365) consecutive day period in the dryer/mixer burner and all other combustion equipment, the Permittee shall limit fuel usage in the dryer/mixer burner and all other combustion equipment according to the following formulas:

(1) Sulfur Dioxide emission calculation

$$S = \frac{G(E_G) + O(E_O) + F(E_F) + (P)(E_P) + B(E_B) + U(E_U)}{2,000 \text{ lbs/ton}}$$

where:

S = tons of sulfur dioxide emissions for three hundred sixty-five (365) consecutive day period;

G = million cubic feet of natural gas used in last three hundred sixty-five (365) days;

O = gallons of No. 2 fuel oil used in last three hundred sixty-five (365) days with less than or equal to fifty hundredths percent (0.50%) sulfur content;

F = gallons of No. 4 fuel oil used in last three hundred sixty-five (365) days with less than or equal to fifty hundredths percent (0.50%) sulfur content;

P = gallons of propane used in the last three hundred sixty-five (365) days with less than or equal to twenty thousandths (0.20) grains per one hundred (100) cubic feet of sulfur in content;

B = gallons of butane used in the last three hundred sixty-five (365) days with less than or equal to twenty thousandths (0.20) grains per one hundred (100) cubic feet of sulfur in content; and

U = gallons of waste oil used in the last three hundred sixty-five (365) days with less than or equal to one percent (1.00%) sulfur content;

Emission Factors for Sulfur Dioxide

E_G = six tenths (0.6) pounds per million cubic feet of natural gas;

E_O = seven hundred eighty-five hundred-thousandths (0.0785) pounds per gallon of No. 2 fuel oil;

E_F = seventy-five ten-thousandths (0.075) pounds per gallon of No. 4 fuel oil;

E_P = two millionths (0.00002) pounds per gallon of propane;

E_B = two millionths (0.00002) pounds per gallon of butane; and

E_U = one hundred forty-seven thousandths (0.147) pounds per gallon of waste oil.

Compliance with these limits, combined with the SO₂ emissions from all other units at this source, will limit the source-wide SO₂ emissions to less than one hundred (100) tons per three hundred sixty-five (365) consecutive day period and shall render 326 IAC 2-7 (Part 70 Permit Program), and 326 IAC 2-2 (PSD), not applicable.

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(2) Hydrogen chloride emission calculation

$$HCl = \underline{\quad U(E_{Cl}) \quad}$$

[2000 lbs/ ton]

where:

U = gallons waste oils used in the last three hundred sixty-five (365) days

Emission Factors for Hydrogen Chloride

E_{Cl} = sixty-six thousandths (0.066) pounds per gallon of waste oil.

Compliance with this limit, combined with the HCl emissions from all other emission units at this source, will limit the source-wide HCl emissions to less than ten (10) tons per three hundred sixty-five (365) consecutive day period and total combined HAP emissions shall be limited to less than twenty-five (25) tons per three hundred sixty-five (365) consecutive day period, and render 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable.

(3) **Nitrogen oxides emission calculation**

$$N = \frac{G(E_G) + O(E_O) + F(E_F) + P(E_P) + B(E_B) + U(E_U)}{2,000 \text{ lbs/ton}}$$

where:

N = tons of nitrogen oxides emissions for a three hundred sixty-five (365) consecutive day period;

G = million cubic feet of natural gas used in the last three hundred sixty-five (365) days;

O = gallons of No. 2 fuel oil used in last three hundred sixty-five (365) days;

F = gallons of No. 4 fuel oil used for last three hundred sixty-five (365) days;

P = gallons of propane used in the last three hundred sixty-five (365) days;

B = gallons of butane used in the last three hundred sixty-five (365) days;
and

U = gallons waste oils used in the last three hundred sixty-five (365) days.

Emission Factors for nitrogen oxides

E_G = two hundred eighty (280) pounds per million cubic feet of natural gas;

E_O = twenty-four ten-thousandths (0.024) pounds per gallon of No. 2 fuel oil;

E_F = forty-seven ten-thousandths (0.047) pounds per gallon of No. 4 fuel oil;

E_P = thirteen hundredths (0.013) pounds per gallon of propane;

E_B = fifteen hundredths (0.015) pounds per gallon of butane; and

E_U = nineteen ten-thousandths (0.019) pounds per gallon of waste oil.

Compliance with these limits, combined with the NO_x emissions from all other units at this source, will limit source-wide NO_x emissions to less than one hundred (100) tons per three hundred sixty-five (365) consecutive day period. Compliance with these limits will render 326 IAC 2-7 (Part 70 Permit Program), and 326 IAC 2-2 (PSD), not applicable.

D.1. 11 9 Sulfur Dioxide (SO₂) Emissions and Sulfur Content

Compliance with Conditions D.1.3(a)2, D.1.3(b), and D.1.43 shall be determined utilizing one of the following options. Pursuant to 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements), compliance shall be demonstrated on a thirty (30) day calendar-month average.

...

...

D.1.12 Hydrogen Chloride (HCl) Emissions and Chlorine Content

In order to comply with Conditions D.1.3(b) and D.1.3(c), the Permittee shall demonstrate that

the chlorine content of the fuel used for the dryer/mixer burner all other fuel combustion equipment does not exceed forty hundredths of a percent (0.40%) by weight, when combusting waste oil, by providing a vendor analysis of each fuel delivery accompanied by a vendor certification.

D.1.13 40 Particulate Control [326 IAC 2-8-6(6)]

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D.1.14 44 Volatile Organic Compounds (VOC)

...

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

D.1.15 42 Visible Emissions Notations

...

D.1.16 43 Parametric Monitoring

...

D.1.17 44 Broken or Failed Bag Detection

...

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

D.1.18 45 Cutback Asphalt Production Rate [326 IAC 2-8-4][326 IAC 2-3]

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D.1.19 46 Record Keeping Requirements[326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-3][326 IAC 7-1.1-2]
[326 IAC 7-2-1]

(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 day.

(b) To document compliance with Conditions ~~D.1.2~~, D.1.3 and D.1.4, the Permittee shall maintain records in accordance with (1) through (7 ~~6~~) below. Records maintained for (1) through (7 ~~6~~) shall be taken daily and shall be complete and sufficient to establish compliance with the SO₂, **HCl** and NO_x emission limits established in Conditions ~~D.1.2~~, D.1.3 and D.1.4. For the annual fuel limits, the compliance determination period is the most recent 365 day period. For the sulfur content limit, the compliance determination period is each calendar month.

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

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

(3) **Actual waste oil usage, chlorine content, and equivalent hydrogen chloride (HCl) emission rate per month**;

(4 ~~3~~) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

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

(54) Fuel supplier certifications;

(65) The name of the fuel supplier; and

- (7~~6~~) A statement from the fuel supplier that certifies the sulfur content of the **No. 2 and No. 4 fuel oils, and the waste oil, and the chlorine content of waste oil.**

- (c) **To document compliance with Conditions D.1.3(e) and D.1.10 when combusting more than one fuel per three hundred sixty-five (365) consecutive day period in the dryer/mixer burner and all other combustion equipment, the Permittee shall maintain records of actual fuel usage and equivalent sulfur dioxide, hydrogen chloride, and nitrogen oxides emission rates for each fuel used at the source per month.**

- (d~~e~~) The Permittee shall maintain records sufficient to verify compliance with the procedures specified in Condition D.1.11 ~~9~~ and D.1.12. Records shall be maintained for a period of five (5) years and shall be made available upon request by IDEM, OAQ.

- (e~~d~~) To document compliance with Condition D.1.15 ~~42~~, 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 (e.g., the plant did not operate that day).**

- (f~~e~~) To document compliance with Condition D.1.16 ~~43~~, 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, (e.g., the dryer/mixer did not operate that day).**

- (g~~f~~) **The Permittee shall maintain records of all recording/monitoring data and support information** ~~All records shall be maintained~~ in accordance with Section C - General Record Keeping Requirements, of this permit. **Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.**

D.1.20 ~~47~~ Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1(a), **D.1.1(b)**, D.1.2(a), **D.1.2(b)**, **D.1.2(c)**, **D.1.2(d)**, **D.1.3(d)**, **D.1.3(e)**, D.1.4(a), **D.1.4(b)** and D.1.5, **D.1.9**, and **D.1.10** 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).

D.1.21 ~~48~~ 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]

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D.1.22 ~~49~~ New Source Performance Standards (NSPS) for Hot Mix Asphalt Facilities [40 CFR 60, Subpart I]

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

FESOP Usage Report (Submit Report Quarterly)

Source Name: _____ Rieth-Riley Construction Co., Inc. _____
 Source Address: _____ 25200 State Road 23, South Bend, Indiana 46614 _____
 Mailing Address: _____ PO Box 477, Goshen, Indiana 46527 _____
 FESOP No.: _____ F141-22022-00027 _____
 Facility: _____ Burner _____
 Parameter: _____ Waste Oil usage _____
 Limit: _____ 1,743,925 gallons of waste oil per 365 consecutive day period, where each gallon of #2 distillate oil shall be equivalent to 0.6636 gallons of waste oil, each gallon of #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, with compliance determined at the end of each day.

Month: _____ Year: _____

Day	This day (tons)	Previous 364 days (tons)	365 day Total (tons)	Day	This day (tons)	Previous 364 days (tons)	365 day Total (tons)
1				17			
2				18			
3				19			
4				20			
5				21			
6				22			
7				23			
8				24			
9				25			
10				26			
11				27			
12				28			
13				29			
14				30			
15				31			
16							

_____ 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 Usage Report (Submit Report Quarterly)

Source Name: _____ Rieth-Riley Construction Co., Inc. _____
 Source Address: _____ 25200 State Road 23, South Bend, Indiana 46614 _____
 Mailing Address: _____ PO Box 477, Goshen, Indiana 46527 _____
 FESOP No.: _____ F141-22022-00027 _____
 Facility: _____ Burner _____
 Parameter: _____ Propane usage _____
 Limit: _____ 10,315,800 gallons of propane per 365 consecutive day period, where each gallon of #2 distillate oil shall be equivalent to 1.263 gallons of propane, each gallon of #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, with compliance determined at the end of each day.

Month: _____ Year: _____

Day	This day (tons)	Previous 364 days (tons)	365 day Total (tons)	Day	This day (tons)	Previous 364 days (tons)	365 day Total (tons)
1				17			
2				18			
3				19			
4				20			
5				21			
6				22			
7				23			
8				24			
9				25			
10				26			
11				27			
12				28			
13				29			
14				30			
15				31			
16							

_____ 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
Page 1 of 4**

Source Name: Rieth-Riley Construction Co., Inc.
Source Location: 25200 State Road 23, South Bend, Indiana 46614
Mailing Address: PO Box 477, Goshen, Indiana 46527
FESOP No.: F141-27073-00027

Facilities: Dryer/mixer burner and all other combustion equipment

Parameters: Fuel Usage and Sulfur Dioxide (SO₂) Emissions

Limit: Sulfur dioxide (SO₂) emissions shall be less than 100 tons per 365 consecutive day period based on the following equation:

$$S = \frac{G(E_G) + O(E_O) + F(E_F) + (P)(E_P) + B(E_B) + U(E_U)}{2,000 \text{ lbs/ton}}$$

where:

- S = tons of sulfur dioxide emissions for 365 consecutive day period;
- G = million cubic feet of natural gas used in last 365 days;
- O = gallons of No. 2 fuel oil used in last 365 days with less than or equal to 0.5% sulfur content;
- F = gallons of No. 4 fuel oil used in last 365 days with less than or equal to 0.5% sulfur content;
- P = gallons of propane used in the last 365 days with less than or equal to 0.20 grains per 100 cubic feet of sulfur content;
- B = gallons of butane used in the last 365 days with less than or equal to 0.20 grains per 100 cubic feet of sulfur content; and
- U = gallons of waste oil used in the last 365 days.

Emission Factors for Sulfur dioxide

- E_G = 0.6 pounds per million cubic feet of natural gas;
- E_O = 0.0785 pounds per gallon of No. 2 fuel oil;
- E_F = 0.075 pounds per gallon of No. 4 fuel oil;
- E_P = 0.00002 pounds per gallon of propane;
- E_B = 0.00002 pounds per gallon of butane; and
- E_U = 0.147 pounds per gallon of waste oil.

QUARTER: _____ MONTH: _____ YEAR: _____

- 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
Page 1 of 4**

Source Name: Rieth-Riley Construction Co., Inc.
Source Location: 25200 State Road 23, South Bend, Indiana 46614
Mailing Address: PO Box 477, Goshen, Indiana 46527
FESOP No.: F141-27073-00027

Facilities: Dryer/mixer burner and all other combustion equipment

Parameters: Fuel Usage and Nitrogen Oxides (NOx) Emissions

Limit: NOx emissions shall be less than 100 tons per three hundred sixty-five (365) consecutive day period based on the following equation:

$$N = \frac{G(E_G) + O(E_O) + F(E_F) + P(E_P) + B(E_B) + U(E_U)}{2,000 \text{ lbs/ton}}$$

where:

N = tons of nitrogen oxide emissions for a 365 consecutive day period;
G = million cubic feet of natural gas used in the last 365 days;
O = gallons of No. 2 fuel oil used in last 365 days;
F = gallons of No. 4 fuel oil used for last 365 days;
P = gallons of propane used in the last 365 days;
B = gallons of butane used in the last 365 days; and
U = gallons waste oils used in the last 365 days.

Emission Factors for Nitrogen oxides

E_G = 280 pounds per million cubic feet of natural gas;
E_O = 0.024 pounds per gallon of No. 2 fuel oil;
E_F = 0.047 pounds per gallon of No. 4 fuel oil;
E_P = 0.019 pounds per gallon of propane;
E_B = 0.021 pounds per gallon of butane; and
E_U = 0.019 pounds per gallon of waste oil.

QUARTER: _____ MONTH: _____ YEAR: _____

- 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

Page 1 of 2

Source Name: Rieth-Riley Construction Co., Inc.
Source Location: 25200 State Road 23, South Bend, Indiana 46614
Mailing Address: PO Box 477, Goshen, Indiana 46527
FESOP No.: F141-27073-00027

Facilities: Dryer/mixer burner and all other combustion equipment

Parameters: Fuel Usage and Hydrogen Chloride (HCl) Emissions

Limit: HCl emissions shall be less than 10 tons per three hundred sixty-five (365) consecutive day period based on the following equation:

$$\text{HCl} = \frac{U(E_{\text{Cl}})}{[2000 \text{ lbs/ ton}]}$$

where:

U = gallons waste oils used in the last 365 days

Emission Factors for Hydrogen Chloride
E_{Cl} = 0.066 pounds per gallon of waste oil.

QUARTER: _____ MONTH: _____ YEAR: _____

- 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.

FESOP Fuel Usage and Hydrogen Chloride (HCL) Emissions Reporting Form

QUARTER: _____ MONTH: _____ YEAR: _____

Waste Oil ≤ 0.40 wt% chlorine					
Day	Chlorine Content of Fuel (%)	Column 1	Column 2	Column 1 + Column 2	Equation Results
		Fuel Usage This Day (gal)	Fuel Usage Previous 364 days (gal)	Fuel Usage 365 day Total (gal)	Total HCl Emissions from Waste Oil (tons per 365 days)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY COMPLIANCE DATA SECTION

FESOP Usage Report (Submit Report Quarterly)

Source Name: Rieth-Riley Construction Co., Inc.
 Source Address: 25200 State Road 23, South Bend, Indiana 46614
 Mailing Address: PO Box 477, Goshen, Indiana 46527
 FESOP No.: F141-22022-00027
 Facility: Cutback Asphalt Process
 Parameter: Volatile Organic Compound (VOC) emissions
 Limit: **52.50** ~~95.94~~ tons of VOC emitted per 365 consecutive day period with compliance determined at the end of each day, where VOC emissions (tons) = Amount of diluent Used (tons) x Weight % VOC in diluent.

Month: _____ Year: _____

Day	This day (tons)	Previous 364 days (tons)	365 day Total (tons)	Day	This day (tons)	Previous 364 days (tons)	365 day Total (tons)
1				17			
2				18			
3				19			
4				20			
5				21			
6				22			
7				23			
8				24			
9				25			
10				26			
11				27			
12				28			
13				29			
14				30			
15				31			
16							

- 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.

3. IDEM, OAQ has decided to make additional revisions to the permit as described below. The permit is revised as follows with deleted language as ~~strikeouts~~ and new language **bolded**:
- (a) All occurrences of IDEM's mailing addresses have been updated in the permit. Any occurrences of the zip code 46204 have been revised to **46204-2251**, and all addresses have been revised to include a mail code (MC) as follows:
- | | |
|---|---------------------------|
| Asbestos Section: | MC 61-52 IGCN 1003 |
| Compliance Branch: | MC 61-53 IGCN 1003 |
| Permits Branch: | MC 61-53 IGCN 1003 |
| Technical Support and Modeling Section: | MC 61-50 IGCN 1003 |
- (b) All occurrences of the Compliance Data Branch telephone and facsimile numbers have been revised to 317-233-~~5674~~ **0178** and 317-233-~~5967~~ **6865**, respectively.
- (c) The phone number for the OAQ, Billing, Licensing, and Training Section (BLT) in Condition B.24(c) is revised to 317-233-~~4230~~ **4320**.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on October 6, 2008.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Significant Revision No. 141-27073-00027. The staff recommends to the Commissioner that this FESOP Significant Revision be approved.

IDEM Contact

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

**Appendix A: Emissions Calculations
Unlimited/Uncontrolled Emission Summary**

Company Name: Rieth-Riley Construction Co., Inc.
Source Location: 25200 State Road 23, South Bend, Indiana 46614
Permit Number: F 141-22022-00027
Revision No.: F 141-27073-00027
Reviewer: Hannah L. Desrosiers
Date Submitted: October 6, 2008

Asphalt Plant Maximum Capacity

Maximum Hourly Asphalt Production =	450	ton/hr								
Maximum Annual Asphalt Production =	3,942,000	ton/yr								
Maximum Fuel Input Rate =	155	MMBtu/hr	<i>Total input rate of all fuel combustion equipment combined (i.e., dryer burner, heaters, generators,</i>							
Equivalent Natural Gas Usage =	1,332	MMCF/yr								
Equivalent No. 2 Fuel Oil Usage =	9,510,857	gal/yr, and	0.50	% sulfur						
Equivalent No. 4 Fuel Oil Usage =	9,510,857	gal/yr, and	0.50	% sulfur						
Equivalent Propane Usage =	14,712,928	gal/yr, and	0.20	gr/100 ft ³ sulfur						
Equivalent Butane Usage =	13,670,637	gal/yr, and	0.20	gr/100 ft ³ sulfur						
Equivalent Used/Waste Oil Usage =	9,510,857	gal/yr, and	1.00	% sulfur	0.50	% ash	0.40	% chlorine,	0.01	% lead

Unlimited/Uncontrolled Emissions

Process Description	Unlimited/Uncontrolled Potential to Emit (tons/year)							
	Criteria Pollutants					Hazardous Air Pollutants		
	PM	PM10	SO2	NOx	VOC	CO	Total HAPs	Worst Case HAP
Ducted Emissions								
Fuel Combustion (worst case)	310.35	247.31	712.85	227.92	7.67	58.55	133.71	128.02 (hydrogen chloride)
Dryer/Mixer	55,188.00	12,811.50	114.32	108.41	63.07	256.23	21.01	6.11 (formaldehyde)
Worst Case Emissions	55,188.00	12,811.50	712.85	227.92	63.07	256.23	133.71	128.02 (hydrogen chloride)
Fugitive Emissions								
Asphalt Load-Out, Silo Filling, On-Site Yard	2.18	2.18	0	0	33.76	5.68	0.56	0.17 (formaldehyde)
Hot Oil Heating System	0	0	0	0	4.1E-03	0.19	4.1E-03	2.6E-03 (naphthalene)
Material Storage Piles	0.50	0.17	0	0	0	0	0	0
Material Processing and Handling	12.73	6.02	0	0	0	0	0	0
Material Crushing, Screening, and Conveying	62.54	22.84	0	0	0	0	0	0
Paved and Unpaved Roads (worst case)	279.98	71.36	0	0	0	0	0	0
Cold Mix Asphalt Production	0	0	0	0	47,372.99	0	12,356.63	4,263.57 (xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	negl.	0	negl.	negl.
Total Fugitive Emissions	357.94	102.58	0	0	47,406.75	5.87	12,357.20	4,263.57 (xylenes)
Totals Unlimited/Uncontrolled PTE	55,545.94	12,914.08	712.85	227.92	47,469.82	262.10	12,490.91	4,263.57 (xylenes)

negl = negligible

Appendix A: Emissions Calculations Limited Emission Summary

Company Name: Rieth-Riley Construction Co., Inc.
Source Location: 25200 State Road 23, South Bend, Indiana 46614
Permit Number: F 141-22022-00027
Revision No.: F 141-27073-00027
Reviewer: Hannah L. Desrosiers
Date Submitted: October 6, 2008

Asphalt Plant Limitations

Annual Asphalt Production Limitation =	1,000,000	ton/yr	<i>value set in order to limit source-wide CO to less than 100 tons/year</i>	
Natural Gas Limitation =	691	MMCF/yr		
No. 2 Fuel Oil Limitation =	2,262,000	gal/yr, and	0.50	% sulfur
No. 4 Fuel Oil Limitation =	2,367,000	gal/yr, and	0.50	% sulfur
Propane Limitation =	14,712,928	gal/yr, and	0.20	gr/100 ft3 sulfur
Butane Limitation =	12,900,000	gal/yr, and	0.20	gr/100 ft3 sulfur
Used/Waste Oil Limitation =	750,000	gal/yr, and	1.00	% sulfur
			0.50	% ash
			0.400	% chlorine,
			0.010	% lead
PM Dryer/Mixer Limitation =	0.233	lb/ton of asphalt production	<i>value set in order to limit source-wide PM to less than 250 tons/year</i>	
PM10 Dryer/Mixer Limitation =	0.153	lb/ton of asphalt production	<i>value set in order to limit source-wide PM-10 to less than 100 tons/year</i>	
CO Dryer/Mixer Limitation =	0.190	lb/ton of asphalt production	<i>note AP-42 uncontrolled emission factor for CO is 0.13 lb/ton</i>	
VOC Dryer/Mixer Limitation =	0.049	lb/ton of asphalt production	<i>note AP-42 uncontrolled emission factor for VOC is 0.032 lb/ton</i>	
Cold Mix Asphalt VOC Usage Limitation =	52.50	tons/yr	<i>value set in order to limit source-wide VOC to less than 100 tons/year and source-wide HAPs to less than 10/25 tons/year</i>	

Limited/Controlled Emissions

Process Description	Limited/Controlled Potential Emissions (tons/year)								
	Criteria Pollutants						Hazardous Air Pollutants		
	PM	PM10	SO2	NOx	VOC	CO	Total HAPs	"Worst" Case Single HAP	
Ducted Emissions									
Fuel Combustion (worst case)	24.31	19.64	99.96	99.93	7.59	57.00	11.07	9.90	(hydrogen chloride)
Dryer/Mixer (process)	116.50	76.50	29.00	27.50	24.50	95.00	5.33	1.55	(formaldehyde)
Worst Case Emissions	116.50	76.50	99.96	99.93	24.50	95.00	11.07	9.90	(hydrogen chloride)
Fugitive Emissions									
Asphalt Load-Out, Silo Filling, On-Site Yard	0.55	0.55	0	0	8.57	1.44	0.14	0.04	(formaldehyde)
Hot Oil Heating System (process)	0	0	0	0	4.1E-03	0.19	4.1E-03	2.6E-03	(naphthalene)
Material Storage Piles	1.60	0.56	0	0	0	0	0	0	
Material Processing and Handling	3.23	1.53	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	15.87	5.80	0	0	0	0	0	0	
Unpaved Roads (worst case)	70.90	14.90	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	52.50	0	13.69	4.73	(xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	negl.	0	negl.	negl.	
Total Fugitive Emissions	92.15	23.34	0	0	61.07	1.63	13.84	4.73	(xylenes)
Totals Limited/Controlled Emissions	208.65	99.84	99.96	99.93	85.57	96.63	24.91	9.90	(hydrogen chloride)

negl = negligible

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

Company Name: Rieth-Riley Construction Co., Inc.
Source Location: 25200 State Road 23, South Bend, Indiana 46614
Permit Number: F 141-22022-00027
Revision No.: F 141-27073-00027
Reviewer: Hannah L. Desrosiers
Date Submitted: October 6, 2008

The following calculations determine the Unlimited/Uncontrolled emissions created from the combustion of natural gas, fuel oil, propane, butane, or waste oil in the dryer/mixer.

Production and Fuel Limitations

Annual Asphalt Production Limitation =	1,000,000	ton/yr											
Natural Gas Limitation =	691	MMCF/yr											
No. 2 Fuel Oil Limitation =	2,262,000	gal/yr, and	0.50	% sulfur									
No. 4 Fuel Oil Limitation =	2,367,000	gal/yr, and	0.50	% sulfur									
Propane Limitation =	14,712,928	gal/yr, and	0.20	gr/100 ft3 sulfur									
Butane Limitation =	12,900,000	gal/yr, and	0.20	gr/100 ft3 sulfur									
Used/Waste Oil Limitation =	750,000	gal/yr, and	1.00	% sulfur	1.00	% ash	0.400	% chlorine	0.010	% lead			

Limited Emissions

Criteria Pollutant	Emission Factor (units)							Limited Potential to Emit (tons/yr)						
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Waste Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Waste Oil (tons/yr)	Worse Case Fuel (tons/yr)	
PM	1.9	2.0	7.0	0.5	0.6	64.0	0.66	2.26	8.28	3.68	3.87	24.00	24.00	
PM10	7.6	3.3	8.3	0.5	0.6	51.0	2.63	3.73	9.82	3.68	3.87	19.13	19.13	
SO2	0.6	78.5	75.0	0.020	0.018	147.0	0.21	88.78	88.76	0.15	0.12	55.13	88.78	
NOx	280	24.0	47.0	13.0	15.0	19.0	96.74	27.14	55.62	95.63	96.75	7.13	96.75	
VOC	5.5	0.20	0.20	1.00	1.10	1.0	1.90	0.23	0.24	7.36	7.10	0.38	7.36	
CO	84	5.0	5.0	7.5	8.4	5.0	29.02	5.66	5.92	55.17	54.18	1.88	55.17	
Hazardous Air Pollutant														
HCl						26.4						9.90	9.90	
Antimony			5.25E-03			negl				6.21E-03		negl	6.2E-03	
Arsenic	2.0E-04	5.6E-04	1.32E-03			1.1E-01	6.9E-05	6.33E-04	1.56E-03			0.04	0.04	
Beryllium	1.2E-05	4.2E-04	2.78E-05			negl	4.1E-06	4.75E-04	3.29E-05			negl	4.8E-04	
Cadmium	1.1E-03	4.2E-04	3.98E-04			9.3E-03	3.8E-04	4.75E-04	4.71E-04			3.49E-03	3.5E-03	
Chromium	1.4E-03	4.2E-04	8.45E-04			2.0E-02	4.8E-04	4.75E-04	1.00E-03			0.01	0.01	
Cobalt	8.4E-05		6.02E-03			2.1E-04	2.9E-05		7.12E-03			7.88E-05	7.1E-03	
Lead	5.0E-04	1.3E-03	1.51E-03			0.55	1.7E-04	1.43E-03	1.79E-03			0.21	0.21	
Manganese	3.8E-04	8.4E-04	3.00E-03			6.8E-02	1.3E-04	9.50E-04	3.55E-03			2.55E-02	0.03	
Mercury	2.6E-04	4.2E-04	1.13E-04				9.0E-05	4.75E-04	1.34E-04				4.8E-04	
Nickel	2.1E-03	4.2E-04	8.45E-02			1.1E-02	7.3E-04	4.75E-04	0.10			4.13E-03	0.10	
Selenium	2.4E-05	2.1E-03	6.83E-04			negl	8.3E-06	2.38E-03	8.08E-04			negl	2.4E-03	
1,1,1-Trichloroethane			2.36E-04						2.79E-04				2.8E-04	
1,3-Butadiene													0	
Acetaldehyde													0	
Acrolein													0	
Benzene	2.1E-03		2.14E-04				7.3E-04		2.53E-04				7.3E-04	
Bis(2-ethylhexyl)phthalate						2.2E-03						8.25E-04	8.3E-04	
Dichlorobenzene	1.2E-03					8.0E-07	4.1E-04					3.00E-07	4.1E-04	
Ethylbenzene			6.36E-05						7.53E-05				7.5E-05	
Formaldehyde	7.5E-02	6.10E-02	3.30E-02				0.03	0.07	0.04				0.069	
Hexane	1.8E+00						0.62						0.622	
Phenol						2.4E-03						9.00E-04	9.0E-04	
Toluene	3.4E-03		6.20E-03				1.2E-03		7.34E-03				7.3E-03	
Total PAH Haps	negl		1.13E-03			3.9E-02	negl		1.34E-03			0.01	0.01	
Polycyclic Organic Matter		3.30E-03						3.73E-03					3.7E-03	
Xylene			1.09E-04						1.29E-04				1.3E-04	
Total HAPs =							0.65	0.08	0.17	0	0	10.20	11.02	

Abbreviations

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

"Worst" Single HAP = 9.90

Methodology

Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
 Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
 Equivalent Propane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0905 MMBtu]
 Equivalent Butane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0974 MMBtu]
 Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
 Waste Oil _{PM/PM10}: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Waste Oil Usage (MMCF/yr)] * [Ash Content (%)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
 Waste Oil _{SO2}: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Waste Oil Usage (MMCF/yr)] * [Sulfur Content (%)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
 Waste Oil _{HCl}: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Waste Oil Usage (MMCF/yr)] * [Chlorine Content (%)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
 Waste Oil _{Lead}: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Waste Oil Usage (MMCF/yr)] * [Lead Content (%)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
 All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
 Sources of AP-42 Emission Factors for fuel combustion:
 Natural Gas: AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
 No. 2, No. 4, and No. 6 Fuel Oil: AP-42 Chapter 1.3 (dated 9/98), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11
 Propane and Butane: AP-42 Chapter 1.5 (dated 07/08), Tables 1.5-1 (assuming PM = PM10)
 Waste Oil: AP-42 Chapter 1.11 (dated 10/96), Tables 1.11-1, 1.11-2, 1.11-3, 1.11-4, and 1.11-5

Notes

*Since there are no specific AP-42 HAP emission factors for combustion of No. 4 fuel oil, it was assumed that HAP emissions from combustion of No. 4 fuel oil were equal to combustion of residual or No. 6 fuel oil.

Appendix A: Emissions Calculations
Limited Emissions
Fuel Combustion with Maximum Capacity < 100 MMBtu/hr
Hot Oil Heating Systems

Company Name: Rieth-Riley Construction Co., Inc.
Source Location: 25200 State Road 23, South Bend, Indiana 46614
Permit Number: F 141-22022-00027
Revision No.: F 141-27073-00027
Reviewer: Hannah L. Desrosiers
Date Submitted: October 6, 2008

The following calculations determine the Unlimited/Uncontrolled emissions created from the combustion of fuel oil, propane, or butane in the Hot Oil Heating Systems.

Hot Oil Heating System (HOHS) Units

2 HOH @ 2.0mmBtu/hr, ea	4.00
2 HOH @ 0.48mmBtu/hr, ea	0.96
	4.96

Maximum Capacity

Maximum Annual Asphalt Production =	3,942,000	ton/yr		
Maximum Fuel Input Rate =	4.96	MMBtu/hr		
Equivalent Natural Gas Usage =	43	MMCF/yr		
Equivalent No. 2 Fuel Oil Usage =	314,852	gal/yr, and	0.50	% sulfur
Equivalent Propane Usage =	474,859	gal/yr, and	0.20	gr/100 ft3 sulfur
Equivalent Butane Usage =	423,485	gal/yr, and	0.20	gr/100 ft3 sulfur

Production and Fuel Limitations

Annual Asphalt Production Limitation =	1,000,000	ton/yr		
Natural Gas Limitation =	43	MMCF/yr		
No. 2 Fuel Oil Limitation =	314,852	gal/yr, and	0.50	% sulfur
Propane Limitation =	474,859	gal/yr, and	0.20	gr/100 ft3 sulfur
Butane Limitation =	423,485	gal/yr, and	0.20	gr/100 ft3 sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units)				Unlimited/Uncontrolled Potential to Emit (tons/yr)					
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Worse Case Fuel (tons/yr)	
PM	1.9	2.0	0.5	0.6	0.041	0.315	0.119	0.127	0.315	
PM10	7.6	3.3	0.5	0.6	0.165	0.520	0.119	0.127	0.520	
SO2	0.6	71.0	0.020	0.018	0.013	11.177	0.005	0.004	11.18	
NOx	100	20.0	13.0	15.0	2.172	3.149	3.087	3.176	3.176	
VOC	5.5	0.20	1.00	1.10	0.119	0.031	0.237	0.233	0.237	
CO	84	5.0	7.5	8.4	1.825	0.787	1.781	1.779	1.825	
Hazardous Air Pollutant										
HCl									0	
Antimony									0	
Arsenic	2.0E-04	5.6E-04			4.3E-06	8.82E-05			8.8E-05	
Beryllium	1.2E-05	4.2E-04			2.6E-07	6.61E-05			6.6E-05	
Cadmium	1.1E-03	4.2E-04			2.4E-05	6.61E-05			6.6E-05	
Chromium	1.4E-03	4.2E-04			3.0E-05	6.61E-05			6.6E-05	
Cobalt	8.4E-05				1.8E-06				1.8E-06	
Lead	5.0E-04	1.3E-03			1.1E-05	1.98E-04			2.0E-04	
Manganese	3.8E-04	8.4E-04			8.3E-06	1.32E-04			1.3E-04	
Mercury	2.6E-04	4.2E-04			5.6E-06	6.61E-05			6.6E-05	
Nickel	2.1E-03	4.2E-04			4.6E-05	6.61E-05			6.6E-05	
Selenium	2.4E-05	2.1E-03			5.2E-07	3.31E-04			3.3E-04	
1,1,1-Trichloroethane									0	
1,3-Butadiene									0	
Acetaldehyde									0	
Acrolein									0	
Benzene	2.1E-03				4.6E-05				4.6E-05	
Bis(2-ethylhexyl)phthalate									0	
Dichlorobenzene	1.2E-03				2.6E-05				2.6E-05	
Ethylbenzene									0	
Formaldehyde	7.5E-02	6.10E-02			1.6E-03	9.60E-03			0.010	
Hexane	1.8E+00				0.04				0.039	
Phenol									0	
Toluene	3.4E-03				7.4E-05				7.4E-05	
Total PAH Haps	negl				negl				0	
Polycyclic Organic Matter		3.30E-03				5.20E-04			5.2E-04	
Xylene									0	
					Total HAPs =	0.04	0.01	0	0	0.05

Abbreviations

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

"Worst" Single HAP = 0.04

Methodology

Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
 Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
 Equivalent Propane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0905 MMBtu]
 Equivalent Butane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0974 MMBtu]
 Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
 All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
 Sources of AP-42 Emission Factors for fuel combustion:
 No. 2, No.4, and No.6 Fuel Oil: AP-42 Chapter 1.3 (dated 9/98), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11
 Propane and Butane: AP-42 Chapter 1.5 (dated 07/08), Tables 1.5-1 (assuming PM = PM10)

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

Company Name: Rieth-Riley Construction Co., Inc.
Source Location: 25200 State Road 23, South Bend, Indiana 46614
Permit Number: F 141-22022-00027
Revision No.: F 141-27073-00027
Reviewer: Hannah L. Desrosiers
Date Submitted: October 6, 2008

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

Annual Asphalt Production Limitation =	1,000,000	ton/yr
PM Dryer/Mixer Limitation =	0.233	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation =	0.153	lb/ton of asphalt production
CO Dryer/Mixer Limitation =	0.190	lb/ton of asphalt production
VOC Dryer/Mixer Limitation =	0.049	lb/ton of asphalt production

Criteria Pollutant	Emission Factor or Limitation (lb/ton)			Limited/Controlled Potential to Emit (tons/yr)			Worse Case PTE
	Drum-Mix Plant (dryer/mixer, controlled by fabric filter)			Drum-Mix Plant (dryer/mixer, controlled by fabric filter)			
	Natural Gas	No. 2 Fuel Oil	No. 6 Fuel Oil or Waste Oil	Natural Gas	No. 2 Fuel Oil	No. 6 Fuel Oil or Waste Oil	
PM	0.233	0.233	0.233	116.5	116.5	116.5	116.5
PM10	0.153	0.153	0.153	76.5	76.5	76.5	76.5
SO2	0.0034	0.011	0.058	1.7	5.5	29.0	29.0
NOx	0.026	0.055	0.055	13.0	27.5	27.5	27.5
VOC	0.049	0.049	0.049	24.5	24.5	24.5	24.5
CO	0.19	0.19	0.19	95.0	95.0	95.0	95.0
Hazardous Air Pollutant							
HCl			2.10E-04			0.11	0.11
Antimony	1.80E-07	1.80E-07	1.80E-07	9.00E-05	9.00E-05	9.00E-05	9.00E-05
Arsenic	5.60E-07	5.60E-07	5.60E-07	2.80E-04	2.80E-04	2.80E-04	2.80E-04
Beryllium	negl	negl	negl	negl	negl	negl	0.00E+00
Cadmium	4.10E-07	4.10E-07	4.10E-07	2.05E-04	2.05E-04	2.05E-04	2.05E-04
Chromium	5.50E-06	5.50E-06	5.50E-06	2.75E-03	2.75E-03	2.75E-03	2.75E-03
Cobalt	2.60E-08	2.60E-08	2.60E-08	1.30E-05	1.30E-05	1.30E-05	1.30E-05
Lead	6.20E-07	1.50E-05	1.50E-05	3.10E-04	7.50E-03	7.50E-03	7.50E-03
Manganese	7.70E-06	7.70E-06	7.70E-06	3.85E-03	3.85E-03	3.85E-03	3.85E-03
Mercury	2.40E-07	2.60E-06	2.60E-06	1.20E-04	1.30E-03	1.30E-03	1.30E-03
Nickel	6.30E-05	6.30E-05	6.30E-05	3.15E-02	3.15E-02	3.15E-02	3.15E-02
Selenium	3.50E-07	3.50E-07	3.50E-07	1.75E-04	1.75E-04	1.75E-04	1.75E-04
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	2.00E-02	2.00E-02	2.00E-02	2.00E-02
Acetaldehyde			1.30E-03			0.65	0.65
Acrolein			2.60E-05			1.30E-02	1.30E-02
Benzene	3.90E-04	3.90E-04	3.90E-04	0.20	0.20	0.20	0.20
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0.12	0.12	0.12	0.12
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	1.55	1.55	1.55	1.55
Hexane	9.20E-04	9.20E-04	9.20E-04	0.46	0.46	0.46	0.46
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0.02	0.02	0.02	0.02
MEK			2.00E-05			0.01	0.01
Propionaldehyde			1.30E-04			0.07	0.07
Quinone			1.60E-04			0.08	0.08
Toluene	1.50E-04	2.90E-03	2.90E-03	0.08	1.45	1.45	1.45
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0.10	0.44	0.44	0.44
Xylene	2.00E-04	2.00E-04	2.00E-04	0.10	0.10	0.10	0.10
Total HAPs						5.33	
Worst Single HAP						1.55	(formaldehyde)

Methodology

Limited/Controlled Potential to Emit (tons/yr) = (Annual Asphalt Production Limitation (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-3, 11.1-7, 11.1-8, 11.1-10, and 11.1-12

Abbreviations

VOC - Volatile Organic Compounds
HCl = Hydrogen Chloride
SO2 = Sulfur Dioxide

HAP = Hazardous Air Pollutant
PAH = Polyaromatic Hydrocarbon

**Appendix A: Emissions Calculations
Unlimited/Uncontrolled Emissions
Hot Oil Heating System Process**

Company Name: Rieth-Riley Construction Co., Inc.
Source Location: 25200 State Road 23, South Bend, Indiana 46614
Permit Number: F 141-22022-00027
Revision No.: F 141-27073-00027
Reviewer: Hannah L. Desrosiers
Date Submitted: October 6, 2008

Hot Oil Heating System (HOHS) Units

2 HOH @ 2.0mmBtu/hr, ea	4.00
2 HOH @ 0.48mmBtu/hr, ea	0.96
	4.96

The following calculations determine the unlimited/uncontrolled fugitive emissions from heating of the oil used in the hot oil heating system.

Maximum Fuel Input Rate To Hot Oil Heater = 5.0 MMBtu/hr
 Equivalent Natural Gas Usage = 43.4 MMCF/yr
 Equivalent No. 2 Fuel Oil Usage = 310,354 gal/yr, and

Criteria Pollutant	Emission Factors		Unlimited/Uncontrolled Potential to Emit (tons/yr)		Worse Case PTE
	Natural Gas (lb/ft3)	No. 2 Fuel Oil (lb/gal)	Natural Gas	No. 2 Fuel Oil	
VOC	2.60E-08	2.65E-05	5.65E-04	0.004	0.004
CO	8.90E-06	0.0012	0.193	0.186	0.193
Hazardous Air Pollutant					
Formaldehyde:	2.60E-08	3.50E-06	5.65E-04	5.43E-04	5.65E-04
Acenaphthene		5.30E-07		8.22E-05	8.22E-05
Acenaphthylene		2.00E-07		3.10E-05	3.10E-05
Anthracene		1.80E-07		2.79E-05	2.79E-05
Benzo(b)fluoranthene		1.00E-07		1.55E-05	1.55E-05
Fluoranthene		4.40E-08		6.83E-06	6.83E-06
Fluorene		3.20E-08		4.97E-06	4.97E-06
Naphthalene		1.70E-05		2.64E-03	2.64E-03
Phenanthrene		4.90E-06		7.60E-04	7.60E-04
Pyrene		3.20E-08		4.97E-06	4.97E-06

Total HAPs 4.14E-03
Worst Single HAP 2.64E-03 (Naphthalene)

Methodology

Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
 Equivalent No. 2 Fuel Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
 Natural Gas: Potential to Emit (tons/yr) = (Natural Gas Usage (MMCF/yr))*(Emission Factor (lb/CF))*(1000000 CF/MMCF)*(ton/2000 lbs)
 No. 2 Fuel Oil: Potential to Emit (tons/yr) = (No. 2 Fuel Oil Usage (gals/yr))*(Emission Factor (lb/gal))*(ton/2000 lbs)
 1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu
 Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Table 11.1-13

*Note: Emissions associated with fuel combustion in the hot oil heater are included in the fuel combustion calculations. Emissions (withdrawal and standing losses) associated with all volatile organic liquid (VOL) storage vessels are not included in the

Abbreviations

CO = Carbon Monoxide
 VOC = Volatile Organic Compound

**Appendix A: Emissions Calculations
Limited Emissions
Cold Mix Asphalt Production and Stockpiles**

Company Name: Rieth-Riley Construction Co., Inc.
Source Location: 25200 State Road 23, South Bend, Indiana 46614
Permit Number: F 141-22022-00027
Revision No.: F 141-27073-00027
Reviewer: Hannah L. Desrosiers
Date Submitted: October 6, 2008

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

Cold Mix Asphalt VOC Usage Limitation = tons/yr

Volatile Organic Compounds

	Maximum weight % of VOC solvent in binder	Weight % VOC solvent in binder that evaporates	VOC Solvent Usage Limitation (tons/yr)	Limited PTE of VOC (tons/yr)
Cut back asphalt rapid cure (assuming gasoline or naphtha solvent)	25.3%	95.0%	55.3	52.5
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	75.0	52.5
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	210.0	52.5
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	113.1	52.5
Other asphalt with solvent binder	25.9%	2.5%	2100.0	52.5
Worst Case Limited PTE of VOC =				52.5

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0% Xylenes
Limited PTE of Total HAPs (tons/yr) =	13.69
Limited PTE of Single HAP (tons/yr) =	4.73 Xylenes

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

Volatile Organic HAP	CAS#	Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents				
		Gasoline	Kerosene	Diesel (#2) Fuel Oil	No. 2 Fuel Oil	No. 6 Fuel Oil
1,3-Butadiene	106-99-0	3.70E-5%				
2,2,4-Trimethylpentane	540-84-1	2.40%				
Acenaphthene	83-32-9		4.70E-5%		1.80E-4%	
Acenaphthylene	208-96-8		4.50E-5%		6.00E-5%	
Anthracene	120-12-7		1.20E-6%	5.80E-5%	2.80E-5%	5.00E-5%
Benzene	71-43-2	1.90%		2.90E-4%		
Benzo(a)anthracene	56-55-3			9.60E-7%	4.50E-7%	5.50E-4%
Benzo(a)pyrene	50-32-8			2.20E-6%	2.10E-7%	4.40E-5%
Benzo(g,h,i)perylene	191-24-2			1.20E-7%	5.70E-8%	
Biphenyl	92-52-4			6.30E-4%	7.20E-5%	
Chrysene	218-01-9			4.50E-7%	1.40E-6%	6.90E-4%
Ethylbenzene	100-41-4	1.70%		0.07%	3.40E-4%	
Fluoranthene	206-44-0		7.10E-6%	5.90E-5%	1.40E-5%	2.40E-4%
Fluorene	86-73-7		4.20E-5%	8.60E-4%	1.90E-4%	
Indeno(1,2,3-cd)pyrene	193-39-5			1.60E-7%		1.00E-4%
Methyl-tert-butylether	1634-04-4	0.33%				
Naphthalene	91-20-3	0.25%	0.31%	0.26%	0.22%	4.20E-5%
n-Hexane	110-54-3	2.40%				
Phenanthrene	85-01-8		8.60E-6%	8.80E-4%	7.90E-4%	2.10E-4%
Pyrene	129-00-0		2.40E-6%	4.60E-5%	2.90E-5%	2.30E-5%
Toluene	108-88-3	8.10%		0.18%	6.20E-4%	
Total Xylenes	1330-20-7	9.00%		0.50%	0.23%	
Total Organic HAPs		26.08%	0.33%	1.29%	0.68%	0.19%
Worst Single HAP		9.00%	0.31%	0.50%	0.23%	0.07%
		Xylenes	Naphthalene	Xylenes	Xylenes	Chrysene

Methodology

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

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

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

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

Abbreviations

VOC = Volatile Organic Compounds

PTE = Potential to Emit

*Appendix B: Minor Source Criteria Pollutant Modeling
PSD Significant Emission Rate Modeling Test*

FESOP SPR No.:	F 141-27073-00027
Company Name:	Rieth-Riley Construction Co., Inc.
Source Location:	25200 State Road 23, South Bend, Indiana 46614
County:	St. Joseph
SIC Code:	2951
Reviewer:	Hannah L. Desrosiers
Date Submitted:	October 6, 2008

Worst Case Ducted Emissions	PM10	SO2	NOx	CO	Pb
Limited (Tons/yr)	99.84	99.96	99.93	96.63	0.22
Control Efficiency (%)	95%	0%	0%	0%	0%
Limited/Controlled (Tons/yr)	4.99	99.96	99.93	96.63	0.22
Limited/Controlled (lbs/hr)	1.14	22.82	22.81	22.06	0.05
PSD Significant threshold	3.42	9.13	9.13	22.83	0.137
Threshold exceeded?	No	Yes	Yes	No	No

*Appendix B: Minor Source Criteria Pollutant Modeling
Screening Form - SCREEN3 Data*

Permit Summary

Revision Number: F 141-27073-00027
 Company Name: Rieth-Riley Construction Co., Inc.
 Source Location: 25200 State Road 23, South Bend, Indiana 46614
 County: St. Joseph
 SIC Code: 2951
 Permit Reviewer: Hannah L. Desrosiers
 Date Submitted: October 6, 2008

SCREEN3 Modeling Data

TABLE 3 - Pollutant Modeling Data - grams per second

Pollutant:	PM ₁₀	SO ₂	NO _x	CO	Pb
<i>Totals (g/s):</i>	0.143605479	2.875583282	2.874587599	2.779767123	6.26E-03

TABLE 4 - Stack Modeling Data

The M-Value is calculated using a unit emission rate of 1 g/s.

The stack with the lowest M value represents the lowest dispersion coefficient and should be modeled.

Stack ID	Stack Height (m)	Stack Gas Velocity (m/s)	Stack Temp. (K)	Stack Diameter (m)	Closest building related to stack			Closest Property Line (m)	Volumetric Flow Rate (m ³ /s)	Stack M-Value
					Height (m)	Width (m)	Length (m)			
SV1	15.65	32.26	394.26	1.26	3.66	6.10	8.54	59.45	40.17	199,023.99
0	0	0	0.00	0	0	0	0	0	0	0
0	0	0	0.00	0	0	0	0	0	0	0
0	0	0	0.00	0	0	0	0	0	0	0
0	0	0	0.00	0	0	0	0	0	0	0

Appendix B: Minor Source Criteria Pollutant Modeling Screening Form - Modeling Results

Permit Summary

Revision Number: F 141-27073-00027
Company Name: Rieth-Riley Construction Co., Inc.
Source Location: 25200 State Road 23, South Bend, Indiana 46614
County: St. Joseph
SIC Code: 2951
Permit Reviewer: Hannah L. Desrosiers
Date Submitted: October 6, 2008

Modeling Method

Model Used (please check one):
 SCREEN3 AERSCREEN
 ISC3 AERMOD

Date Modeling Completed: 12/1/2008
Modeler: Hannah L. Desrosiers

Modeling Results

TABLE 5 - Pollutants Modeling Results: 1 Hour Concentration ($\mu\text{g}/\text{m}^3$):

The modeled concentrations in this table are the 1-hour concentrations for each pollutant. Use tables 6 and 7 to compare the modeled data to the air quality standard.

Pollutant:	PM ₁₀	SO ₂	NO _x	CO	Pb
Concentration ($\mu\text{g}/\text{m}^3$):	17.74	355.2	355.0	343.3	7.78E-01

TABLE 6 - Pollutants Maximum Concentration ($\mu\text{g}/\text{m}^3$):

Averaging Period	PM ₁₀	SO ₂	NO _x	CO	Pb
1-hour modeled concentration				343.3	
NAAQ Standard				40000	
PASS or FAIL				PASS	
3-hour modeled concentration		319.68			
NAAQ Standard		1300			
PASS or FAIL		PASS			
8-hour modeled concentration				240.31	
NAAQ Standard/CEP Benchmark				10000	
PASS or FAIL				PASS	
24-hour modeled concentration	7.096	142.08			0.31124
NAAQ Standard	150	365			1.5
PASS or FAIL	PASS	PASS			PASS
Annual modeled concentration	1.4192	28.416	28.4		
NAAQ Standard/CEP Benchmark	50	80	100		
PASS or FAIL	PASS	PASS	PASS		

Appendix B: Minor Source Criteria Pollutant Modeling SCREEN3 Report

12/18/08
10:22:39

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

27073_PM10

SIMPLE TERRAIN INPUTS:

```

SOURCE TYPE           =          POINT
EMISSION RATE (G/S)   =          .143600
STACK HEIGHT (M)      =          15.6500
STK INSIDE DIAM (M)   =          1.2600
STK EXIT VELOCITY (M/S)=          1.0000
STK GAS EXIT TEMP (K) =          394.2600
AMBIENT AIR TEMP (K)  =          293.0000
RECEPTOR HEIGHT (M) =           .0000
URBAN/RURAL OPTION    =          RURAL
BUILDING HEIGHT (M)   =          1.2600
MIN HORIZ BLDG DIM (M) =          6.1000
MAX HORIZ BLDG DIM (M) =          8.5400
    
```

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BOUY. FLUX = 1.000 M**4/S**3; MOM. FLUX = .295 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
59.	8.135	1	3.0	3.1	960.0	19.60	16.94	8.76	NO
100.	15.20	1	2.5	2.6	800.0	21.15	26.96	14.15	NO
200.	17.36	3	2.5	2.6	800.0	21.03	23.74	14.22	NO
300.	17.28	3	1.5	1.6	480.0	27.13	34.51	20.70	NO
400.	15.73	3	1.0	1.0	320.0	34.76	45.03	27.09	NO
500.	15.01	4	1.5	1.6	480.0	26.79	36.35	18.69	NO
600.	14.23	4	1.5	1.6	480.0	26.79	42.89	21.55	NO
700.	13.36	4	1.0	1.1	320.0	34.25	49.52	24.71	NO
800.	12.78	4	1.0	1.1	320.0	34.25	55.87	27.39	NO
900.	11.95	4	1.0	1.1	320.0	34.25	62.15	30.02	NO
1000.	11.04	4	1.0	1.1	320.0	34.25	68.37	32.60	NO
1100.	10.15	4	1.0	1.1	320.0	34.25	74.53	34.60	NO
1200.	9.347	4	1.0	1.1	320.0	34.25	80.64	36.54	NO
1300.	8.622	4	1.0	1.1	320.0	34.25	86.71	38.43	NO
1400.	7.971	4	1.0	1.1	320.0	34.25	92.73	40.27	NO
1500.	7.389	4	1.0	1.1	320.0	34.25	98.71	42.06	NO
1600.	6.867	4	1.0	1.1	320.0	34.25	104.65	43.81	NO
1700.	6.470	6	1.0	1.3	10000.0	36.56	55.32	20.57	NO

**Appendix B: Minor Source Criteria Pollutant Modeling
SCREEN3 Report**

1800.	6.574	6	1.0	1.3	10000.0	36.56	58.23	21.25	NO
1900.	6.637	6	1.0	1.3	10000.0	36.56	61.12	21.92	NO
2000.	6.667	6	1.0	1.3	10000.0	36.56	64.01	22.58	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND					59. M:				
233.	17.74	3	2.0	2.1	640.0	23.32	27.45	16.46	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

 *** REGULATORY (Default) ***
 PERFORMING CAVITY CALCULATIONS
 WITH ORIGINAL SCREEN CAVITY MODEL
 (BRODE, 1988)

*** CAVITY CALCULATION - 1 ***	*** CAVITY CALCULATION - 2 ***
CONC (UG/M**3) = .0000	CONC (UG/M**3) = .0000
CRIT WS @10M (M/S) = 99.99	CRIT WS @10M (M/S) = 99.99
CRIT WS @ HS (M/S) = 99.99	CRIT WS @ HS (M/S) = 99.99
DILUTION WS (M/S) = 99.99	DILUTION WS (M/S) = 99.99
CAVITY HT (M) = 1.26	CAVITY HT (M) = 1.26
CAVITY LENGTH (M) = 5.55	CAVITY LENGTH (M) = 4.83
ALONGWIND DIM (M) = 6.10	ALONGWIND DIM (M) = 8.54

CAVITY CONC NOT CALCULATED FOR CRIT WS > 20.0 M/S. CONC SET = 0.0

 END OF CAVITY CALCULATIONS

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
-----	-----	-----	-----
SIMPLE TERRAIN	17.74	233.	0.

 ** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

*Appendix B: Minor Source Criteria Pollutant Modeling
SCREEN3 Report*

12/18/08
10:36:01

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

27073_SO2

SIMPLE TERRAIN INPUTS:

```

SOURCE TYPE           =          POINT
EMISSION RATE (G/S)   =          2.87560
STACK HEIGHT (M)      =          15.6500
STK INSIDE DIAM (M)   =           1.2600
STK EXIT VELOCITY (M/S)=           1.0000
STK GAS EXIT TEMP (K) =          394.2600
AMBIENT AIR TEMP (K)  =          293.0000
RECEPTOR HEIGHT (M) =           .0000
URBAN/RURAL OPTION    =           RURAL
BUILDING HEIGHT (M)   =           3.6600
MIN HORIZ BLDG DIM (M) =           6.1000
MAX HORIZ BLDG DIM (M) =           8.5400
    
```

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BOUOY. FLUX = 1.000 M**4/S**3; MOM. FLUX = .295 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
59.	162.9	1	3.0	3.1	960.0	19.60	16.94	8.76	NO
100.	304.3	1	2.5	2.6	800.0	21.15	26.96	14.15	NO
200.	347.7	3	2.5	2.6	800.0	21.03	23.74	14.22	NO
300.	346.0	3	1.5	1.6	480.0	27.13	34.51	20.70	NO
400.	315.0	3	1.0	1.0	320.0	34.76	45.03	27.09	NO
500.	300.6	4	1.5	1.6	480.0	26.79	36.35	18.69	NO
600.	285.0	4	1.5	1.6	480.0	26.79	42.89	21.55	NO
700.	267.6	4	1.0	1.1	320.0	34.25	49.52	24.71	NO
800.	255.9	4	1.0	1.1	320.0	34.25	55.87	27.39	NO
900.	239.2	4	1.0	1.1	320.0	34.25	62.15	30.02	NO
1000.	221.1	4	1.0	1.1	320.0	34.25	68.37	32.60	NO
1100.	203.3	4	1.0	1.1	320.0	34.25	74.53	34.60	NO
1200.	187.2	4	1.0	1.1	320.0	34.25	80.64	36.54	NO
1300.	172.6	4	1.0	1.1	320.0	34.25	86.71	38.43	NO
1400.	159.6	4	1.0	1.1	320.0	34.25	92.73	40.27	NO
1500.	148.0	4	1.0	1.1	320.0	34.25	98.71	42.06	NO
1600.	137.5	4	1.0	1.1	320.0	34.25	104.65	43.81	NO
1700.	129.6	6	1.0	1.3	10000.0	36.56	55.32	20.57	NO

**Appendix B: Minor Source Criteria Pollutant Modeling
SCREEN3 Report**

1800.	131.6	6	1.0	1.3	10000.0	36.56	58.23	21.25	NO
1900.	132.9	6	1.0	1.3	10000.0	36.56	61.12	21.92	NO
2000.	133.5	6	1.0	1.3	10000.0	36.56	64.01	22.58	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND					59. M:				
233.	355.2	3	2.0	2.1	640.0	23.32	27.45	16.46	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

 *** REGULATORY (Default) ***
 PERFORMING CAVITY CALCULATIONS
 WITH ORIGINAL SCREEN CAVITY MODEL
 (BRODE, 1988)

*** CAVITY CALCULATION - 1 ***	*** CAVITY CALCULATION - 2 ***
CONC (UG/M**3) = .0000	CONC (UG/M**3) = .0000
CRIT WS @10M (M/S) = 99.99	CRIT WS @10M (M/S) = 99.99
CRIT WS @ HS (M/S) = 99.99	CRIT WS @ HS (M/S) = 99.99
DILUTION WS (M/S) = 99.99	DILUTION WS (M/S) = 99.99
CAVITY HT (M) = 4.33	CAVITY HT (M) = 3.94
CAVITY LENGTH (M) = 7.66	CAVITY LENGTH (M) = 7.54
ALONGWIND DIM (M) = 6.10	ALONGWIND DIM (M) = 8.54

CAVITY CONC NOT CALCULATED FOR CRIT WS > 20.0 M/S. CONC SET = 0.0

 END OF CAVITY CALCULATIONS

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
-----	-----	-----	-----
SIMPLE TERRAIN	355.2	233.	0.

 ** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

**Appendix B: Minor Source Criteria Pollutant Modeling
SCREEN3 Report**

12/18/08
10:41:02

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

27073_NOx

SIMPLE TERRAIN INPUTS:

```

SOURCE TYPE           =          POINT
EMISSION RATE (G/S)   =          2.87460
STACK HEIGHT (M)      =          15.6500
STK INSIDE DIAM (M)   =           1.2600
STK EXIT VELOCITY (M/S)=          1.0000
STK GAS EXIT TEMP (K) =          394.2600
AMBIENT AIR TEMP (K)  =          293.0000
RECEPTOR HEIGHT (M) =           .0000
URBAN/RURAL OPTION    =          RURAL
BUILDING HEIGHT (M)   =           3.6600
MIN HORIZ BLDG DIM (M) =           6.1000
MAX HORIZ BLDG DIM (M) =           8.5400
    
```

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BOUY. FLUX = 1.000 M**4/S**3; MOM. FLUX = .295 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
59.	162.9	1	3.0	3.1	960.0	19.60	16.94	8.76	NO
100.	304.2	1	2.5	2.6	800.0	21.15	26.96	14.15	NO
200.	347.6	3	2.5	2.6	800.0	21.03	23.74	14.22	NO
300.	345.9	3	1.5	1.6	480.0	27.13	34.51	20.70	NO
400.	314.8	3	1.0	1.0	320.0	34.76	45.03	27.09	NO
500.	300.5	4	1.5	1.6	480.0	26.79	36.35	18.69	NO
600.	284.9	4	1.5	1.6	480.0	26.79	42.89	21.55	NO
700.	267.5	4	1.0	1.1	320.0	34.25	49.52	24.71	NO
800.	255.8	4	1.0	1.1	320.0	34.25	55.87	27.39	NO
900.	239.2	4	1.0	1.1	320.0	34.25	62.15	30.02	NO
1000.	221.0	4	1.0	1.1	320.0	34.25	68.37	32.60	NO
1100.	203.2	4	1.0	1.1	320.0	34.25	74.53	34.60	NO
1200.	187.1	4	1.0	1.1	320.0	34.25	80.64	36.54	NO
1300.	172.6	4	1.0	1.1	320.0	34.25	86.71	38.43	NO
1400.	159.6	4	1.0	1.1	320.0	34.25	92.73	40.27	NO
1500.	147.9	4	1.0	1.1	320.0	34.25	98.71	42.06	NO
1600.	137.5	4	1.0	1.1	320.0	34.25	104.65	43.81	NO
1700.	129.5	6	1.0	1.3	10000.0	36.56	55.32	20.57	NO

**Appendix B: Minor Source Criteria Pollutant Modeling
SCREEN3 Report**

1800.	131.6	6	1.0	1.3	10000.0	36.56	58.23	21.25	NO
1900.	132.9	6	1.0	1.3	10000.0	36.56	61.12	21.92	NO
2000.	133.5	6	1.0	1.3	10000.0	36.56	64.01	22.58	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND					59. M:				
233.	355.0	3	2.0	2.1	640.0	23.32	27.45	16.46	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

 *** REGULATORY (Default) ***
 PERFORMING CAVITY CALCULATIONS
 WITH ORIGINAL SCREEN CAVITY MODEL
 (BRODE, 1988)

*** CAVITY CALCULATION - 1 ***	*** CAVITY CALCULATION - 2 ***
CONC (UG/M**3) = .0000	CONC (UG/M**3) = .0000
CRIT WS @10M (M/S) = 99.99	CRIT WS @10M (M/S) = 99.99
CRIT WS @ HS (M/S) = 99.99	CRIT WS @ HS (M/S) = 99.99
DILUTION WS (M/S) = 99.99	DILUTION WS (M/S) = 99.99
CAVITY HT (M) = 4.33	CAVITY HT (M) = 3.94
CAVITY LENGTH (M) = 7.66	CAVITY LENGTH (M) = 7.54
ALONGWIND DIM (M) = 6.10	ALONGWIND DIM (M) = 8.54

CAVITY CONC NOT CALCULATED FOR CRIT WS > 20.0 M/S. CONC SET = 0.0

 END OF CAVITY CALCULATIONS

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
-----	-----	-----	-----
SIMPLE TERRAIN	355.0	233.	0.

 ** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

Appendix B: Minor Source Criteria Pollutant Modeling
SCREEN3 Report

12/18/08
10:43:55

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

27073_CO

SIMPLE TERRAIN INPUTS:

```

SOURCE TYPE           =          POINT
EMISSION RATE (G/S)   =          2.77980
STACK HEIGHT (M)      =          15.6500
STK INSIDE DIAM (M)   =           1.2600
STK EXIT VELOCITY (M/S)=          1.0000
STK GAS EXIT TEMP (K) =          394.2600
AMBIENT AIR TEMP (K)  =          293.0000
RECEPTOR HEIGHT (M) =           .0000
URBAN/RURAL OPTION    =          RURAL
BUILDING HEIGHT (M)   =           3.6600
MIN HORIZ BLDG DIM (M) =           6.1000
MAX HORIZ BLDG DIM (M) =           8.5400
    
```

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = 1.000 M**4/S**3; MOM. FLUX = .295 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
59.	157.5	1	3.0	3.1	960.0	19.60	16.94	8.76	NO
100.	294.2	1	2.5	2.6	800.0	21.15	26.96	14.15	NO
200.	336.1	3	2.5	2.6	800.0	21.03	23.74	14.22	NO
300.	334.5	3	1.5	1.6	480.0	27.13	34.51	20.70	NO
400.	304.5	3	1.0	1.0	320.0	34.76	45.03	27.09	NO
500.	290.6	4	1.5	1.6	480.0	26.79	36.35	18.69	NO
600.	275.5	4	1.5	1.6	480.0	26.79	42.89	21.55	NO
700.	258.6	4	1.0	1.1	320.0	34.25	49.52	24.71	NO
800.	247.3	4	1.0	1.1	320.0	34.25	55.87	27.39	NO
900.	231.3	4	1.0	1.1	320.0	34.25	62.15	30.02	NO
1000.	213.7	4	1.0	1.1	320.0	34.25	68.37	32.60	NO
1100.	196.5	4	1.0	1.1	320.0	34.25	74.53	34.60	NO
1200.	180.9	4	1.0	1.1	320.0	34.25	80.64	36.54	NO
1300.	166.9	4	1.0	1.1	320.0	34.25	86.71	38.43	NO
1400.	154.3	4	1.0	1.1	320.0	34.25	92.73	40.27	NO
1500.	143.0	4	1.0	1.1	320.0	34.25	98.71	42.06	NO
1600.	132.9	4	1.0	1.1	320.0	34.25	104.65	43.81	NO
1700.	125.2	6	1.0	1.3	10000.0	36.56	55.32	20.57	NO

**Appendix B: Minor Source Criteria Pollutant Modeling
SCREEN3 Report**

1800.	127.3	6	1.0	1.3	10000.0	36.56	58.23	21.25	NO
1900.	128.5	6	1.0	1.3	10000.0	36.56	61.12	21.92	NO
2000.	129.1	6	1.0	1.3	10000.0	36.56	64.01	22.58	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND					59. M:				
233.	343.3	3	2.0	2.1	640.0	23.32	27.45	16.46	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

 *** REGULATORY (Default) ***
 PERFORMING CAVITY CALCULATIONS
 WITH ORIGINAL SCREEN CAVITY MODEL
 (BRODE, 1988)

*** CAVITY CALCULATION - 1 ***	*** CAVITY CALCULATION - 2 ***
CONC (UG/M**3) = .0000	CONC (UG/M**3) = .0000
CRIT WS @10M (M/S) = 99.99	CRIT WS @10M (M/S) = 99.99
CRIT WS @ HS (M/S) = 99.99	CRIT WS @ HS (M/S) = 99.99
DILUTION WS (M/S) = 99.99	DILUTION WS (M/S) = 99.99
CAVITY HT (M) = 4.33	CAVITY HT (M) = 3.94
CAVITY LENGTH (M) = 7.66	CAVITY LENGTH (M) = 7.54
ALONGWIND DIM (M) = 6.10	ALONGWIND DIM (M) = 8.54

CAVITY CONC NOT CALCULATED FOR CRIT WS > 20.0 M/S. CONC SET = 0.0

 END OF CAVITY CALCULATIONS

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
-----	-----	-----	-----
SIMPLE TERRAIN	343.3	233.	0.

 ** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

**Appendix B: Minor Source Criteria Pollutant Modeling
SCREEN3 Report**

12/18/08
10:47:04

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

27073_Pb

SIMPLE TERRAIN INPUTS:

```

SOURCE TYPE           =          POINT
EMISSION RATE (G/S)   =          .630000E-02
STACK HEIGHT (M)      =          15.6500
STK INSIDE DIAM (M)   =          1.2600
STK EXIT VELOCITY (M/S)=          1.0000
STK GAS EXIT TEMP (K) =          394.2600
AMBIENT AIR TEMP (K)  =          293.0000
RECEPTOR HEIGHT (M) =          .0000
URBAN/RURAL OPTION    =          RURAL
BUILDING HEIGHT (M)   =          3.6600
MIN HORIZ BLDG DIM (M) =          6.1000
MAX HORIZ BLDG DIM (M) =          8.5400
    
```

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BOUY. FLUX = 1.000 M**4/S**3; MOM. FLUX = .295 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)	DWASH
59.	.3569	1	3.0	3.1	960.0	19.60	16.94	8.76	NO
100.	.6668	1	2.5	2.6	800.0	21.15	26.96	14.15	NO
200.	.7618	3	2.5	2.6	800.0	21.03	23.74	14.22	NO
300.	.7580	3	1.5	1.6	480.0	27.13	34.51	20.70	NO
400.	.6900	3	1.0	1.0	320.0	34.76	45.03	27.09	NO
500.	.6586	4	1.5	1.6	480.0	26.79	36.35	18.69	NO
600.	.6245	4	1.5	1.6	480.0	26.79	42.89	21.55	NO
700.	.5862	4	1.0	1.1	320.0	34.25	49.52	24.71	NO
800.	.5606	4	1.0	1.1	320.0	34.25	55.87	27.39	NO
900.	.5241	4	1.0	1.1	320.0	34.25	62.15	30.02	NO
1000.	.4844	4	1.0	1.1	320.0	34.25	68.37	32.60	NO
1100.	.4454	4	1.0	1.1	320.0	34.25	74.53	34.60	NO
1200.	.4101	4	1.0	1.1	320.0	34.25	80.64	36.54	NO
1300.	.3782	4	1.0	1.1	320.0	34.25	86.71	38.43	NO
1400.	.3497	4	1.0	1.1	320.0	34.25	92.73	40.27	NO
1500.	.3242	4	1.0	1.1	320.0	34.25	98.71	42.06	NO
1600.	.3013	4	1.0	1.1	320.0	34.25	104.65	43.81	NO
1700.	.2838	6	1.0	1.3	10000.0	36.56	55.32	20.57	NO

**Appendix B: Minor Source Criteria Pollutant Modeling
SCREEN3 Report**

1800.	.2884	6	1.0	1.3	10000.0	36.56	58.23	21.25	NO
1900.	.2912	6	1.0	1.3	10000.0	36.56	61.12	21.92	NO
2000.	.2925	6	1.0	1.3	10000.0	36.56	64.01	22.58	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND					59. M:				
233.	.7781	3	2.0	2.1	640.0	23.32	27.45	16.46	NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

 *** REGULATORY (Default) ***
 PERFORMING CAVITY CALCULATIONS
 WITH ORIGINAL SCREEN CAVITY MODEL
 (BRODE, 1988)

*** CAVITY CALCULATION - 1 ***	*** CAVITY CALCULATION - 2 ***
CONC (UG/M**3) = .0000	CONC (UG/M**3) = .0000
CRIT WS @10M (M/S) = 99.99	CRIT WS @10M (M/S) = 99.99
CRIT WS @ HS (M/S) = 99.99	CRIT WS @ HS (M/S) = 99.99
DILUTION WS (M/S) = 99.99	DILUTION WS (M/S) = 99.99
CAVITY HT (M) = 4.33	CAVITY HT (M) = 3.94
CAVITY LENGTH (M) = 7.66	CAVITY LENGTH (M) = 7.54
ALONGWIND DIM (M) = 6.10	ALONGWIND DIM (M) = 8.54

CAVITY CONC NOT CALCULATED FOR CRIT WS > 20.0 M/S. CONC SET = 0.0

 END OF CAVITY CALCULATIONS

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
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SIMPLE TERRAIN	.7781	233.	0.

 ** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
