

Mr. Dean K. Logan
Rieth-Riley Construction Co., Inc.
P. O. Box 477
Goshen, IN 46527-0477

Re: 097-16615-00089
First Significant Revision to
FESOP Renewal 097-14774-00089

Dear Mr. Logan

Rieth-Riley Construction Co., Inc. was issued a FESOP Renewal on September 27, 2002 for a hot mix asphalt plant . A letter requesting changes to this permit was received on October 7, 2002. Pursuant to the provisions of 326 IAC 2-8-11.1, a significant permit revision to FESOP is hereby approved as described in the attached Technical Support Document:

- (a) One (1) Drum Mixer (unit ID 3) with a maximum rated capacity of 500 tons per hour, and one (1) 125 million Btu per hour aggregate dryer. The primary fuel source is No. 4 waste oil with natural gas, No. 4 distillate oil, No.2 distillate oil, butane and propane as backup. Particulate emissions will be controlled by one (1) baghouse, blower rated at 85,184 acfm and exhausting at a stack, identified as SV1.

The following insignificant activities are also being modified in this permit revision :

- (b) Vehicle travel on paved roads, unpaved roads, and parking lots;
- (c) Aggregate stockpiles;
- (d) Conveying, transferring, and transportation of aggregates by vehicles;
- (e) Loading and unloading of asphalt concrete mix material.

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Indiana Department of Environmental Management, Office of Air Quality (OAQ) and City of Indianapolis, Office of Environmental Services (OES).
2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the

rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

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. Please attach a copy of this modification and the following revised permit pages to the front of the original 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 **Keshav Reddy**, Indianapolis Office of Environmental Services, 2700 South Belmont Avenue, Indianapolis, Indiana, 46221, or call (317) 321-2221.

Sincerely,

Original Signed by John B. Chavez
John B. Chavez, Administrator
Office of Environmental Services
City of Indianapolis

Attachments

kr

cc: U.S. EPA, Region V
Mindy Hahn, IDEM OAQ
IDEM OAQ Compliance Data Section -Karen Nowak
IDEM OAQ Technical Support and Modeling - Michelle Boner

**FEDERALLY ENFORCEABLE STATE
OPERATING PERMIT (FESOP) (Renewal)
OFFICE OF AIR QUALITY
and
CITY OF INDIANAPOLIS
OFFICE OF ENVIRONMENTAL SERVICES**

Rieth-Riley Construction Co., Inc.
5165 East 96th Street
Indianapolis, Indiana 46240

(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.

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.: F097-14774-00089	
Issued by: John B. Chavez Administrator Office of Environmental Services	Issuance Date: September 27, 2002 Expiration Date: September 27, 2007
First Significant Permit Revision No. : 097-16615	Pages Affected : 3, 5, 26, 27, 28, 29, 30, 31, 32, 33, 35, 36, 37, 39, 40, 41, 42, 43, 44, 45 and 46. Pages Added : 1
Issued by: John B. Chavez Administrator Office of Environmental Services	Issuance Date: Expiration Date: September 27, 2002

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Certification Form
Emergency Occurrence Form
Affadavit of Construction
Quarterly Report Form
Quarterly Report Form
Quarterly Report Form
Quarterly Report Form

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) City of Indianapolis Office of Environmental Services (OES). 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 plant.

Authorized individual: Dean K. Logan
Source Address: 5165 East 96th Street, Indianapolis, Indiana 46240
Mailing Address: P.O. Box 477, Goshen, Indiana 46527-0477
SIC Code: 2951
Source Location Status: Marion
County Status: Attainment for all criteria pollutants
Source Status: Federally Enforceable State Operating Permit (FESOP)
Minor Source, under PSD 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) Drum Mixer (unit ID 3) with a maximum rated capacity of 500 tons per hour, and one (1) 125 million Btu per hour aggregate dryer. The primary fuel source is No. 4 waste oil with natural gas, No. 4 distillate oil, No.2 distillate oil, butane and propane as backup. Particulate emissions will be controlled by one (1) baghouse, blower rated at 85,184 acfm and exhausting at a stack, identified as SV1.
- (b) One (1) Hot Oil Heater, 2.82 million Btu per hour maximum rated capacity. The primary fuel is No. 2 oil with natural gas, propane, and butane as backup. The Hot Oil Heater exhausts at stack 2. The unit was installed in 1992.

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

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

- (a) One (1) 25,000 gallon VOL Storage Tank, maximum true vapor pressure less than 15.0 kPa. This unit was installed in 1992.
- (b) One (1) 20,000 gallon VOL Storage Tank, maximum true vapor pressure less than 15.0 kPa. This unit was installed in 1992.
- (c) One (1) 10,000 gallon VOL Storage Tank, maximum true vapor pressure less than 15.0 kPa. This unit was installed in 1992.
- (d) Petroleum fuel (excluding gasoline) dispensing facilities having storage capacities less than or equal to 10,500 gallons and dispensing less than or equal to 230,000 gallons per month;

SECTION D.1 FACILITY OPERATION CONDITIONS

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

- (1) One (1) Drum Mixer (unit ID 3) with a maximum rated capacity of 500 tons per hour, and one (1) 125 million Btu per hour aggregate dryer. The primary fuel source is No. 4 waste oil with natural gas, No. 4 distillate oil, No.2 distillate oil, butane and propane as backup. Particulate emissions will be controlled by one (1) baghouse, blower rated at 85,184 acfm and exhausting at a stack, identified as SV1.
- (2) One (1) hot oil heater, 2.82 million Btu per hour maximum rated capacity. The primary fuel source is No. 2 oil with propane and butane backup. The heater exhausts at stack 2. The unit was installed in 1992.

(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 Sulphur Dioxide (SO₂) [326 IAC 2-8-4] [326 IAC 2-2] [40 CFR 52.21]

- (a) Pursuant to 326 IAC 2-8-4, the input of residual No.4 waste oil to the dryer burner shall be limited to less than 1,261,770 gallons per twelve (12) consecutive month period with compliance determined at the end of each month, which is equivalent to SO₂ emissions of less than 92.7 tons per year. Sulphur content of the residual No.4 waste oil shall not exceed one percent (1%) sulphur by weight. This limit is structured such that when including the emissions of insignificant activities, the total source SO₂ emissions remain below one hundred (100) tons per twelve (12) month consecutive period. This renders the requirements of 326 IAC 2-7 (Part 70 permit program), 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.
- (b) For purposes of determining compliance based on SO₂ emissions:
 - (1) Each gallon of No. 4 distillate oil shall be equivalent 0.51 gallons of waste oil,
 - (2) Each gallon of propane shall be equivalent to 0.001 gallons of waste oil,
 - (3) Each gallon of butane shall be equivalent to 0.001 gallons of waste oil,
 - (4) Every million cubic feet of natural gas shall be equivalent to 4.082 gallons of waste oil, and
 - (5) Each gallon of No. 2 distillate oil shall be equivalent 0.483 gallons of waste oil.

D.1.2 Sulphur Dioxide (SO₂) Emissions Limitations [326 IAC 7-1.1-2]

Pursuant to 326 IAC 7.1.1-2, sulphur dioxide emissions from the combustion of distillate (No.2 and No.4) oil shall be limited to 0.5 pounds per million Btu heat input. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a thirty (30) day rolling weighted average.

D.1.3 Nitrogen Oxides (NO_x) [326 IAC 2-8-4] [326 IAC 2-2] [40 CFR 52.21]

- (a) The input of natural gas to the dryer/burner shall be limited to less than 687.4 million cubic feet per twelve (12) consecutive month period with compliance determined at the end of each month, which is equivalent to NO_x emissions of less than 96.2 tons per year. Compliance with the potential to emit limitation makes 326 IAC 2-7 (Part 70 Permit Program) not applicable. Due to the potential to emit limitation, the provisions of Prevention of Significant Deterioration (40 CFR 52.21) rules are not applicable.

- (b) For purposes of determining compliance based on NO_x emissions:
- (1) Every 1000 gallons of residual No. 4 waste oil burned shall be equivalent to 0.068 million cubic feet of natural gas,
 - (2) Every 1000 gallons of No. 4 distillate oil burned shall be equivalent to 0.168 million cubic feet of natural gas,
 - (3) Every 1000 gallons of butane burned shall be equivalent to 0.075 million cubic feet of natural gas, and
 - (4) Every 1000 gallons of propane burned shall be equivalent to 0.068 million cubic feet of natural gas.
 - (5) Every 1000 gallons of No. 2 distillate oil burned shall be equivalent to 0.086 million cubic feet of natural gas,

D.1.4 Particulate Matter (PM) [326 IAC 6-1-12] [326 IAC 2-2] [40 CFR 52.21]

Pursuant to 326 IAC 6-1-2, particulate matter emissions from the asphalt plant shall not exceed 0.030 grains per dry standard cubic foot. In order to meet this requirement, the baghouse shall be operated at all times the asphalt plant is in operation. Compliance with this rule renders 326 IAC 2-2 not applicable.

D.1.5 Asphalt Plant [326 IAC 12] [40 CFR 60.90-60.93, NSPS Subpart I]

Pursuant to the New Source Performance Standards, 326 IAC 12 (40 CFR 60.90 to 60.93, Subpart I):

- (a) Particulate matter emissions from the hot mix asphalt facility shall not exceed 0.04 grains per dry standard cubic foot (gr/dscf). Compliance with 326 IAC 6-1-2(a) will satisfy 326 IAC 12 and 40 CFR 60.92(a)(1), Subpart I, and
- (b) The visible emissions from the hot mix asphalt facility shall not exceed twenty percent (20%) opacity.
- (c) Pursuant to 40 CFR 60.7(a), the permittee shall submit to OES/AQM and IDEM/OAQ the following:
 - (1) a notification of the date of construction of drum mixer and aggregate dryer is commenced postmarked no later than 30 days after such date.
 - (2) a notification of the actual date of initial start up of drum mixer and aggregate dryer postmarked within 15 days after such date.
 - (3) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. OES/AQM and IDEM/OAQ may request additional relevant information subsequent to this notice.
 - (4) a notification of the anticipated date for conducting the opacity observations required by 40 CFR 60.11(e)(1) of this part. The notification shall also include, if appropriate, a request for OES/AQM and IDEM/OAQ to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30

days prior to such date

D.1.6 Particulate matter less than 10 microns (PM-10) [326 IAC 2-8-2] [326 IAC 2-2] [40 CFR 52.21]

- (a) The total asphalt production for this plant shall be limited to 1,000,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This production limit is the equivalent of 99.0 tons of PM-10 source wide per year.
- (b) PM-10 emissions from combined process equipment and dryer/burner operations shall be limited to 0.154 pounds per ton (lb/ton). Due to the potential to emit limitations, the Prevention of Significant Deterioration (326 IAC 2-2 and 40 CFR 52.21) and Part 70 rules (326 IAC 2-7) are not applicable.

D.1.7 Miscellaneous Operations: Asphalt Paving [326 IAC 8-5-2]

Pursuant to 326 IAC 8-5-2, no person shall cause or allow the use of cutback asphalt or asphalt emulsion containing more than seven (7) percent oil distillate by volume of emulsion of any paving application except:

- (a) Penetrating prime coating;
- (b) Stockpile storage; and
- (c) Application during the months of November, December, January, February, and March.

D.1.8 Volatile Organic Compounds (VOC) [326 IAC 2-8-4] [326 IAC 2-2] [40CFR 52.21]

- (a) Pursuant to 326 IAC 2-8-4, the VOC solvent used as diluent in the liquid binder used in cold mix asphalt production from the plant shall be limited such that no more than ninety-six (96.0) tons of VOC emissions emitted per twelve (12) consecutive months with compliance determined at the end of each month. This shall be achieved by limiting the total VOC solvent of any one selected binder to not exceed the stated limit in (c) for that binder during the last twelve (12) months. When more than one binder is used, the formula in (c)(6) must be applied so that the total VOC emitted does not exceed ninety-nine (99.0) tons per twelve (12) consecutive month period.
- (b) Liquid binders used in the production of cold mix asphalt shall be defined as follows:
 - (1) Cut back asphalt rapid cure, containing a maximum of 25.3% of the liquid binder by weight of VOC solvent and 95% by weight of VOC solvent evaporating.
 - (2) Cut back asphalt medium cure, containing a maximum of 28.6% of the liquid binder by weight of VOC solvent and 70% by weight of VOC solvent evaporating.
 - (3) Cut back asphalt slow cure, containing a maximum of 20% of the liquid binder by weight of VOC solvent and 25% by weight of VOC solvent evaporating.
 - (4) Emulsified asphalt with solvent, containing a maximum of 15% of liquid binder by weight of VOC solvent and 46.4% by weight of the VOC solvent in the liquid blend evaporating. The percent oil distillate in emulsified asphalt with solvent liquid, as determined by ASTM, must be 7% or less of the total emulsion by volume
 - (5) Other asphalt with solvent binder, containing a maximum 25.9% of the liquid binder of VOC solvent and 2.5% by weight of the VOC solvent evaporating

- (c) The liquid binder used in cold mix asphalt production shall be limited as follows:
- (1) Cutback asphalt rapid cure liquid binder usage shall not exceed 96.0 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis with compliance determined at the end of each month.
 - (2) Cutback asphalt medium cure liquid binder usage shall not exceed 130.5 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis with compliance determined at the end of each month.
 - (3) Cutback asphalt slow cure liquid binder usage shall not exceed 364.8 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis with compliance determined at the end of each month.
 - (4) Emulsified asphalt with solvent liquid binder usage shall not exceed 195.8 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis with compliance determined at the end of each month.
 - (5) Other asphalt with solvent liquid binder shall not exceed 3648.0 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis with compliance determined at the end of each month.
 - (6) The VOC solvent allotments in subpart (c)(1) through (c)(5) of this condition shall be adjusted when more than one type of binder is used per twelve (12) month consecutive period rolled on a monthly basis with compliance determined at the end of each month. In order to determine the tons of VOC emitted per each type of binder, use the following formula and divide the tons of VOC solvent used for each type of binder by the corresponding adjustment ratio listed in the table that follows.

$$\frac{\text{Tons of solvent contained in binder}}{\text{Adjustment ratio}} = \text{tons of VOC emitted}$$

Type of Binder	Tons VOC Solvent	Adjustment Ratio	Tons VOC Emitted
Cutback Asphalt Rapid Cure		1	
Cutback Asphalt Medium Cure		1.36	
Cutback Asphalt Slow Cure		3.8	
Emulsified Asphalt		2.04	
Other Asphalt		38	

The equivalent total tons of VOC of the combined liquid binders shall be less than ninety-six (96.0) tons per twelve (12) consecutive month period rolled on a monthly basis with compliance determined at the end of each month. Compliance with this limit will ensure that 326 IAC 2-7 and 326 IAC 2-2 does not apply.

D.1.9 Preventive Maintenance Plan [326 IAC 2-8-4(9)] [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the drum/dryer burner and its control device.

D.1.10 Used Oil Requirements [329 IAC 13]

The waste oil burned in the dryer burner shall comply with the used oil requirements specified in 329 IAC 13 (Used Oil Management). Pursuant to 329 IAC 13-3-2 (Used Oil Specifications), used oil burned for energy recovery that is classified as off-specification used oil fuel shall comply with the provisions of 329 IAC 13-8 (Used Oil Burners Who Burn Off-specification Used Oil For Energy Recovery), including:

- (a) Receipt of an EPA identification number as outlined in 329 IAC 13-8-3 (Notification),
- (b) Compliance with the used oil storage requirements specified in 329 IAC 13-8-5 (Used Oil Storage), and
- (c) Maintaining records pursuant to 329 IAC 13-8-6 (Tracking).

The burning of mixtures of used oil and hazardous waste that is regulated under 329 IAC 3.1 is prohibited at this source.

Compliance Determination Requirements

D.1.11 Sulfur Dioxide Emissions and Sulfur Content [326 IAC 3-7-4]

Compliance shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million Btu heat input by:
 - (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification;
or
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the two and eight tenths (2.82) MMBtu per hour heater, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

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

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

D.1.12 Testing Requirement

Within 60 days after achieving maximum production rate at which the drum mixer and aggregate dryer will be operated, but no later than 180 days after initial start up, the Permittee shall perform a stack test approved by OES/AQM and IDEM/OAQ to demonstrate compliance with D.1.4, D.1.5 and D.1.6. Stack test shall include testing for PM and PM10 (filterable and condensable). The stack test methods shall be in accordance with the provisions of 326 IAC 3-2.1 (Source Sampling Procedures).

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

D.1.13 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the dryer burner, at least once per shift when the dryer burner 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- Compliance Response Plan - Preparation, Implementation, Records and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

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

D.1.14 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the dryer burner when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.1.15 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have 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).

D.1.16 Visible Emissions Notations

- (a) Visible emission notations of the baghouse stack exhaust, conveyors, and transfer points shall be performed once per shift 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) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records and Reports, shall be considered a violation of this permit.

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

D.1.17 Record Keeping Requirements

- (a) To document compliance with Condition D.1.1, the Permittee shall maintain daily records of the input of residual No. 4 waste oil to the dryer burner.
- (b) To document compliance with Condition D.1.2, the Permittee shall maintain records in accordance with (1) through (6) below.
 - (1) Calendar dates covered in the compliance determination period;
 - (2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;
 - (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, the natural gas fired boiler certification does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1); and

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

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

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

- (c) To document compliance with Condition D.1.3, the Permittee shall maintain daily records of the input of natural gas to the dryer burner.
- (d) To document compliance with Condition D.1.6, the Permittee shall maintain records of asphalt production as follows:
 - (1) Amount of asphalt concrete produced each day;
 - (2) Amount of asphalt concrete produced in the last three hundred and sixty-five (365) days.

- (e) To document compliance with Condition D.1.8 Volatile Organic Compounds, VOC records shall document VOC usage as follows:
- (1) Amount and type of liquid binder used in the production of cold mix asphalt each day.
 - (2) Type and VOC, solvent content by weight of the liquid binder used in the production of cold mix asphalt each day.
 - (3) Amount of VOC, solvent used in the production of cold mix asphalt each day.
- Records may include: delivery tickets, manufacturer's data, material safety data sheets (MSDS), and other documents necessary to verify the type and amount used. Test results of ASTM tests for asphalt cutback and asphalt emulsion may be used to document volatilization.
- (f) To document compliance with Condition D.1.13, the Permittee shall maintain records of the total static pressure drop across the baghouse used in conjunction with the dryer burner, at least once per shift when the dryer burner is in operation when venting to the atmosphere.
- (g) To document compliance with Condition D.1.14, the Permittee shall maintain quarterly records of the inspections performed on all bags controlling the dryer burner when venting to the atmosphere.
- (h) To document compliance with Condition D.1.16, the Permittee shall maintain records of visible emission notations of the stack exhaust once per shift.
- (i) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.18 Reporting Requirements

- (a) A quarterly summary of the information to document compliance with Conditions D.1.1, D.1.3, D.1.6, and D.1.8 shall be submitted to the addresses 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).
- (b) Reports to document compliance with condition D.1.5(c) shall be submitted to the addresses listed in Section C - General Reporting Requirements. The reports submitted by the Permittee do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1)

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
and
CITY OF INDIANAPOLIS
OFFICE of ENVIRONMENTAL SERVICES**

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

Source Name: Rieth-Riley Construction Co., Inc.
Source Address: 5165 East 96th Street, Indianapolis, IN 46240
Mailing Address: P.O. Box 477, Goshen, IN 46527-0477
FESOP No.: 097-14774-00089 and Significant Revision: 097-16615

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:

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

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

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
P.O. Box 6015**

**100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967**

**CITY OF INDIANAPOLIS
OFFICE of ENVIRONMENTAL SERVICES
DATA COMPLIANCE**

**2700 South Belmont Avenue
Indianapolis, Indiana 46221
Phone:317-327-2234
Fax:317-327-2274**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT**

Source Name:Rieth-Riley Construction Co., Inc.
Source Address:5165 East 96th Street, Indianapolis, IN 46240
Mailing Address: P.O. Box 477, Goshen, IN 46527-0477
FESOP No.: 097-14774-00089 and Significant Revision: 097-16615

This form consists of 2 pagesPage 1 of 2

- 9** This is an emergency as defined in 326 IAC 2-7-1(12)
CThe Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
CThe Permittee must submit notice in writing or by facsimile within two (2) days (Facsimile Number: 317-233-5967), 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.

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____.
(Title) (Company Name)
3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____.
(Company Name)
4. I hereby certify that Rieth-Riley has constructed the following: One (1) Drum Mixer (unit ID 3) with a maximum rated capacity of 500 tons per hour, and one (1) 125 million Btu per hour aggregate dryer in conformity with the requirements and intent of the construction permit application received by the Office of Environmental Services on October 10, 2002 and as permitted pursuant to **FESOP Significant Revision No. 097-16615-00089** issued on _____.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature

Date

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of
Indiana on this _____ day of _____, 200_.

My Commission expires: _____

Signature

**Indiana Department of Environmental Management
Office of Air Quality
and
City of Indianapolis
Office of Environmental Services**

**Addendum to the
Technical Support Document for a Significant Permit Revision to a
Federally Enforceable State Operating Permit**

Source Name:	Rieth-Riley Construction Co., Inc.
Source Location:	5165 East 96 th Street, Indianapolis, Indiana 46240
County:	Marion
SIC Code:	2951
Operation Permit No.:	097-14774-00089
Significant Permit Revision No.:	097-16615-00089
Permit Reviewer:	Keshav Reddy

On January 18, 2003, the Indiana Department of Environmental Management, Office of Air Quality (OAQ) and the Office of Environmental Services (OES) had a notice published in the Indianapolis Star, Indianapolis, Indiana, stating that Rieth-Riley Construction Co., Inc. had applied for a Significant Revision to its Federally Enforceable State Operating Permit (FESOP) for the replacement and operation its batch mixer with a larger capacity counter flow drum mixer at its hot mix asphalt plant. The notice also stated that OES proposed to revise the FESOP 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 revision should be issued as proposed.

On January 27, 2003, Rieth-Riley Construction Co., Inc. submitted comments on the proposed significant revision. The summary of the comments and responses is as follows:

Comment 1:

Section D.1.1, Permit Revision; Sulfur Dioxide Limits

“ Why are there significant changes from the FESOP issued in September 2002 in the waste oil conversion with respect to other fuels, especially with the natural gas conversion? The change in the conversion went from 5.607 MMCF of natural gas to 1 gallon of waste oil to 1 MMCF of natural gas to 0.004 gallon of waste oil”

Response to Comment 1:

The fuel usage limits are established based on the emission factors for fuel combustion. A few of the fuel usage limits set in the FESOP, issued in September, 2002, were based on erroneous emission factors. These emission factors were revised with appropriate ones in the current review. A statement to this effect was made in Page 4 of the TSD. With respect to the specific conversion of natural gas to waste oil, further review was done. A minor conversion error was made in the calculations. The fuel conversion in condition D.1.1 for natural gas to waste oil should read: every million cubic feet of natural gas shall be equivalent to 4.082 gallons of waste oil instead of 0.004 gallons of waste oil. This change is acknowledged in the TSD and the corresponding change is reflected in the permit.

Comment 2:

Section D.1.6, Permit Revision; PM10 Limits

"I would like you to change the plant production limit from 3,174,296 tons per twelve (12) consecutive months to 1,000,000 tons per twelve (12) consecutive months. Then I would like to change the 0.098 lbs/hr limit of PM10 to 0.198 lbs/ton of production."

Response to Comment 2:

The limit established to meet FESOP standards for PM10 was 3,174,296 tons of asphalt production per year. However, the source requested a lower limit of 1,000,000 tons of production per twelve (12) consecutive months. This request does not relax any standards or limits. Hence this request is accommodated in the permit. The source further requested to change the 0.098 lbs/hr limit of PM10 to 0.198 lbs/ton of production. No such limit (0.098 lbs/hr) was set in the permit. Upon telephonic conversation with the source representative seeking clarification on this issue, it was pointed out as an inadvertent comment and should not have been in the letter. However, the source requested to revise the lb of PM10/ton of product limit. Due to a lower production limit of 1,000,000 tons of product for twelve (12) consecutive months, the lbs of PM10/ton of product is calculated as follows:

Allowable PM10 emissions from combined drum mixer = 76.7 tons/yr
and burner units, to comply with FESOP limit of
99 tons/yr, after allocation to all other emission points

PM10 emission limit corresponding to the limited = $\frac{76.7 \text{ tons/yr} * 2000 \text{ lbs/ton}}{1,000,000 \text{ tons}}$
production of 1,000,000 tons:

= 0.154 lbs PM10/ton of asphalt produced

The requested limit of 1,000,000 tons product per twelve (12) consecutive months and a calculated PM10 limit of 0.154 lbs PM10/ton of asphalt produced are acknowledged in the TSD. The permit is revised to include this changes. Condition D.1.12 in the permit requires stack testing to show compliance with these limits.

**Indiana Department of Environmental Management
Office of Air Quality
and
Indianapolis Office of Environmental Services**

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

Source Background and Description

Source Name:	Rieth-Riley Construction Co., Inc.
Source Location:	5165 East 96th Street, Indianapolis, IN, 46240
County:	Marion
SIC Code:	2951
Operation Permit No.:	F 097-14774-00089
Operation Permit Issuance Date:	September, 27, 2002
Significant Permit Revision No. :	097-16615-00089
Permit Reviewer:	Keshav Reddy

The City of Indianapolis, Office of Environmental Services (OES) has reviewed a revision application from Rieth-Riley Construction CO., Inc. relating to the replacement and operation of the following emission units to be used in its hot mix asphalt plant:

- (a) One (1) Drum Mixer (unit ID 3) with a maximum rated capacity of 500 tons per hour, and one (1) 125 million Btu per hour aggregate dryer. The primary fuel source is No. 4 waste oil with natural gas, No. 4 distillate oil, No.2 distillate oil, butane and propane as backup. Particulate emissions will be controlled by one (1) baghouse, blower rated at 85,184 acfm and exhausting at a stack, identified as SV1.

The following insignificant activities are also being modified in this permit revision :

- (b) Vehicle travel on paved roads, unpaved roads, and parking lots;
- (c) Aggregate stockpiles;
- (d) Conveying, transferring, and transportation of aggregates by vehicles;
- (e) Loading and unloading of asphalt concrete mix material.

History

On October 7, 2002, Rieth-Riley Construction Co., Inc. submitted an application to the OES requesting for the replacement of the batch mixer, burner, baghouse with a larger capacity counter flow drum mixer, burner and baghouse. This approval increased the maximum rated capacity of the drum mixer at plant from 425 tons per hour to 500 tons per hour and decreased the capacity of the burner from 136 million Btu per hour to 125 million Btu per hour. Rieth-Riley Construction Co., Inc. has also requested that the current FESOP status remain unchanged for this source. Rieth-Riley Construction Co., Inc. was issued FESOP Renewal 097-14774-00089 on September 27, 2002.

Existing Approvals

- (a) FESOP Renewal 097-14774-00089 was issued on September 27, 2002.

(b) FESOP 097-5593-00089 was issued on June 3, 1997.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
SV1	Drum Mixer/Dryer Burner	30	4.2	85184	260

Recommendation

The staff recommends to the Administrator that the Significant Permit Revision be approved. This recommendation is based on the following facts and conditions:

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

An application for the purposes of this review was received on September 27, 2002 and additional information was received by mail on October 10, 2002.

Emission Calculations

See Appendix A of this document for detailed emissions calculations.

Unrestricted Potential Emissions

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

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

Pollutant	Unrestricted Potential Emissions (tons/yr)
PM	59,918
PM-10	8,637
SO ₂	304
VOC	>250*
CO	45.6
NO _x	415

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

*The VOC potential emissions include the maximum potential use of cold mix cutback asphalt.

HAP's	Unrestricted Potential Emissions (tons/yr)
Combined HAPs from aggregate dryer	10.8
TOTAL HAPs	10.8

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM-10, SO₂, and NO_x are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) **Fugitive Emissions**
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2-1(w)(1) and since there are applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are counted toward determination of PSD and Emission Offset applicability.

Potential To Emit Before Control/Limitation due to the Modification

Pollutant	Potential To Emit (tons/year)
PM	16.6
PM-10	32027.3
SO ₂	268.9
VOC	2.2
CO	22.2
NO _x	---

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's	Potential To Emit (tons/year)
Combined HAP's	---
TOTAL	—

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM-10 and SO₂ are greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (b) **Fugitive Emissions**
 Since this type of operation is one of the listed source categories under 326 IAC 2-2-1(w)(2) and since there are applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are counted toward determination of PSD applicability.

Justification for Revision

The replacement of drum mixer and aggregate dryer, and modifications to insignificant activities result in an increase in the potential to emit of PM10 and SO₂ greater than 25 tons per year for each pollutant. Therefore, the revision is subject to 326 IAC IAC 2-8-11.1(f), Significant Permit Revision.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2002 OES emission data.

Pollutant	Actual Emissions (tons/year)
PM	9.98
PM-10	4.29
SO ₂	19.82
VOC	0.31
CO	1.63
NO _x	6.19

Source Status

Existing Source PSD definition (emissions based on the latest permit (FESOP Renewal F097-14774-00089) issued on September 27, 2002, which reflects the PTE after controls and limitations).

Process/emission unit	Potential to Emit After Issuance (tons/year)						
	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Aggregate Dryer Mixer	18.2	18.2	0.0	0.0	0.0	0.0	0.0
Aggregate Dryer Burner	56.7	47.4	92.8	0.4	10.3	96.2	3.5
Combined Fugitive Dust	48.5	22.0	0.0	0.0	0.0	0.0	0.0
Cutback Asphalt	0.0	0.0	0.0	98.5	0.0	0.0	0.0
Insignificant Activities	0.2	0.1	6.2	0.1	0.5	2.8	0.0
Total PTE After Issuance	123.6	87.7	99.0	99.0	10.8	99.0	3.5

This existing source is not a major stationary source under the Prevention of Significant Deterioration (PSD), because no regulated pollutant is emitted at a rate of 250 tons per year or greater.

Potential to Emit of Modification After Issuance

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this FESOP revision.

Process/facility	Limited Potential to Emit (tons/year)						
	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Aggregate Dryer Burner	38.5	32.2	92.7	3.0	46.0	96.2	9.5
Aggregate Drum Mixer	44.5	44.5	0.0	0.0	0.0	0.0	11.6
Combined Fugitive Dust	49.4	22.2	0.0	0.0	0.0	0.0	0.0
Cut Back Asphalt	0.0	0.0	0.0	96.0	0.0	0.0	0.0
Insignificant Activities	0.2	0.1	6.3	0.0	0.5	2.8	0.0
Total Emissions	132.6	99.0	99.0	99.0	46.5	99.0	21.1

* The emission factors were revised in this permit for dryer burner, drum mixer and combined fugitive dust. It was discovered that the wrong emission factors were used in setting limits in permit F097-14774-00089. Therefore, the production limits, fuel usage limits and its equivalencies changed significantly.

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD thresholds. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM-10	Unclassifiable
SO ₂	maintenance attainment
NO ₂	attainment
Ozone	maintenance attainment
CO	attainment
Lead	attainment

Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as maintenance attainment for ozone.

Federal Rule Applicability

- (a) The hot mix asphalt plant is subject to the New Source Performance Standard, 40 CFR Part 60.90, Subpart I (326 IAC 12) because this source meets the definition of a hot mix asphalt plant as described in 40 CFR 60.90(a), Subpart I and construction of the facility was commenced on January 27, 1992 which is after June 11, 1973. The requirements of 40 CFR 60.90, Subpart I, limit particulate emissions from the asphalt plant to 0.040 grains per dry standard cubic foot (gr/dscf) and visible emissions to 20% opacity.

Pursuant to 40 CFR 60.7(a), the permittee shall submit to OES/AQM and IDEM/OAQ the following:

- (1) a notification of the date of construction of drum mixer and aggregate dryer is commenced postmarked no later than 30 days after such date.
- (2) a notification of the actual date of initial start up of drum mixer and aggregate dryer postmarked within 15 days after such date.
- (3) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in §§ 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. OES/AQM and IDEM/OAQ may request additional relevant information subsequent to this notice.
- (4) A notification of the anticipated date for conducting the opacity observations required by §§ 60.11(e)(1) of this part. The notification shall also include, if appropriate, a request for OES/AQM and IDEM/OAQ to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.

Pursuant to 40 CFR 60.80 (a), within 60 days after achieving maximum production rate at which the drum mixer and aggregate dryer will be operated, but no later than 180 days after

initial start up, the permittee shall conduct performance tests to show compliance with 40 CFR 60.90(a), Subpart I and furnish to OES/AQM and IDEM/OAQ written reports of the results of such performance test.

- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 1-5-2 (Emergency Reduction Plans)

The source has submitted an Emergency Reduction Plan (ERP) on February 20, 1990. The ERP has been verified to fulfill the requirements of 326 IAC 1-5-2 (Emergency Reduction Plans).

326 IAC 1-6-3 (Preventive Maintenance Plan)

Pursuant to 326 IAC 2-8-4(9), the source is required to maintain a Preventive Maintenance Plan (PMP) on site for the drum/dryer burner and its control device. Pursuant to 326 IAC 2-8-3(c)(6)(FESOP: Permit Application), the source is not required to submit the plan. However, the PMP maintained on site must meet the requirements of 326 IAC 1-6-3 (Preventive Maintenance Plan). The FESOP Renewal issued previously to this source, F097-14774-00089, has the requirement included in Condition B.13 and is being carried over to this revision.

326 IAC 2-2 (Prevention of Significant Deterioration)

The source commenced construction on January 27, 1992 (after August 7, 1977), and therefore does not predate this rule. The source is also not one of the twenty-eight (28) listed source categories under 326 IAC 2-2-1(w)(1) and its unrestricted potential to emit of PM, PM-10 and SO₂ meet the definition of "major PSD source" pursuant to 326 IAC 2-2-1(w)(2). However, potential to emit of PM-10, NO_x and SO₂ is being enforceably restricted to less than one hundred (100) tons per year such that 326 IAC 2-7 does not apply. In addition, PM is being enforceably restricted to less than two hundred and fifty (250) tons per year pursuant to 326 IAC 6-1-2. Therefore, potential to emit of PM, PM-10 and SO₂ is being enforceably restricted to less than major thresholds such that 326 IAC 2-2 does not apply.

326 IAC 2-4.1 (Hazardous Air Pollutants)

The source is not subject to 326 IAC 2-4.1 because the plant was constructed in January 27, 1992 which is prior to July 27, 1997 and the source is not a major source of hazardous air pollutants, as defined in 40 CFR 63.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because the source is located in Marion County and it has the potential to emit more than ten (10) tons per year of VOC and NO_x. Pursuant to this rule, the owner/operator of the source must submit an emission statement for the source. The statement must be received by April 15 of each year, in accordance with the compliance schedule specified in 326 IAC 2-6 and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8). The FESOP Renewal issued previously to this source, F097-14774-00089, has the requirement included in Condition C.19 and is being carried over to this revision.

326 IAC 2-8-4 (FESOP)

Pursuant to this rule, source wide emissions of PM-10, SO₂, VOC and NO_x shall be limited to less than one hundred (100) tons per year such that it does not fall within any of the categories listed in 326 IAC 2-7-2(a) and that assure compliance with all applicable requirements at the time of significant revision to FESOP issuance (See Emissions Calculations, Appendix A).

The following limits shall apply to assure compliance with this rule:

(a) Sulfur Dioxide (SO₂)

The input of No. 4 waste oil to the dryer/burner shall be limited to less than 1,261,770 gallons per twelve (12) consecutive month period with compliance determined at the end of each month, which is equivalent to SO₂ emissions of less than 92.7 tons per year. Compliance with the potential to emit limitation makes 326 IAC 2-7 (Part 70 Permit Program) not applicable.

These limits are structured such that when including emissions from insignificant activities, the total source SO₂ emissions remain below one hundred (100) tons per twelve (12) consecutive month period. The source wide unrestricted potential to emit of an individual HAP or combination of HAPs does not exceed the thresholds listed in 326 IAC 2-7-1(22), thus the source does not have major potential to emit for HAPs. Limiting source wide emissions of SO₂ will further limit the potential to emit of an individual HAP or combination of HAPs. This renders the requirements of 326 IAC 2-7 (Part 70 Permit Program) not applicable.

The usage of No. 4 distillate oil, natural gas, No.2 distillate oil, propane and butane to the list of permitted fuels does not increase the potential to emit SO₂ because No. 4 waste oil is the worst case fuel for this pollutant (see calculations, Appendix A page 8 of 10). No. 4 waste oil was permitted in the original FESOP and renewal.

For purposes of determining compliance based on SO₂ emissions (See calculations, Appendix A):

- (1) Each gallon of No. 4 distillate oil shall be equivalent to 0.510 gallons of waste oil,
 - (2) Each gallon of propane shall be equivalent to 0.001 gallons of waste oil,
 - (3) Each gallon of butane shall be equivalent to 0.001 gallons of waste oil,
 - (4) Every million cubic feet of natural gas shall be equivalent to 0.004 gallons of waste oil.
- and
- (5) Each gallon of No. 2 distillate oil shall be equivalent to 0.483 gallons of waste oil,

(b) Nitrogen Oxides (NO_x) Emissions Limitations

The input of natural gas to the dryer/burner shall be limited to less than 687.4 million cubic feet per twelve (12) consecutive month period with compliance determined at the end of each month, which is equivalent to NO_x emissions of less than 96.2 tons per year. Compliance with the potential to emit limitation makes 326 IAC 2-7 (Part 70 Permit Program) not applicable. Due to the potential to emit limitation, the provisions of Prevention of Significant Deterioration (40 CFR 52.21) rules are not applicable.

These limits are structured such that when including emissions from insignificant activities, the total source NO_x emissions remain below one hundred (100) tons per twelve (12) consecutive month period. The source wide unrestricted potential to emit of an individual HAP or combination of HAPs does not exceed the thresholds listed in 326 IAC 2-7-1(22), thus the source does not have major potential to emit for HAPs. Limiting source wide emissions of NO_x will further limit the potential to emit of an individual HAP or combination of HAPs. This renders the requirements of 326 IAC 2-7 (Part 70 Permit Program) not applicable.

The addition of No. 4 distillate oil, propane, No.4 waste oil, No.2 distillate oil , butane to the

list of permitted fuels does not increase the potential to emit NO_x because natural gas is the worst case fuel for this pollutant (see calculations, Appendix A page 7 of 10). Natural gas was permitted in the original FESOP and renewal.

For purposes of determining compliance based on NO_x emissions (See calculations, Appendix A) :

- (1) Every 1000 gallons of No. 4 waste oil burned shall be equivalent to 0.068 million cubic feet of natural gas,
 - (2) Every 1000 gallons of No. 4 distillate oil burned shall be equivalent to 0.168 million cubic feet of natural gas,
 - (3) Every 1000 gallons of butane burned shall be equivalent to 0.075 million cubic feet of natural gas, and
 - (4) Every 1000 gallons of propane burned shall be equivalent to 0.068 million cubic feet of natural gas.
- and
- (5) Every 1000 gallons of No. 2 distillate oil burned shall be equivalent to 0.086 million cubic feet of natural gas,

(c) Particulate matter less than 10 microns (PM-10)

The total asphalt production for this plant shall be limited to 3,174,296 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This production limit is the equivalent of 99.0 tons of PM-10 source wide per year.

PM-10 emissions from combined process equipment and dryer/burner operations shall be limited to 0.048 pounds per ton (lb/ton) (See calculations, Appendix A). Compliance with the potential to emit limitation makes 326 IAC 2-7 (Part 70 Permit Program) not applicable. Due to the potential to emit limitations, the Prevention of Significant Deterioration (326 IAC 2-2 and 40 CFR 52.21) and Part 70 rule (326 IAC 2-7) are not applicable.

(d) Volatile Organic Compounds

Pursuant to 326 IAC 2-8-4, the liquid binder used in cold mix asphalt production shall be limited as follows:

- (1) Cutback asphalt rapid cure liquid binder usage shall not exceed 96.0 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis with compliance determined at the end of each month.
- (2) Cutback asphalt medium cure liquid binder usage shall not exceed 130.5 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis with compliance determined at the end of each month.
- (3) Cutback asphalt slow cure liquid binder usage shall not exceed 364.8 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis with compliance determined at the end of each month.
- (4) Emulsified asphalt with solvent liquid binder usage shall not exceed 195.8 of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis with compliance determined at the end of each month.

- (5) Other asphalt with solvent liquid binder shall not exceed 3648 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis with compliance determined at the end of each month.
- (6) The VOC solvent allotments in (A) through (E) above shall be adjusted when more than one type of binder is used per twelve (12) month consecutive period rolled on a monthly basis with compliance determined at the end of each month. In order to determine the tons of VOC emitted per each type of binder, use the following formula and divide the tons of VOC solvent used for each type of binder by the corresponding adjustment ratio listed in the table that follows.

$$\frac{\text{Tons of solvent contained in binder}}{\text{Adjustment ratio}} = \text{tons of VOC emitted}$$

Type of binder	Tons VOC Solvent	Adjustment Ratio	Tons VOC Emitted
Cutback Asphalt Rapid Cure		1	
Cutback Asphalt Medium Cure		1.36	
Cutback Asphalt Slow Cure		3.8	
Emulsified Asphalt		2.04	
Other Asphalt		38	

The equivalent total tons of VOC of the combined liquid binders shall be less than ninety-six (96.0) tons per twelve consecutive month period rolled on a monthly basis with compliance determined at the end of each month.

- (e) The source wide unrestricted potential to emit of an individual HAP or combination of HAPs does not exceed the thresholds listed in 326 IAC 2-7-1(22), thus the source does not have major potential to emit for HAPs. Limiting source wide emissions of PM-10, VOC, SO₂, and NO_x will further limit the potential to emit of an individual HAP or combination of HAPs. Therefore, the source will not fall within any of the categories listed in 326 IAC 2-7-2(a) and will comply with all applicable requirements at the time of the FESOP issuance (See Emissions Calculations, Appendix A).

326 IAC 5-1 (Opacity Limitations)

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

- (a) Opacity shall not exceed an average of thirty percent (30%) 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.

The FESOP Renewal issued previously to this source, F097-14774-00089, has the requirement included and is being carried over to this revision

326 IAC 6-4-1 (Fugitive Dust Emissions)

Pursuant to 326 IAC 6-4-1, the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner

that would violate 326 IAC 6-4 (Fugitive Dust Emissions). The FESOP Renewal issued previously to this source, F097-14774-00089, has the requirement included and is being carried over to this revision

326 IAC 6-5 (Fugitive Particulate Emissions Limitations)

Pursuant to this rule, a fugitive dust control plan was submitted by the source on March 19, 1996. The plan was reviewed and approved. The source shall comply with all dust abatement measures contained therein. The FESOP Renewal issued previously to this source, F097-14774-00089, has the requirement included and is being carried over to this revision

State Rule Applicability - Individual Facilities

326 IAC 6-1-2 (Particulate Limitations)

Pursuant to this rule, particulate matter emissions from the mixer and aggregate dryer shall not exceed 0.03 grains per actual standard cubic foot (gr/acsf). The baghouse shall be in operation at all times the dryer burner is in operation, in order to comply with this limit.

Pursuant to the New Source Performance Standards, 326 IAC 12 (40 CFR 60.90 to 60.93, Subpart I), particulate matter emissions from the asphalt plant shall not exceed 0.040 grains per dry standard cubic foot (gr/dscf) and that visible emissions from the asphalt plant shall not exceed 20% opacity. Compliance with these limits will also satisfy 326 IAC 5-1. Compliance with the requirements of 326 IAC 6-1-2 satisfies the requirement for 40 CFR 60.90 to 60.93 Subpart I grain loading limitation. The FESOP Renewal issued previously to this source, F097-14774-00089, has the requirement included and is being carried over to this revision

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

Pursuant to this rule, sulfur dioxide emissions from the combustion of distillate (No. 2 and No. 4) oil shall be limited to 0.5 pounds per million Btu heat input. The company has accepted a voluntary limit of 1% sulphur by weight on No. 4 waste oil. The FESOP Renewal issued previously to this source, F097-14774-00089, has the requirement included and is being carried over to this revision

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

Pursuant to 326 IAC 8-5-2, no person shall cause or allow the use of cutback asphalt or asphalt emulsion containing more than seven (7) percent oil distillate by volume of emulsion of any paving application except:

- (a) Penetrating prime coating;
- (b) Stockpile storage; and
- (c) Application during the months of November, December, January, February, and March.

The FESOP Renewal issued previously to this source, F097-14774-00089, has the requirement included and is being carried over to this revision

Testing Requirements

326 IAC 2-8-4(3) (Performance Testing)

Within 60 days after achieving maximum production rate at which the drum mixer and aggregate dryer will be operated, but no later than 180 days after initial start up, the permittee shall perform a stack test approved by OES/AQM and IDEM/OAQ to demonstrate compliance with 40 CFR Part 60.90, Subpart I, 326 IAC 6-1-2, 326 IAC 2-2-2, and 326 IAC 2-8-4. Stack tests shall include testing for PM and PM-10 (filterable and condensable). The stack test methods shall be in accordance with the provisions of 326 IAC 3-2-1 (Source Sampling Procedures).

In order to demonstrate compliance with 326 IAC 2-8-4, PM-10 emissions from combined process equipment and dryer/burner operations are limited to 10.16 pounds per hour (lb/hr). The total

asphalt production for this plant is limited to 3,174,296 tons per twelve (12) consecutive month period. This production limit is the equivalent of 99.0 tons of PM-10 source wide per year.

Previous stack tests to comply with this requirement were conducted on PM on October 22, 1998. PM emissions (particulate) were found to be 0.0199 gr/dscf. In order to demonstrate compliance with 326 IAC 6-1-2, allowable PM emissions are limited to less than 0.030 gr/dscf.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

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

All compliance requirements from previous approvals were incorporated into this Significant Permit Revision. The compliance monitoring requirements applicable to this source are as follows:

- (a) The baghouse has applicable compliance monitoring conditions as specified below:
 - (1) Visible emission notations of the exhaust stack from the baghouse, conveyors, and transfer points shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee will record whether emissions are normal or abnormal. 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. 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. 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. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
 - (2) The Permittee shall record the total static pressure drop across the baghouse controlling the dryer burner, at least once per shift when the dryer burner is in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 2.0 to 8.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.
 - (3) An inspection shall be performed each calendar quarter of all bags controlling the dryer burner when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All

defective bags shall be replaced.

- (4) In the event that bag failure has been detected:
- (A) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan-Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (B) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have 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).

These monitoring conditions are necessary because the baghouse controlling the aggregate drying and mixing process must operate properly to ensure compliance with 40 CFR 60.90, Subpart I, 326 IAC 2-8 (FESOP), and 326 IAC 6-1-2.

Revision to the FESOP

- (1) Section A.2 is revised to replace the batch mixer and aggregate dryer with drum mixer and aggregate dryer and be numbered as item (a) as follows (changes are **bolded** and deletions are ~~struck-through~~ for emphasis):

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

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

- (a) ~~One (1) Batch Mixer (unit ID 2), 425 tons per hour maximum rated capacity, and one (1) 136 million Btu per hour Aggregate Dryer. The primary fuel source is No. 4 waste oil with natural gas, No. 2 oil, No. 4 oil, and propane as backup. Particulate emissions are controlled by one (1) baghouse, blower rated at 72,947 acfm and exhausting at stack 1. The unit was installed in 1992.~~ **One (1) Drum Mixer (unit ID 3) with a maximum rated capacity of 500 tons per hour, and one (1) 125 million Btu per hour aggregate dryer. The primary is No. 4 waste oil with natural gas, No. 4 distillate oil, No.2 distillate oil, butane and propane as backup. Particulate emissions will be controlled by one (1) baghouse, blower rated at 85,184 acfm and exhausting at a stack, identified as SV1.**
- (b) no changes
- (2) Section D.1 is changed in the FESOP to incorporate the replacement of batch mixer.

SECTION D.1 FACILITY OPERATION CONDITIONS

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

- (a) ~~One (1) Batch Mixer (unit ID 2), 425 tons per hour maximum rated capacity, and one (1) 136 million Btu per hour Aggregate Dryer. The primary fuel source is No. 4 waste oil with natural gas, No. 2 oil, No. 4 oil, and propane as backup. Particulate emissions are controlled by one (1) baghouse, blower rated at 72,947 acfm and exhausting at stack 1. The unit was installed in 1992.~~ **One (1) Drum Mixer (unit ID 3) with a maximum rated capacity of 500 tons per hour, and one (1) 125 million Btu per hour aggregate dryer. The primary fuel source is No. 4 waste oil with natural gas, No. 4 distillate oil, No.2 distillate oil, butane and propane as backup. Particulate emissions will be controlled by one (1) baghouse, blower rated at 85,184 acfm and exhausting at a stack, identified as SV1.**

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

D.1.1 Sulphur Dioxide (SO₂) [326 IAC 2-8-4] [326 IAC 2-2] [40 CFR 52.21]

- (a) Pursuant to 326 IAC 2-8-4, the input of residual No.4 waste oil to the dryer burner shall be limited to less than ~~1,734,950~~ **1,261,770** gallons per twelve (12) consecutive month period with compliance determined at the end of each month, which is equivalent to SO₂ emissions of less than ~~92.8~~ **92.7** tons per year. Sulphur content of the residual No.4 waste oil shall not exceed one percent (1%) sulphur by weight. This limit is structured such that when including the emissions of insignificant activities, the total source SO₂ emissions remain below one hundred (100) tons per twelve (12) month consecutive period. This renders the requirements of 326 IAC 2-7 (Part 70 permit program), 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.
- (b) For purposes of determining compliance based on SO₂ emissions:
- (1) Each gallon of No. 2 distillate oil shall be equivalent to ~~0.7336~~ **0.483** gallons of waste oil.
 - (2) Each gallon of No. 4 distillate oil shall be equivalent to ~~0.7009~~ **0.51** gallons of waste oil,
 - (3) Each gallon of propane or butane shall be equivalent to ~~0.0009~~ **0.001** gallons of waste oil, and
 - (4) Every million cubic feet of natural gas shall be equivalent to ~~5.607~~ **0.004** gallons of waste oil.

D.1.3 Nitrogen Oxides (NO_x) [326 IAC 2-8-4] [326 IAC 2-2] [40 CFR 52.21]

- (a) The input of natural gas to the dryer/burner shall be limited to less than ~~350.18~~ **687.4** million cubic feet per twelve (12) consecutive month period with compliance determined at the end of each month, which is equivalent to NO_x emissions of less than ~~96.3~~ **96.2** tons per year. Compliance with the potential to emit limitation makes 326 IAC 2-7 (Part 70 Permit Program) not applicable. Due to the potential to emit limitation, the provisions of Prevention of Significant Deterioration (40 CFR 52.21) rules are not applicable.
- (b) For purposes of determining compliance based on NO_x emissions:
- (1) Every 1000 gallons of residual No. 4 waste oil burned shall be equivalent to ~~0.029~~ **0.068** million cubic feet of natural gas,
 - (2) Every 1000 gallons of No. 4 distillate oil burned shall be equivalent to ~~0.036~~ **0.168** million cubic feet of natural gas,

- (3) Every 1000 gallons of No. 2 distillate oil burned shall be equivalent to ~~0.036~~ **0.086** million cubic feet of natural gas,
- (4) Every 1000 gallons of butane burned shall be equivalent to ~~0.038~~ **0.075** million cubic feet of natural gas, and
- (5) Every 1000 gallons of propane burned shall be equivalent to ~~0.034~~ **0.068** million cubic feet of natural gas.

D.1.5 Asphalt Plant [326 IAC 12] [40 CFR 60.90-60.93, NSPS Subpart I]

Pursuant to the New Source Performance Standards, 326 IAC 12 (40 CFR 60.90 to 60.93, Subpart I):

- (a) Particulate matter emissions from the hot mix asphalt facility shall not exceed 0.04 grains per dry standard cubic foot (gr/dscf). Compliance with 326 IAC 6-1-2(a) will satisfy 326 IAC 12 and 40 CFR 60.92(a)(1), Subpart I, and
- (b) The visible emissions from the hot mix asphalt facility shall not exceed twenty percent (20%) opacity.
- (C) **Pursuant to 40 CFR 60.7(a), the permittee shall submit to OES/AQM and IDEM/OAQ the following:**
 - (1) **a notification of the date of construction of drum mixer and aggregate dryer is commenced postmarked no later than 30 days after such date.**
 - (2) **a notification of the actual date of initial start up of drum mixer and aggregate dryer postmarked within 15 days after such date.**
 - (3) **A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. OES/AQM and IDEM/OAQ may request additional relevant information subsequent to this notice.**
 - (4) **a notification of the anticipated date for conducting the opacity observations required by 40 CFR 60.11(e)(1) of this part. The notification shall also include, if appropriate, a request for OES/AQM and IDEM/OAQ to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.**

D.1.6 Particulate matter less than 10 microns (PM-10) [326 IAC 2-8-2] [326 IAC 2-2] [40 CFR 52.21]

- (a) The total asphalt production for this plant shall be limited to ~~1,200,000~~ **3,174,296** tons per twelve (12) consecutive month period with compliance determined at the end of each month. This production limit is the equivalent of 99.0 tons of PM-10 source wide per year.
- (b) PM-10 emissions from combined process equipment and dryer/burner operations shall be limited to ~~0.44~~ **0.048** pounds per ton (lb/ton). Due to the potential to emit limitations, the Prevention of Significant Deterioration (326 IAC 2-2 and 40 CFR 52.21) and Part 70 rules (326 IAC 2-7) are not applicable.

D.1.8 Volatile Organic Compounds (VOC) [326 IAC 2-8-4] [326 IAC 2-2] [40CFR 52.21]

- (a) Pursuant to 326 IAC 2-8-4, the VOC solvent used as diluent in the liquid binder used in cold mix asphalt production from the plant shall be limited such that no more than ~~98.5~~ **ninety-six (96.0)** tons of VOC emissions emitted per twelve (12) consecutive months **with compliance determined at the end of each month**. This shall be achieved by limiting the total VOC solvent of any one selected binder to not exceed the stated limit in (c) for that binder during the last twelve (12) months. When more than one binder is used, the formula in (c)(6) must be applied so that the total VOC emitted does not exceed ninety-nine (99.0) tons per twelve (12) consecutive month period.
- (b) Liquid binders used in the production of cold mix asphalt shall be defined as follows:
- (1) Cut back asphalt rapid cure, containing a maximum of 25.3% of the liquid binder by weight of VOC solvent and 95% by weight of VOC solvent evaporating.
 - (2) Cut back asphalt medium cure, containing a maximum of 28.6% of the liquid binder by weight of VOC solvent and 70% by weight of VOC solvent evaporating.
 - (3) Cut back asphalt slow cure, containing a maximum of 20% of the liquid binder by weight of VOC solvent and 25% by weight of VOC solvent evaporating.
 - (4) Emulsified asphalt with solvent, containing a maximum of 15% of liquid binder by weight of VOC solvent and 46.4% by weight of the VOC solvent in the liquid blend evaporating. The percent oil distillate in emulsified asphalt with solvent liquid, as determined by ASTM, must be 7% or less of the total emulsion by volume
 - (5) Other asphalt with solvent binder, containing a maximum 25.9% of the liquid binder of VOC solvent and 2.5% by weight of the VOC solvent evaporating
- (c) The liquid binder used in cold mix asphalt production shall be limited as follows:
- (1) Cutback asphalt rapid cure liquid binder usage shall not exceed ~~98.5~~ **96.0** tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis **with compliance determined at the end of each month**.
 - (2) Cutback asphalt medium cure liquid binder usage shall not exceed ~~134.0~~ **130.5** tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis **with compliance determined at the end of each month**.
 - (3) Cutback asphalt slow cure liquid binder usage shall not exceed ~~374.3~~ **364.8** tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis **with compliance determined at the end of each month**.
 - (4) Emulsified asphalt with solvent liquid binder usage shall not exceed ~~200.9~~ **195.8** tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis **with compliance determined at the end of each month**.

- (5) Other asphalt with solvent liquid binder shall not exceed ~~3743~~ **3,648.0** tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis **with compliance determined at the end of each month.**
- (6) The VOC solvent allotments in subpart (c)(1) through (c)(5) of this condition shall be adjusted when more than one type of binder is used per twelve (12) month consecutive period rolled on a monthly basis with compliance determined at the end of each month. In order to determine the tons of VOC emitted per each type of binder, use the following formula and divide the tons of VOC solvent used for each type of binder by the corresponding adjustment ratio listed in the table that follows.

$$\frac{\text{Tons of solvent contained in binder}}{\text{Adjustment ratio}} = \text{tons of VOC emitted}$$

Type of Binder	Tons VOC Solvent	Adjustment Ratio	Tons VOC Emitted
Cutback Asphalt Rapid Cure		1	
Cutback Asphalt Medium Cure		1.36	
Cutback Asphalt Slow Cure		3.8	
Emulsified Asphalt		2.04	
Other Asphalt		38	

The equivalent total tons of VOC of the combined liquid binders shall be less than ~~ninety-eight and five tenths (98.5)~~ **ninety-six (96.0)** tons per twelve (12) consecutive month period rolled on a monthly basis with compliance determined at the end of each month. Compliance with this limit will ensure that 326 IAC 2-7 and 326 IAC 2-2 does not apply.

D.1.12 Testing Requirement

Within ~~720 days of issuance of the renewal~~ **60 days after achieving maximum production rate at which the drum mixer and aggregate dryer will be operated, but no later than 180 days after initial start up**, the Permittee shall perform a stack test approved by OES/AQM and IDEM/OAQ to demonstrate compliance with D.1.4, **D.1.5** and D.1.6. Stack test shall include testing for PM and PM10 (filterable and condensable). The stack test methods shall be in accordance with the provisions of 326 IAC 3-2.1 (Source Sampling Procedures).

D.1.18 Reporting Requirements

- (a) A quarterly summary of the information to document compliance with Conditions D.1.1, D.1.3, D.1.6, and D.1.8 shall be submitted to the addresses 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).
- (b) **Reports to document compliance with condition D.1.5(c) shall be submitted to the addresses listed in Section C - General Reporting Requirements. The reports**

submitted by the Permittee do require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1)

- (3) All the reporting forms have been revised to include the significant modification revision number and also the revised limits to address the modifications at the source. The revised forms and corresponding changes are included in the attached Appendix B.

Conclusion

The operation of this hot mix asphalt plant shall be subject to the conditions of the attached proposed **Significant Permit Revision No. 097-16615-00089**.

Dryer Burner (> 100 MMBtu/hr)

Company Name: Rieth-Riley Construction Co., Inc.
 Street Address: 5165 East 96th St., IN 46240
 County: Marion County
 FESOP No.: 097-14774-00089
 Permit Revision No.: 097-16615-00089
 Reviewer: Keshav Reddy

Fuel Source	Heat Input Capacity (MMBtu/hr)	Higher Heating Value	Units	ThroughPut	Units	Sulphur %
Natural Gas	125	1000	Btu/scf	1095	MMCF/yr	
No.4 Fuel Oil	125	138000	Btu/gal	7934.78	kgal/yr	0.5
No.4 Waste Oil	125	142000	Btu/gal	7711.27	kgal/yr	1
Propane	125	94000	Btu/gal	11648.94	kgal/yr	1
Butane	125	94000	Btu/gal	11648.94	kgal/yr	1
No.2 Fuel Oil	125	138000	Btu/gal	7934.78	kgal/yr	0.5

Criteria Pollutants for Natural Gas :	Emission Factor (lb/MMCF)	Uncontrolled Potential Emissions (tons/yr)
PM	1.9	1.04
PM10	7.6	4.16
SO2	0.6	0.33
NOX	280	153.30
VOC	5.5	3.01
CO	84	45.99

Criteria Pollutants for No.4 Fuel Oil :	Emission Factor (lb/kgal)	Uncontrolled Potential Emissions (tons/yr)
PM	7	27.77
PM10	6	23.80
SO2	75	297.55
NOX	47	186.47
VOC	0.2	0.79
CO	5	19.84

Criteria Pollutants for No.4 Waste Oil :	Emission Factor (lb/kgal)	Uncontrolled Potential Emissions (tons/yr)
PM	61	235.19
PM10	51	196.64
SO2	147	566.78
NOX	19	73.26
VOC	0.1	0.39
CO	5	19.28

Criteria Pollutants for Propane :	Emission Factor (lb/kgal)	Uncontrolled Potential Emissions (tons/yr)
PM	0.6	3.49
PM10	0.6	3.49
SO2	0.1	0.58
NOX	19	110.66
VOC	0.25	1.46
CO	3.2	18.64

Criteria Pollutants for Butane :	Emission Factor (lb/kgal)	Uncontrolled Potential Emissions (tons/yr)
PM	0.6	3.49
PM10	0.6	3.49
SO2	0.09	0.52
NOX	2.1	12.23
VOC	0.26	1.51
CO	3.6	20.97

Criteria Pollutants for No.2 Fuel Oil :	Emission Factor (lb/kgal)	Uncontrolled Potential Emissions (tons/yr)
PM	2	7.93
PM10	1	3.97
SO2	71	281.68
NOX	24	95.22
VOC	0.2	0.79
CO	5	19.84

Criteria Pollutant	Uncontrolled Potential Emissions (tons/yr)	Worst Case Fuel
PM	235.19	No.4 Waste Oil
PM10	196.64	No.4 Waste Oil
SO2	566.78	No.4 Waste Oil
NOX	186.47	No.4 Distillate Oil
VOC	3.01	Natural Gas
CO	45.99	Natural Gas

HAPs from Natural Gas Combustion	Emission Factor (lb/MMCF)	Uncontrolled Potential Emissions (tons/yr)
HAP - Organics		
Formaldehyde	7.50E-02	4.11E-02
Benzene	2.10E-03	1.15E-03
Hexane	1.80E+00	9.86E-01
Toluene	3.40E-03	1.86E-03
Dichlorobenzene	1.20E-03	6.57E-04
HAP-Metals		
Arsenic	2.00E-04	1.10E-04
Cadmium	1.10E-03	6.02E-04
Chromium	1.40E-03	7.67E-04
Lead	5.00E-04	2.74E-04
Mercury	2.60E-04	1.42E-04
Manganese	3.80E-04	2.08E-04
Nickel	2.10E-03	1.15E-03

HAP Emissions from Natural Gas (tons/yr) 1.03

HAPs from #2 Fuel Oil Combustion	Emission Factor (lb/MMBtu)	Uncontrolled Potential Emissions (tons/yr)
HAP-Metals		
Arsenic	4.00E-06	0.00E+00
Beryllium	3.00E-06	1.64E-03
Cadmium	3.00E-06	1.64E-03
Chromium	3.00E-06	1.64E-03
Lead	9.00E-06	4.93E-03
Mercury	3.00E-06	1.64E-03
Manganese	6.00E-06	3.29E-03
Nickel	3.00E-06	1.64E-03
Selenium	1.50E-05	8.21E-03
Copper	6.00E-06	3.29E-03

HAP Emissions from #2 Fuel Oil (tons/yr) 0.03

HAP-Metals	Emission Factor (lb/kgal)	Uncontrolled Potential Emissions (tons/yr)
Lead	2.2	8.48
Total HAP Emissions (tons/yr)		9.52

Uncontrolled Potential to Emit PM10 from Vehicle Travel on Unpaved Roads

Company Name: Rieth-Riley Construction Co., Inc.
Street Address: 5165 East 96th St., IN 46240
County: Marion County
FESOP No.: 097-14774-00089
Permit Revision No : 097-16615-00089
Reviewer: Keshav Reddy

$E = (k * 5.9 * (s/12) * (S/30) * (W/30)^{0.7} * (w/4)^{0.5} * (365-p)/365)$ = lb particulate/vehicle mile traveled on unpaved roads
 (AP-42, 13.2.2)

k =	0.36	particle size multiplier for PM10 (constant)
s =	4.8	silt content of road surface material (%), unspecified municipal roads
p =	125	number of days with at least 0.01 inch of precipitation (per year)

S = mean vehicle speed (mph)
 W = mean vehicle weight (tons)
 w = number of wheels

Vehicle Type	Mean Speed (mph)	Mean Weight (tons)	# of Wheels	Trip (mi) Distance	# Trips per Hour	Total Miles (One Day)	Day/Year	E (lb/VMT)	PM10 (ton/yr)
Triaxle truck	10	21	14	0.0357	47.5	40.70	365	1.36	10.10
Front end loader	10	34.8	4	0.0535	117.28	150.59	365	1.04	28.46
Total fugitive PM10 emissions =								38.56	
Fugitive PM10 emission control =								50.00%	
Total fugitive PM10 emissions =								19.28	

Uncontrolled Potential to Emit PM from Vehicle Travel on Unpaved Roads

Company Name: Rieth-Riley Construction Co., Inc.
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$E = (k * 5.9 * (s/12) * (S/30) * (W/30)^{0.7} * (w/4)^{0.5} * (365-p)/365)$ = lb particulate/vehicle mile traveled on unpaved roads
 (AP-42, 13.2.2)

k =	0.8	particle size multiplier for PM10 (constant)
s =	4.8	silt content of road surface material (%), unspecified municipal roads
p =	125	number of days with at least 0.01 inch of precipitation (per year)

S = mean vehicle speed (mph)
 W = mean vehicle weight (tons)
 w = number of wheels

Vehicle Type	Mean Speed (mph)	Mean Weight (tons)	# of Wheels	Trip (mi) Distance	# Trips per Hour	Total Miles (One Day)	Day/Year	E (lb/VMT)	PM (ton/yr)
Triaxle truck (agg)	10	21	14	0.0357	47.5	40.70	365	3.02	22.45
Front end loader	10	34.8	4	0.0535	117.28	150.59	365	2.30	63.24
Total fugitive PM emissions =								85.69	
Fugitive PM emission control =								50.00%	
Total fugitive PM emissions =								42.84	

Uncontrolled Potential to Emit PM from Handling

Company Name: Rieth-Riley Construction Co., Inc.
Street Address: 5165 East 96th St., IN 46240
County: Marion County
FESOP No.: 097-14774-00089
Permit Revision No : 097-16615-00089
Reviewer: Keshav Reddy

*AP-42 11.19.2-4: emission factors for crushed stone processing

Operation	Number of Points	Individual Rate (ton/hr)	Emission Factor : PM10		Uncontrolled Emissions PM10 (ton/yr)	Controlled Emissions PM10 (ton/yr)
			Uncontrolled (lb/ton)	Controlled (lb/ton)		
Conveyor trans.	4	500	0.0014	0.000048	12.26	0.42
Screening	1	500	0.0150	0.000840	32.85	1.84
Front end loader	1	500	0.0014	0.000048	3.07	0.11
Total PM10					48.2	2.4

Per AP-42 11.19.2-6c: PM = PM10 x 2.1

Operation	Number of Points	Individual Rate (ton/hr)	Emission Factor : PM10		Uncontrolled Emissions PM (ton/yr)	Controlled Emissions PM (ton/yr)
			Uncontrolled (lb/ton)	Controlled (lb/ton)		
Conveyor trans.	4	500	0.0029	0.000101	25.75	0.88
Screening	1	500	0.0315	0.001764	68.99	3.86
Front end loader	1	500	0.0029	0.000101	6.44	0.22
Total PM					101.2	5.0

Uncontrolled Potential to Emit PM,PM-10 from Storage Piles

Company Name: Rieth-Riley Construction Co., Inc.**Street Address:** 5165 East 96th St., IN 46240**County:** Marion County**FESOP No.:** 097-147774-00089**Permit Revision No :** 097-16615-00089**Reviewer:** Keshav Reddy

p (no: of days of rain greater than or equal to 0.01 inches) =
f (% of wind greater than or equal to 12 mph) =

125
15

Material	Silt Content (s) (wt%)	Pile Size (acres)	Storage Capacity (tons)	Emission Factor (lb/acre/day)	PM Emissions (tons/yr)	PM-10 Emissions (tons/yr)
Sand	1.1	0.196	5000	1.27	0.36	0.12
Gravel	0.9	0.265	8600	1.04	0.29	0.10
Limestone	1.2	0.257	8600	1.39	0.39	0.14
Recycle Asphalt Pavement	0.8	0.56	11650	0.93	0.26	0.09
Slag	0.8	0.257	8600	0.93	0.26	0.09
Total Pile Size (acres) =		1.535		Total Emissions(tons/yr)	1.56	0.54

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Reviewer: Keshav Reddy

Unit	ID	Maximum Rated Capacity	Capacity Units	Control Device	Exhaust Flow (scfm)	Control Efficiency gr/dscf
Aggregate Drum Mixer	2/3, SV1	500	ton/hr	baghouse	58,412	0.028

(Fire 6.23,)

Unit	(lb/hr)	Controlled PTE (ton/yr)	Uncontrolled Emissions (Max Capacity, 8760 hr)	
			(lb/hr)	(ton/yr)
Aggregate Drum Mixer (PM-10)	14.01885257	61.40257426	9222.93	40396.43
(PM)	14.01885257	61.40257426	9222.93	40396.43

Allowable PM10 Emissions for FESOP Limit

ACFM	Stack Temp/	SCFM
85,184	310	58,412

Allowable PM10 Emissions after allocation to all other emission units at the source = 44.5 tons/yr = 10.16 lbs/hr
 Production Throughput Limit to limit the PM10 emissions from the Drum Mixer:

$$(4380000 * 44.5) / 61.4 = 3174296.882 \text{ tons of Asphalt Per Year}$$

$$264524.7401 \text{ tons of Asphalt Per Month}$$

Short Term Allowable PM-10 Limit (lbs/ton): $(76.7 \text{ tons/yr}) \times (2000 \text{ lbs/ton}) / (3,174,296 \text{ tons/yr}) = 0.048325676 \text{ lbs/ton of Asphalt}$

HAP Emission Calculations

Unit	Maximum Rated Capacity (tons/hr)	Emission Factor (lb/ton)	Uncontrolled Emissions (tons/yr)
Aggregate Drum Mixer	500		
Hazardous Air Pollutants (HAPs)			
Ethyl Benzene		2.90E-04	6.35E-01
Formaldehyde		3.60E-03	7.88E+00
Benzene		1.20E-03	2.63E+00
Toluene		2.00E-04	4.38E-01

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Heat Input Capacity:	125	MMBtu/hr
Heating Value of No.4 Distillate Oil:	0.138	MMBtu/gallon
Heating Value of Butane :	0.094	MMBtu/gallon
Heating Value of Natural Gas:	1,000	Btu/Cubic Foot
Heating Value of Propane:	0.094	MMBtu/gallon
Heating Value of No.4 Waste Oil :	0.140	MMBtu/gallon
Heating Value of No.2 Distillate Oil	0.138	MMBtu/gallon

"NOX" Limit	
Natural Gas Limited Firing	
(pollutant)	(tons/yr)
PM	0.7
PM-10	2.6
SO2	0.2
NOx	96.2
VOC	1.9
CO	28.9

Dryer Burner NOX Limit:	
FESOP Limit:	99 tons per year NOX
- Other Facilities:	2.76 tons per year NOX
NOx Limit:	96.2 tons per year NOX
Annual Fuel Consumption:	1095.00 MMCF/yr
Natural Gas ("NOX") Usage Limit:	687.43 MMCF/yr

POTENTIAL EMISSIONS PER FUEL						
Natural Gas:						
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.90	7.60	0.60	280.00	5.50	84.00
Potential Emission in tons/yr	1.0	4.2	0.3	153.3	3.0	46.0
Propane:						
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	0.60	0.60	0.10	19.00	0.25	3.20
Potential Emission in tons/yr	3.5	3.5	0.6	110.7	1.5	18.6
Butane :						
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	0.60	0.60	0.09	21.00	0.26	3.60
Potential Emission in tons/yr	3.5	3.5	0.5	122.3	1.5	21.0
No. 4 Distillate Oil:						
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	7.00	6.00	75.00	47.00	0.20	5.00
Potential Emission in tons/yr	27.8	23.8	297.6	186.5	0.8	19.8
No. 4 Waste Oil:						
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	61.00	51.00	147.00	19.00	0.10	5.00
Potential Emission in tons/yr	238.6	199.4	574.9	74.3	0.4	19.6
No.2 Distillate Oil:						
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	2.00	1.00	71.00	24.00	0.20	5.00
Potential Emission in tons/yr	7.9	4.0	281.7	95.2	0.8	19.8

Alternate Fuel Limits as Natural Gas Equivalent: NOX		
Fuel	NOX Emission Factor	Limit (MMCF/Fuel)
Natural Gas	280 lb/MMCF	1.000 MMCF/MMCF
No. 4 Waste Oil	19 lb/Kgal	0.068 MMCF/Kgal #4W
No. 4 Distillate Oil	47 lb/Kgal	0.168 MMCF/ Kgal #No.4
Butane	21 lb/Kgal	0.075 MMCF/ Kgal Butane
Propane	19 lb/Kgal	0.068 MMCF/Kgal Propane
No.2 Distillate Oil	24 lb/Kgal	0.086 MMCF/Kgal #No.2

Methodology

MMBtu = 1,000,000 Btu
 MMCF = 1,000,000 Cubic Feet of Gas
 Throughput(MMBtu/yr)=Heat Input Capacity (MMBtu/hr) * 8760 hrs/yr
 Emissions (tons/yr) = Emission Factor (lb/MMCF) x Annual Fuel Consumption (MMCF/yr) / 2,000 lb/ton
 Natural Gas Usage Limit (MMCF/yr) = Dryer Burner NOX Limit (tons/yr) x Annual Fuel Consumption (MMCF/yr) / NOX Potential Emissions (tons/yr)
 Natural Gas Limited Firing (tons/yr) = Usage Limit (MMCF/yr) x Emission Factor (lb/MMCF) / 2,000 lb/ton
 Alternate Fuel Limits (MMCF Natural Gas /Fuel) = Fuel Emission Factor (lb/Kgal)/ Natural Gas Emission Factor (lb/MMCF)
 Emission Factors are from FIRE 6.23

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Heat Input Capacity:	125 MMBtu/hr
Heating Value of No.4 Distillate Oil:	0.138 MMBtu/gallon
Heating Value of Butane :	0.094 MMBtu/gallon
Heating Value of Natural Gas:	1,000 Btu/Cubic Foot
Heating Value of Propane:	0.094 MMBtu/gallon
Heating Value of No.4 Waste Oil :	0.140 MMBtu/gallon
Heating Value of No.2 Distillate Oil:	0.138 MMBtu/gallon

"SO2" Limit	
No.4 Waste Oil Limited Firing (pollutant)	(tons/yr)
PM	38.5
PM-10	32.2
SO2	92.7
NOx	12.0
VOC	0.1
CO	3.2

Dryer Burner SO2 Limit:	
FESOP Limit:	99 tons per year SO2
- Other Facilities:	6.26 tons per year SO2
NOx Limit:	92.7 tons per year SO2
Annual Fuel Consumption:	7821.43 kgal/yr
No.4 Waste Oil ("SO2") Usage Limit:	1261.77 kgal/yr

POTENTIAL EMISSIONS PER FUEL						
Natural Gas:						
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.90	7.60	0.60	280.00	5.50	84.00
Potential Emission in tons/yr	1.0	4.2	0.3	153.3	3.0	46.0
Propane:						
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	0.60	0.60	0.10	19.00	0.25	3.20
Potential Emission in tons/yr	3.5	3.5	0.6	110.7	1.5	18.6
Butane :						
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	0.60	0.60	0.09	21.00	0.26	3.60
Potential Emission in tons/yr	3.5	3.5	0.5	122.3	1.5	21.0
No. 4 Oil:						
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	7.00	6.00	75.00	47.00	0.20	5.00
Potential Emission in tons/yr	27.8	23.8	297.6	186.5	0.8	19.8
No. 4 Waste Oil:						
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	61.00	51.00	147.00	19.00	0.10	5.00
Potential Emission in tons/yr	238.6	199.4	574.9	74.3	0.4	19.6
No. 2 Distillate Oil:						
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	2.00	1.00	71.00	24.00	0.20	5.00
Potential Emission in tons/yr	7.9	4.0	281.7	95.2	0.8	19.8

Alternate Fuel Limits as No.4 Waste Oil Equivalent: SO2		
Fuel	SO2 Emission Factor	Limit (Kgal/Fuel)
Natural Gas	0.6 lb/MMCF	0.004 Kgal #4W/MMCF
No. 4 Waste Oil	147 lb/Kgal	1.000 Kgal #4W/Kgal #4W
No. 4 Distillate Oil	75 lb/Kgal	0.510 Kgal #4W / Kgal #No.4
Butane	0.09 lb/Kgal	0.001 Kgal #4W / Kgal Butane
Propane	0.1 lb/Kgal	0.001 Kgal #4W/ Kgal Propane
No.2 Distillate Oil	71 lb/Kgal	0.483 Kgal #4W/Kgal # No.2

Methodology

MMBtu = 1,000,000 Btu
 MMCF = 1,000,000 Cubic Feet of Gas
 Throughput (MMBtu/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr
 Emissions (tons/yr) = Throughput (MMBtu/yr) * Emission Factor (lb/kgal) x Heat Value Oil (gal/MMBtu)/2000lb/ton
 No.4 Waste Oil Usage Limit (kgal/yr) = Dryer Burner SO2 Limit (tons/yr) x Annual Fuel Consumption (kgal/yr) / SO2 Potential Emissions (tons/yr)
 No.4 Waste Oil Limited Firing (tons/yr) = Usage Limit (kgal/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton
 Alternate Fuel Limits (Kgal No.4 WasteOil /Fuel) = Fuel Emission Factor (lb/Kgal)/ No.4 Waste Oil Emission Factor (lb/Kgal)
 Emission Factors are from FIRE 6.23

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Emission Unit	PM	PM-10	PTE Existing (tons/year)				
			SO2	NOX	VOC	CO	HAP'S
Aggregate Dryer Burner	259.6	217.0	297.8	327.6	0.9	23.8	0.0
Unpaved Roads	88.3	39.7	0.0	0.0	0.0	0.0	
Material Handling	86.0	41.0	0.0	0.0	0.0	0.0	
Storage Piles	0.2	0.1	0.0	0.0	0.0	0.0	
Drum Mixer	59568.0	8376.8	0.0	0.0	0.0	0.0	10.8

Emission Unit	PM	PM-10	PTE Modification (tons/year)				
			SO2	NOX	VOC	CO	HAP'S
Aggregate Dryer Burner	235.2	196.6	566.8	186.5	3.0	46.0	9.5
Unpaved Roads	85.7	38.6	0.0	0.0	0.0	0.0	0.0
Material Handling	101.2	48.2	0.0	0.0	0.0	0.0	0.0
Storage Piles	1.6	0.5	0.0	0.0	0.0	0.0	0.0
Drum Mixer	40396.4	40396.4	0.0	0.0	0.0	0.0	11.6

Emission Unit	PM	PM-10	Increase in PTE (tons/year)				
			SO2	NOX	VOC	CO	HAP'S
Aggregate Dryer Burner			268.9		2.2	22.2	9.5
Unpaved Roads							
Material Handling	15.2	7.2					
Storage Piles	1.4	0.5					
Drum Mixer		32019.6					0.8
Net Increase in PTE due to the Modifications at the Source (tons/year)	16.6	32027.3	268.9	0.0	2.2	22.2	10.3

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Uncontrolled Emissions (tons/yr)

Process	PM	PM-10	Pollutants				
			SO2	NOX	VOC	CO	HAPs
Dryer Burner	235.2	196.6	566.8	186.5	3.0	46.0	9.5
Drum Mixer	40396.4	40396.4	0.0	0.0	0.0	0.0	11.6
UnPaved Roads	85.7	38.6	0.0	0.0	0.0	0.0	0.0
Handling	101.2	48.2	0.0	0.0	0.0	0.0	0.0
Storage Piles	1.6	0.5	0.0	0.0	0.0	0.0	0.0
Total Emissions (tons/yr)	40820.1	40680.4	566.8	186.5	3.0	46.0	21.1

Limited PTE (tons/yr)

Process	PM	PM-10	Pollutants				
			SO2	NOX	VOC	CO	HAPs
Dryer Burner	38.5	32.2	92.7	96.2	3.0	46.0	9.5
Drum Mixer	44.5	44.5	0.0	0.0	0.0	0.0	11.6
UnPaved Roads	42.8	19.3	0.0	0.0	0.0	0.0	0.0
Handling	5.0	2.4	0.0	0.0	0.0	0.0	0.0
Storage Piles	1.6	0.5	0.0	0.0	0.0	0.0	0.0
Cut Back Asphalt	0.0	0.0	0.0	0.0	96.0	0.0	0.0
Insignificant Activities	0.2	0.1	6.3	2.8	0.0	0.5	0.0
Total Emissions (tons/yr)	132.6	99.0	99.0	99.0	99.0	46.5	21.1

Company Name: Rieth-Riley Construction Co. Inc.
 Location: 5165 East 96th Street, Indianapolis, IN 46240
 Permit No: F097-14774-00089
Significant Permit Revision No. : 097-16615-00089
Source/Facility: Drum mixer/dryer burner
 Pollutant: Sulfur Dioxides (SO2)

Day	Month:						Year:	Daily waste oil equivalent (0.7009 0.51 x #4 distillate oil) (0.7336 0.483 x #2 distillate oil) (0.009 0.001 x propane gas) (0.0009 0.001 x butane gas) (5.607 0.004 x MMCF nat. gas)	TOTAL waste oil Usage this day gallons	waste oil usage last 365 days gals/365 days	waste oil LIMIT gals/365 days	Average sulphur content (%)			Average heating value MMBTU		
	waste oil Usage gals/day	#4 distillate oil Usage gals/day	#2 distillate oil Usage gals/day	propane gas usage gals/day	butane gas usage gals/day	Natural gas Usage MMCF/day						waste oil	#4 dist. oil	#2 dist. oil	waste oil	#4 dist. oil	#2 dist. oil
1										1,734,950 1,261,770							
2										1,734,950 1,261,770							
3										1,734,950 1,261,770							
4										1,734,950 1,261,770							
5										1,734,950 1,261,770							
6										1,734,950 1,261,770							
7										1,734,950 1,261,770							
8										1,734,950 1,261,770							
9										1,734,950 1,261,770							
10										1,734,950 1,261,770							
11										1,734,950 1,261,770							
12										1,734,950 1,261,770							
13										1,734,950 1,261,770							
14										1,734,950 1,261,770							
15										1,734,950 1,261,770							

Company Name: Rieth-Riley Construction Co. Inc.
 Location: 5165 East 96th Street, Indianapolis, IN 46240
 Permit No: F097-14774-00089
Significant Permit Revision no. : 097-16615-00089
Source/Facility: Drum mixer/dryer burner
 Pollutant: Sulfur Dioxides (SO2)

Day	Month:	#4 distillate oil Usage gals/day	#2 distillate oil Usage gals/day	propane gas usage gals/day	butane gas usage gals/day	Natural gas Usage MM cf/day	Daily waste oil equivalent (0.7009 0.51 x #4 distillate oil) (0.7336 0.483 x #2 distillate oil) (0.009 0.001 x propane gas) (0.0009 0.001 x butane gas) (5.607 0.004 x MMCF nat. gas)	TOTAL waste oil Usage this day gals/day	waste oil usage last 365 days gals/365 days	waste oil LIMIT gals/365 days	Average sulphur content (%)			Average heating value (MMBTU/gal)		
											waste oil	#4 dist. oil	#2 dist. oil	waste oil	#4 dist. oil	#2 dist. oil
16										1,734,950 1,261,770						
17										1,734,950 1,261,770						
18										1,734,950 1,261,770						
19										1,734,950 1,261,770						
20										1,734,950 1,261,770						
21										1,734,950 1,261,770						
22										1,734,950 1,261,770						
23										1,734,950 1,261,770						
24										1,734,950 1,261,770						
25										1,734,950 1,261,770						
26										1,734,950 1,261,770						
27										1,734,950 1,261,770						
28										1,734,950 1,261,770						
29										1,734,950 1,261,770						
30										1,734,950 1,261,770						
31										1,734,950 1,261,770						

- No deviation occurred in this month.
- Deviation/s occurred in this month
 Deviation has been reported on: _____

Submitted by: Dean K. Logan
 Title/position: Asphalt Plant Specialist
 Signature: _____
 Phone No.: (574) 875-5183 Ext. 20226
 Date: _____

Company Name: Rieth-Riley Construction Co. Inc.
 Location: 5165 East 96th Street, Indianapolis, IN 46240
 Permit No: F097-14774-00089
Significant Permit Revision no. : 097-16615-00089
Source/Facility: Drum mixer/dryer burner
 Pollutant: Nitrogen Oxides (NOx)

Day	Month:	Waste oil usage gals/day	Year:	#4 distillate oil usage gals/day	#2 distillate oil Usage gals/day	Propane Gas Usage gals/day	Butane Gas Usage gals/day	Daily Natural Gas Equivalent MMCF (0.029 0.068 x waste oil usage Kgal) (0.036 0.168 x #4 distillate oil usage Kgal) (0.036 0.086 x #2 distillate oil usage Kgal) (0.034 0.068 x propane usage Kgal) (0.038 0.075 x butane usage Kgal)	TOTAL Natural gas usage this day MMCF	TOTAL natural gas usage last 365 days gals/365 days	Natural gas LIMIT MMCF/365 days
1											350.18 687.4
2											350.18 687.4
3											350.18 687.4
4											350.18 687.4
5											350.18 687.4
6											350.18 687.4
7											350.18 687.4
8											350.18 687.4
9											350.18 687.4
10											350.18 687.4
11											350.18 687.4
12											350.18 687.4
13											350.18 687.4
14											350.18 687.4
15											350.18 687.4

Company Name: Rieth-Riley Construction Co. Inc.
 Location: 5165 East 96th Street, Indianapolis, IN 46240
 Permit No: F097-14774-00089
Significant Permit Revision no. : 097-16615-00089
Source/Facility: Drum mixer/dryer burner
 Pollutant: Nitrogen Oxides (NOx)

Day	Month:	Waste oil Usage gals/day	Year:	#4 distillate oil usage gals/day	#2 distillate oil Usage gals/day	Butane gas usage gals/day	Propane gas usage gals/day	Daily Natural Gas Equivalent MMCF (0.029 0.068 x waste oil usage Kgal) (0.036 0.168 x #4 distillate oil usage Kgal) (0.036 0.086 x #2 distillate oil usage Kgal) (0.034 0.068 x propane usage Kgal) (0.038 0.075 x butane usage Kgal)	TOTAL Natural gas usage this day MMCF	TOTAL Natural gas usage last 365 days MMCF/365 days	Natural gas LIMIT MMCF/365 days
16											350.18 687.4
17											350.18 687.4
18											350.18 687.4
19											350.18 687.4
20											350.18 687.4
21											350.18 687.4
22											350.18 687.4
23											350.18 687.4
24											350.18 687.4
25											350.18 687.4
26											350.18 687.4
27											350.18 687.4
28											350.18 687.4
29											350.18 687.4
30											350.18 687.4
31											350.18 687.4

- No deviation occurred in this month.
- Deviation/s occurred in this month
 Deviation has been reported on: _____

Submitted by: Dean K. Logan
 Title/Position: Asphalt Plant Specialist
 Signature: _____
 Phone No.: (574) 875-5183 Ext. 20226
 Date: _____

Company Name: Rieth-Riley Construction Co. Inc.
 Location: 5165 East 96th Street, Indianapolis, IN 46240
 Permit No: F097-14774-00089
Significant Permit Revision no. : 097-16615-00089
Source/Facility: Drum mixer/dryer burner
 Pollutant: Particulate Matter (PM10)

Month:		Year:	
DAY	Amount of asphalt concrete produced this day (tons/day)	Amount of asphalt concrete produced last 365 days (tons/365 days)	asphalt concrete production limit (tons/365 days)
1			1,200,000 3174296
2			1,200,000 3174296
3			1,200,000 3174296
4			1,200,000 3174296
5			1,200,000 3174296
6			1,200,000 3174296
7			1,200,000 3174296
8			1,200,000 3174296
9			1,200,000 3174296
10			1,200,000 3174296
11			1,200,000 3174296
12			1,200,000 3174296
13			1,200,000 3174296
14			1,200,000 3174296
15			1,200,000 3174296

Company Name: Rieth-Riley Construction Co. Inc.
 Location: 5165 East 96th Street, Indianapolis, IN 46240
 Permit No: F097-14774-00089
Significant Permit Revision No. : 097-16615-00089
 Source/Facility: **Drum mixer/dryer burner**
 Pollutant: Particulate Matter (PM10)

Month:	Year:		
DAY	Amount of asphalt concrete produced this day (tons/day)	Amount of asphalt concrete produced last 365 days (tons/365 days)	asphalt concrete production limit (tons/365 days)
16			1,200,000 3174296
17			1,200,000 3174296
18			1,200,000 3174296
19			1,200,000 3174296
20			1,200,000 3174296
21			1,200,000 3174296
22			1,200,000 3174296
23			1,200,000 3174296
24			1,200,000 3174296
25			1,200,000 3174296
26			1,200,000 3174296
27			1,200,000 3174296
28			1,200,000 3174296
29			1,200,000 3174296
30			1,200,000 3174296
31			1,200,000 3174296

- No deviation occurred in this month.
 Deviation/s occurred in this month
 Deviation has been reported on: _____

Submitted by: Dean K. Logan
 Title/Position: Asphalt Plant Specialist
 Signature: _____
 Phone No.: (574) 875-5183 Ext 20226
 Date: _____

Company Name: Rieth-Riley Construction Co. Inc.

Location: 5165 East 96th Street, Indianapolis, IN 46240

Permit No: F097-14774-030089

Significant Permit Revision no. : 097-16615-00089

Source/Facility: Drum mixer/dryer burner

Pollutant: Volatile Organic Compound (VOC)

Month:		Year:			
DAY	Type of liquid binder used this day	Amount of liquid binder used in the production of coldmix cutback asphalt this day (tons/day)	VOC, solvent content by weight of binder used this day (%)	Amount of VOC, solvent used this day (tons/day)	Amount of VOC, solvent used in 1st 365 days (tons/365 days)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Company Name: Rieth-Riley Construction Co. Inc.
 Location: 5165 East 96th Street, Indianapolis, IN 46240
 Permit No: F097-14774-00089
Significant Permit Revision No. : 097-16615-00089
Source/Facility: Drum mixer/dryer burner
 Pollutant: Volatile Organic Compounds (VOC)

Month:	YEAR:				
DAY	Type of liquid binder used this day	Amount of liquid binder used in the production of coldmix cutback asphalt this day (tons/day)	VOC, solvent content by weight of binder used this day (%)	Amount of VOC, solvent used this day (tons/day)	Amount of VOC, solvent used in 1st 365 days (tons/365 days)
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

- No deviation occurred in this month.
- Deviation/s occurred in this month
- Deviation has been reported on: _____

Submitted by: Dean K. Logan
 Title/Position: Asphalt Plant Specialist
 Signature: _____
 Phone No.: (574) 875-5183 Ext 20226
 Date: _____

**IDEM
and**

**Indianapolis Office of Environmental Services
Air Quality Management Section - Compliance Data Group
Quarterly Report of 365 Day Daily Rolling Total**

Company Name: Rieth-Riley Construction Co. Inc.																		
Location: 5165 East 96th Street, Indianapolis, IN 46240																		
Permit No: F097-14774-00089																		
Significant Permit Revision No. : 097-16615-00089																		
Source/Facility: Drum mixer/dryer burner																		
Pollutant: Sulfur Dioxides (SO ₂)																		
Day	Month:					Year:					waste oil usage last 365 days gals/365 days	waste oil LIMIT gals/365 days	Average sulphur content (%)			Average heating value MMBTU		
	waste oil Usage gals/day	#4 distillate oil Usage gals/day	#2 distillate oil Usage gals/day	propane gas usage gals/day	butane gas usage gals/day	Natural gas Usage MMCF/day	Daily waste oil equivalent (0.51 x #4 distillate oil) (0.483 x #2 distillate oil) (0.001 x propane gas) (0.001 x butane gas) (4.082 x MMCF nat. gas)	TOTAL waste oil Usage this day gallons	waste oil	waste oil			waste oil	#4 dist. oil	#2 dist. oil	waste oil	#4 dist. oil	#2 dist. oil
1										1,261,770								
2										1,261,770								
3										1,261,770								
4										1,261,770								
5										1,261,770								
6										1,261,770								
7										1,261,770								
8										1,261,770								
9										1,261,770								
10										1,261,770								
11										1,261,770								
12										1,261,770								
13										1,261,770								
14										1,261,770								
15										1,261,770								

IDEM
and
Indianapolis Office of Environmental Services
Air Quality Management Section - Compliance Data Group
Quarterly Report of 365 day Daily Rolling Total

Company Name: Rieth-Riley Construction Co. Inc.
Location: 5165 East 96th Street, Indianapolis, IN 46240
Permit No: F097-14774-00089
Significant Permit Revision no. : 097-16615-00089
Source/Facility: Drum mixer/dryer burner
Pollutant: Sulfur Dioxides (SO2)

Day	Month:	#4 distillate oil Usage gals/day	#2 distillate oil Usage gals/day	propane gas usage gals/day	butane gas usage gals/day	Natural gas Usage MM cf/day	Daily waste oil equivalent (0.51 x #4 distillate oil) (0.483 x #2 distillate oil) (0.001 x propane gas) (0.001 x butane gas) (4.082 x MMCF nat. gas)	TOTAL waste oil Usage this day gals/day	waste oil usage last 365 days gals/365 days	waste oil LIMIT gals/365 days	Average sulphur content (%)			Average heating value (MMBTU/gal)		
											waste oil	#4 dist. oil	#2 dist. oil	waste oil	#4 dist. oil	#2 dist. oil
16										1,261,770						
17										1,261,770						
18										1,261,770						
19										1,261,770						
20										1,261,770						
21										1,261,770						
22										1,261,770						
23										1,261,770						
24										1,261,770						
25										1,261,770						
26										1,261,770						
27										1,261,770						
28										1,261,770						
29										1,261,770						
30										1,261,770						
31										1,261,770						

- No deviation occurred in this month.
- Deviation/s occurred in this month
- Deviation has been reported on: _____

Submitted by: Dean K. Logan
 Title/position: Asphalt Plant Specialist
 Signature: _____
 Phone No.: (574) 875-5183 Ext. 20226
 Date: _____

IDEM
and
Indianapolis Office of Environmental Services
Air Quality Management Section - Compliance Data Group
Quarterly Report of 365 day Daily Rolling Total

Company Name: **Rieth-Riley Construction Co. Inc.**
 Location: **5165 East 96th Street, Indianapolis, IN 46240**
 Permit No: **F097-14774-00089**
 Significant Permit Revision no. : **097-16615-00089**
 Source/Facility: **Drum mixer/dryer burner**
 Pollutant: **Nitrogen Oxides (NOx)**

Day	Month:	Year:					Daily Natural Gas Equivalent MMCF (0.068 x waste oil usage Kgal) (0.168 x #4 distillate oil usage Kgal) (0.086 x #2 distillate oil usage Kgal) (0.068 x propane usage Kgal) (0.075 x butane usage Kgal)	TOTAL Natural gas usage this day MMCF	TOTAL Natural gas usage last 365 days MMCF/365 days	Natural gas LIMIT MMCF/365 days
16										687.4
17										687.4
18										687.4
19										687.4
20										687.4
21										687.4
22										687.4
23										687.4
24										687.4
25										687.4
26										687.4
27										687.4
28										687.4
29										687.4
30										687.4
31										687.4

- No deviation occurred in this month.
- Deviation/s occurred in this month
Deviation has been reported on: _____

Submitted by: Dean K. Logan
 Title/Position: Asphalt Plant Specialist
 Signature: _____
 Phone No.: (574) 875-5183 Ext. 20226
 Date: _____

and

Office of Environmental Services
Air Quality Management Section - Compliance Data Group
Quarterly Report of 365-day Rolling Total

Company Name: Rieth-Riley Construction Co. Inc. Location: 5165 East 96th Street, Indianapolis, IN 46240 Permit No: F097-14774-00089 Significant Permit Revision no. : 097-16615-00089 Source/Facility: Drum mixer/dryer burner Pollutant: Particulate Matter (PM10)			
Month:		Year:	
DAY	Amount of asphalt concrete produced this day (tons/day)	Amount of asphalt concrete produced last 365 days (tons/365 days)	asphalt concrete production limit (tons/365 days)
1			1,000,000
2			1,000,000
3			1,000,000
4			1,000,000
5			1,000,000
6			1,000,000
7			1,000,000
8			1,000,000
9			1,000,000
10			1,000,000
11			1,000,000
12			1,000,000
13			1,000,000
14			1,000,000
15			1,000,000

**IDEM
 and
 Indianapolis Office of Environmental Services
 Air Quality Management Section - Compliance Data Group
 Quarterly Report of 365-day Daily rolling Total**

Company Name: Rieth-Riley Construction Co. Inc.			
Location: 5165 East 96th Street, Indianapolis, IN 46240			
Permit No: F097-14774-00089			
Significant Permit Revision No. : 097-16615-00089			
Source/Facility: Drum mixer/dryer burner			
Pollutant: Particulate Matter (PM10)			
Month:		Year:	
DAY	Amount of asphalt concrete produced this day (tons/day)	Amount of asphalt concrete produced last 365 days (tons/365 days)	asphalt concrete production limit (tons/365 days)
16			1,000,000
17			1,000,000
18			1,000,000
19			1,000,000
20			1,000,000
21			1,000,000
22			1,000,000
23			1,000,000
24			1,000,000
25			1,000,000
26			1,000,000
27			1,000,000
28			1,000,000
29			1,000,000
30			1,000,000
31			1,000,000
<input type="checkbox"/> No deviation occurred in this month. <input type="checkbox"/> Deviation/s occurred in this month Deviation has been reported on: _____		Submitted by: <u>Dean K. Logan</u> Title/Position: <u>Asphalt Plant Specialist</u> Signature: _____ Phone No.: <u>(574) 875-5183 Ext 20226</u> Date: _____	

**Indianapolis Office of Environmental Services
Air Quality Management Section - Compliance Data Group
Quarterly Report of 365-day Rolling Total**

Company Name: Rieth-Riley Construction Co. Inc.
 Location: 5165 East 96th Street, Indianapolis, IN 46240
 Permit No: F097-14774-030089
 Significant Permit Revision no. : 097-16615-00089
 Source/Facility: Drum mixer/dryer burner
 Pollutant: Volatile Organic Compound (VOC)

Month:	Year:				
DAY	Type of liquid binder used this day	Amount of liquid binder used in the production of coldmix cutback asphalt this day (tons/day)	VOC, solvent content by weight of binder used this day (%)	Amount of VOC, solvent used this day (tons/day)	Amount of VOC, solvent used in lst 365 days (tons/365 days)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

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and
Office of Environmental Services
Air Quality Management - Compliance Data Group
Quarterly Report of 365-day Daily rolling Total

Company Name: **Rieth-Riley Construction Co. Inc.**
Location: **5165 East 96th Street, Indianapolis, IN 46240**
Permit No: **F097-14774-00089**
Significant Permit Revision No. : **097-16615-00089**
Source/Facility: **Drum mixer/dryer burner**
Pollutant: **Volatile Organic Compounds (VOC)**

Month:	YEAR:				
DAY	Type of liquid binder used this day	Amount of liquid binder used in the production of coldmix cutback asphalt this day (tons/day)	VOC, solvent content by weight of binder used this day (%)	Amount of VOC, solvent used this day (tons/day)	Amount of VOC, solvent used in lst 365 days (tons/365 days)
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

- No deviation occurred in this month.
 Deviation/s occurred in this month
Deviation has been reported on: _____

Submitted by: Dean K. Logan
Title/Position: Asphalt Plant Specialist
Signature: _____
Phone No.: (574) 875-5183 Ext 20226
Date: _____