

Mr. Dean Logan
Rieth-Riley Construction Company, Inc.
P.O. Box 477
Valparaiso, Indiana 46383

Re: **127-13986-03224**
First Significant Revision to
FESOP 127-5490-03224

Dear Mr. Logan:

Rieth-Riley Construction Company, Inc. was issued a permit on December 13, 1996 for a hot mix asphalt plant. A letter requesting changes to this permit was received on March 2, 2001. Pursuant to the provisions of 326 IAC 2-8-11.1 a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of changing their existing PM10 limit of 15.2 lb/hr (66.57 tons/yr) to an equivalent lb/ton production limit of 0.1331 with an annual production limit of 1,000,000 tons/yr.

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 Scott Fulton, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call at (800) 451-6027, press 0 and ask for Scott Fulton or extension (3-5691), or dial (317) 233-5691.

Sincerely,

Original signed by

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments
SDF

cc: File - Porter County
U.S. EPA, Region V
Porter County Health Department
Northwest Regional Office
Air Compliance Section Inspector - Dave Sampias
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
Phone: 1-800-451-6027

**Rieth-Riley Construction Company, Inc.
361 West U.S. Highway 6
Valparaiso, Indiana 46383**

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 and contains the conditions and provisions specified in 326 IAC 2-8 and 40 CFR Part 70.6 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments) and IC 13-15 and IC 13-17 (prior to July 1, 1996, IC 13-1-1-4 and IC 13-7-10).

Operation Permit No.: F127-5490-03224	Date Issued: December 13, 1996
First Significant Permit Revision No. 127-13986-03224	Affected Pages: 4, 24, 25, and 28, with pages 25a and 35a added.
Issued by: Original signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: June 28, 2001

SECTION A SOURCE SUMMARY

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

The Permittee owns and operates a hot mix asphalt batch plant.

Responsible Official: Dean K. Logan, Asphalt Plant Specialist
Source Address: 361 West U.S. Highway 6, Valparaiso, Indiana 46383
Mailing Address: P.O. Box 477, Goshen, Indiana 46527-0477
SIC Code: 2951
County Location: Porter
County Status: Severe nonattainment for ozone, unclassifiable for PM-10, and Attainment for all other criteria pollutants
Source Status: Synthetic Minor Source, FESOP Program

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

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

- (a) one (1) aggregate rotary drum dryer, identified as emission unit No. 2, with a maximum capacity of 400 tons per hour, equipped with one (1) re-refined waste oil fired aggregate dryer burner with a maximum rated capacity of 118 million (MM) Btu per hour using natural gas and No. 4 distillate fuel oil as back-up fuels, and a cyclone and baghouse in series for air pollution control, exhausting at one (1) stack, identified as SV1;
- (b) one (1) drag slat hot mix conveyor and three (3) feeder conveyors;
- (c) one (1) screen;
- (d) three (3) liquid asphalt storage tanks, identified as Tanks 19A, 19B and 19C, with maximum storage capacities of 18,000, 25,000 and 25,000 gallons, respectively, with each tank exhausting at one (1) stack, identified as SV4, SV5, and SV6, respectively;
- (e) one (1) re-refined waste oil or No. 4 distillate fuel oil storage tank, identified as Tank 18, with a maximum storage capacity of 20,400 gallons, exhausting at one (1) stack identified as SV9;
- (f) one (1) No. 2 distillate fuel oil storage tank, identified as Tank 22, with a maximum storage capacity of 9,800 gallons, exhausting at one (1) stack, identified as SV10; and
- (g) cold-mix (stockpile mix) asphalt storage piles, containing cutback asphalt with 10% diesel-like solvent by volume.

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

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(20):

- (a) one (1) re-refined waste oil fired hot oil heater, identified as emission unit No. 20, rated at 2.0 MMBtu/hr using natural gas and butane as back-up fuels, exhausting at one (1) stack, identified as SV2;
- (b) one (1) No. 2 distillate fuel oil fired liquid asphalt storage tank heater, identified as emission unit No. 19A, rated at 0.5 MMBtu/hr using natural gas and butane as back-up fuels, exhausting at one (1) stack, identified as SV3;
- (c) one (1) tach tank, identified as Tank 23, with a maximum storage capacity of 13,800 gallons, exhausting at one (1) stack identified as SV8;
- (d) one (1) cold feed system consisting of six (6) compartments with a total aggregate holding capacity of 180 tons;
- (e) one (1) hot aggregate bucket elevator;
- (f) one (1) hot aggregate storage bin consisting of four (4) compartments;

SECTION D.1 FACILITY OPERATION CONDITIONS

- (a) one (1) aggregate rotary drum dryer, identified as emission unit No. 2, with a maximum capacity of 400 tons per hour, equipped with one (1) re-refined waste oil fired aggregate dryer burner with a maximum rated capacity of 118 million (MM) Btu per hour using natural gas and No. 4 distillate fuel oil as back-up fuels, and a cyclone and baghouse in series for air pollution control, exhausting at one (1) stack, identified as SV1;
- (b) one (1) drag slat hot mix conveyor and three (3) feeder conveyors;
- (c) one (1) screen.

Emissions Limitations and Standards [326 IAC 2-8-4(1)] [326 IAC 6-3] [326 IAC 12] [40 CFR Part 60.90]

D.1.1 Particulate Matter

State: Pursuant to 326 IAC 6-3 (Process Operations) and 326 IAC 2-2 (Prevention of Significant Deterioration), the particulate matter emissions from the mixing and drying operation shall not exceed 36.2 pounds per hour.

Federal: Pursuant to 326 IAC 12, (40 CFR Part 60.90, Subpart I) "Standards of Performance for Hot Mix Asphalt Facilities", the particulate matter emissions from the mixing and drying operations shall be limited to 0.04 grains per dry standard cubic foot (gr/dscf).

D.1.2 Particulate Matter 10 Microns (PM-10)

Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the aggregate mixing and drying operation shall not exceed 0.1331 pounds per ton of asphalt, including both filterable and condensable fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

D.1.3 Opacity

Pursuant to 326 IAC 12, (40 CFR Part 60.92, Subpart I) "Standards of Performance for Hot Mix Asphalt Facilities", the mixing and drying operations shall not discharge or cause the discharge into the atmosphere any gases which exhibit 20% opacity or greater.

D.1.4 Sulfur Dioxide (SO₂)

Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), sulfur dioxide emissions from the 118 million British thermal units per hour burner for the aggregate dryer shall be limited to 1.6 pounds per million British thermal unit heat input or a sulfur content of less than or equal to 1.52 percent when using re-refined waste oil. This source has accepted a sulfur content limit of 1.0 percent when using re-refined waste oil. When using distillate oil, the sulfur dioxide emissions from the 118 million British thermal units per hour burner for the aggregate dryer shall be limited to 0.5 pound per million British thermal unit heat input or a sulfur content of less than or equal to 0.49 percent. The No. 4 distillate fuel oil used in the aggregate dryer has a sulfur content of 0.461 percent, which was used to calculate potential SO₂ emissions and re-refined waste oil equivalents.

Pursuant to 326 IAC 7-1.1-2, this sulfur dioxide limit applies at all times including periods of startup, shutdown, and malfunction.

D.1.5 Re-refined Waste Oil Usage

Pursuant to 326 IAC 2-8-4(1), the input of re-refined waste oil to the 118 million Btu per hour burner for the aggregate dryer shall be limited, in total, to 1,253,066 U.S. gallons per 365 day period, rolled on a daily basis, based on a maximum oil sulfur content of 1.0 percent. For purposes of determining compliance, every million cubic feet of natural gas burned shall be equivalent to 4.1 gallons of re-refined waste oil, based on SO₂ emissions. Every 1,000 gallons of No. 4 distillate fuel oil burned shall be equivalent to 470.4 gallons of re-refined waste oil based on SO₂ emissions and a maximum sulfur content of 0.461 percent. The total gallons and sulfur content of re-refined waste oil and re-refined waste oil equivalent input shall not exceed the limits specified. During the first 365 days of operation under this permit, the input of re-refined waste oil and re-refined waste oil equivalents shall be limited such that the total gallons divided by the accumulated days of operation shall not exceed 3,433 U.S. gallons per day. Therefore, the requirements of 326 IAC 2-7 will not apply.

D.1.6 Natural Gas Usage

Pursuant to 326 IAC 2-8-4(1), the input of natural gas to the 118 million Btu per hour burner for the aggregate dryer shall be limited, in total, to 356.8 million cubic feet (MMCF) per 365 day period, rolled on a daily basis. For purposes of determining compliance, every 1,000 gallons of No. 4 distillate fuel oil burned shall be equivalent to 0.1218 MMCF of natural gas, based on NO_x emissions and a maximum sulfur content of 0.461 percent. Every 1,000 gallons of re-refined waste oil burned shall be equivalent to 0.0345 MMCF of natural gas, based on NO_x emissions and a maximum sulfur content of 1.0 percent. The total MMCF of natural gas and natural gas equivalents input shall not exceed the limit specified. During the first 365 days of operation under this permit, the input of natural gas and natural gas equivalents shall be limited such that the total MMCF divided by the accumulated days of operation shall not exceed 0.98 MMCF per day. Therefore, the requirements of 326 IAC 2-7 will not apply.

D.1.6a Hot Mix Asphalt Production Limit

The amount of hot mix asphalt produced shall be limited to 1,000,000 tons per twelve (12) month period, rolled on a monthly basis. During the first 12 months of operation under this permit, the asphalt production shall be limited such that the total tons of asphalt produced divided by the accumulated months of operation shall not exceed 1,000,000 tons per year. Therefore, the requirements of 326 IAC 2-7 will not apply.

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

D.1.7 Particulate Matter and PM10

The Permittee shall perform PM and PM-10 testing for the mixing and drying operation utilizing 40 CFR 60, Appendix A, Method 5, 17, 40 CFR Part 51, Appendix M, Method 201, 201a, 202, as approved by the Commissioner, to demonstrate compliance with the limitations of Conditions D.1.1 and D.1.2. This test shall be repeated at least once every five years from the date of this valid compliance demonstration. PM-10 includes filterable and condensable PM-10.

D.1.8 Sulfur Dioxide Emissions and Sulfur Content

The Permittee shall test for:

- (a) Sulfur content of oil burned as fuel by the 118 million Btu per hour burner for the aggregate dryer using 40 CFR Part 60, Appendix A, Method 19 for each load of oil delivered; or

- (b) Sulfur dioxide emissions from the 118 million Btu per hour burner for the aggregate dryer using 40 CFR Part 60, Appendix A, Method 6 each time a test to comply with Condition D.1.6 is performed.

Sulfur content tests may be made by the oil supplier.

D.1.16 Natural Gas Usage

Complete and sufficient records shall be kept to establish compliance with the natural gas usage limit established in this permit and contain a minimum of the following:

- (1) Calendar dates covered in the compliance determination period; and
- (2) Daily usage and calculated natural gas equivalent.

D.1.17 Re-refined Waste Oil Usage

Pursuant to 329 IAC 3.1-11 (Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities), the re-refined waste oil burned in the aggregate dryer shall meet the used oil specifications in 40 CFR 266.40(e). Therefore, 40 CFR 266 (Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management facilities), Subpart E (Used Oil Burned for Energy Recovery), does not apply.

D.1.17a Hot Mix Asphalt Production

The Permittee shall maintain records at the facility of the amount of hot mix asphalt produced each month. The records shall be complete and sufficient to establish compliance with the production limit of Condition D.1.6a. The records shall contain at a minimum, the amount of hot mix asphalt produced each current month and the amount of asphalt produced in the last 12 months.

D.1.17b Hot Mix Asphalt Production [326 IAC 12, 40 CFR 60.116(a) and (b)]

Pursuant to 40 CFR 60, Subpart Kb, Section 116(a) and (b), the owner or operator, shall, for tanks 19B and 19C, keep readily accessible records showing the dimensions of each storage vessel and an analysis showing the capacity of the storage vessel. Said records shall be kept for the life of the tank, and shall be made available upon request of the Office of Air Quality.

D.1.18 Quarterly Reporting

A quarterly summary to document compliance with operation Conditions D.1.4, D.1.5, D.1.6, and D.1.6a shall be submitted, to the address listed in Section C.17 - General Reporting Requirements, using the enclosed forms or their equivalent, within thirty (30) days after the end of the quarter being reported.

COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Rieth-Riley Construction Company, Inc.
Source Address: 361 West U.S. Highway 6, Valparaiso, Indiana 46383
FESOP No.: F127-5490-03224
Facility: Hot Mix Asphalt
Parameter: Asphalt Production
Limit: 1,000,000 tons of hot mix asphalt per last 12-month period.

Month: _____ Year: _____

Month	Hot -Mix Asphalt Production This Month (Tons)	Production Per Last 12 Months (Tons)

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

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

Indiana Department of Environmental Management Office of Air Quality

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

Source Background and Description

Source Name:	Rieth-Riley Construction Company, Inc.
Source Location:	361 West U.S. Highway 6, Valparaiso, Indiana 46383
County:	Porter
SIC Code:	2951
Operation Permit No.:	F 127-5490-03224
Operation Permit Issuance Date:	December 13, 1996
Significant Permit Revision No.:	F 127-13986-03224
Permit Reviewer:	SDF

The Office of Air Quality (OAQ) has reviewed a significant permit revision application from Rieth-Riley Construction Company, Inc. relating to the operation of their existing batch hot mix asphalt plant.

History

On March 2, 2001, Rieth-Riley Construction Company submitted an application to change their existing PM10 limit of 15.2 lb/hr (66.57 tons/yr) to an equivalent lb/ton production limit of 0.1331 with an annual production limit of 1,000,000 tons/yr.

In addition, Rieth-Riley has requested the replacement of their existing 1 MMBtu/hr natural gas-fired hot oil heater with a 2 MMBtu/hr natural gas fired hot oil heater, and the replacement of liquid asphalt tanks 19B (19,000 gallons) and 19C (15,000 gallons), with two new 25,000 gallon tanks.

The limit change that has been proposed by Rieth-Riley is a means of limiting emissions at asphalt plants that has recently been approved by the Office of Air Quality, but requires a significant permit revision pursuant to 326 IAC 2-8-11.1(f)(1) which states that a revision to a FESOP that is not an administrative amendment under section 10 of this rule or subject to subsection (d) (Minor Permit Revision), is a significant permit revision.

The equivalent lb/ton production limit is acceptable because there will be no increase in the allowable emission rate. The proposed 1,000,000 tons/yr production limit is also acceptable because it is less than the current annual allowable rate of 3,504,000 tons/yr.

The maximum throughput for the plant is 400 tons per hour. Replacing the existing 1 MMBtu/hr hot oil heater with the 2 MMBtu/hr oil heater and replacing liquid asphalt tanks 19B and 19C with the two new proposed liquid asphalt tanks will not change this maximum rate. Thus, the only increases in emissions due to the proposed revision are the natural gas combustion emissions due to the increased hot oil heater capacity and the increase in emissions due to the increased capacity of the two new tanks.

Existing Approvals

The source was issued Federally Enforceable State Operating Permit (FESOP) (127-5490-03224) on December 13, 1996.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner 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.

Emission Calculations

UNRESTRICTED POTENTIAL TO EMIT DUE TO THE MODIFICATION:

Combustion Emissions:

The following calculations determine the unrestricted PTE due to the increased heater capacity based on natural gas combustion, an increase in maximum capacity of 1MMBtu/hr, emissions before controls, AP-42 emission factors (Tables 1.4-1, 1.4-2, 1.4-3), 8760 hours/yr, and 1000 Btu/cf:

$$1 \text{ MMBtu/hr} * 8760 \text{ hr/yr} * 1 \text{ E6 Btu/MMBtu} * 1/1000 \text{ cf/Btu} * 1/1\text{E6 MMcf/cf} * \text{Ef lb poll/MMcf} * 1/2000 \text{ ton poll/lb poll} = \text{ton poll/yr}$$

	PM 1.9 lb/MMcf	PM10 7.6 lb/MMcf	SO2 0.6 lb/MMcf	NOx 100 lb/MMcf	VOC 5.5 lb/MMcf	CO 84 lb/MMcf
ton/yr	0.01	0.03	neg.	0.40	0.02	0.34

The emissions are uncontrolled.

Storage Tanks:

The following calculations determine the unrestricted potential to emit due to the increased storage tank capacity based on liquid asphalt storage, the emissions associated with the original tank capacities of 19,000 and 15,000 gallons, the emissions associated with the two new tanks (each with a capacity of 25,000 gallons), emissions before controls, and 8,760 hours of operation.

The unrestricted PTE due to the increased capacities of the tanks is estimated by subtracting the unrestricted PTE of the original tanks from the unrestricted PTE of the new tanks. Based on the AP-42 Tanks3 program*, the estimated VOC emissions from the original tanks and new tanks are 1,343.1 lb/yr (0.67 ton/yr) and 1,597.94 lb/yr (0.80 ton/yr), respectively. The unrestricted PTE due to the proposed revision is therefore 0.13 ton/yr.

$$\text{Tons VOC/yr} = 0.80 \text{ ton/yr} - 0.67 \text{ ton/yr} = 0.13 \text{ ton/yr}$$

The emissions are uncontrolled.

* See attached pages for the tanks3 results.

EMISSIONS AFTER NEW 1,000,000 TONS/YR PRODUCTION LIMIT:

The emissions generated from the asphalt operation are the hot mix asphalt production emissions, the cold mix asphalt production emissions, and the emissions due to combustion of fuel. To achieve the desired limited FESOP levels, the source currently utilizes emission controls (a baghouse for the mixing and drying processes and preventive maintenance of the fugitive dust plan for the unpaved roads) and various usage limitations (a fuel use limitation of 1,253,066 gal/yr, and a cold mix limitation of 8,257 tons/yr). The following table lists the current permitted emission levels.

	PM tons/yr	PM10 tons/yr	SO2 tons/yr	NOx tons/yr	VOC tons/yr	CO tons/yr
Combustion	0.05	0.04	93.32	98.09	0.63	7.37
Cold Mix	-	-	-	-	17.34	-
Asphalt Production	159.24	42.31	-	-	6.03	-
ton/yr	159.29	42.35	93.32	98.09	24.00	7.37

In addition to the above mentioned emission reduction methods, Rieth-Riley has proposed an additional limitation of 1,000,000 tons of asphalt per year. The cold mix limit and the fuel use limit shall remain the same. Thus, the emissions from these portions of the asphalt operation will remain unchanged. The hot mix asphalt production emissions, however, will change.

Currently, the maximum hourly production for the hot mix asphalt plant is 400 tons/hr which at 8,760 hours of operation, equates to 3,504,000 tons of asphalt per year.

$$400 \text{ tons/hr} * 8760 \text{ hr/yr} = 3,504,000 \text{ tons/yr}$$

Implementing the proposed hot mix asphalt limit of 1,000,000 tons/yr will reduce the production level and emissions to 28.5% of the original production level and emissions.

$$[1,000,000 \text{ tons/yr} / 3,504,000 \text{ tons/yr}] = 0.285 * 100 = 28.5\% \text{ of original production}$$

The following table lists the emissions after controls, after the current limitations, after the proposed production limit of 1,000,000 tons/yr, and after the addition of the hot oil heater and storage tanks 19B and 19C.

$$\begin{aligned} \text{Hot Mix PM After New Limit} &= 0.285 * 159.29 \text{ tons/yr} &= 45.40 \text{ tons/yr} \\ \text{Hot Mix PM10 After New Limit} &= 0.285 * 42.31 \text{ tons/yr} &= 12.06 \text{ tons/yr} \end{aligned}$$

	PM tons/yr	PM10 tons/yr	SO2 tons/yr	NOx tons/yr	VOC tons/yr	CO tons/yr
Combustion	0.05	0.04	93.32	98.09	0.63	7.13
Storage Tanks	-	-	-	-	0.80	-
Hot Oil Heater	0.02	0.06	0.01	0.80	0.04	0.68
Cold Mix	-	-	-	-	17.34	-
Asphalt Production	45.40	12.06	-	-	1.72	-
ton/yr	45.47	12.16	93.33	98.89	20.53	7.81

After the proposed production limit, there will minor increases in SO₂, NO_x, and CO, due to the proposed changes to the hot oil heater and the addition of the new storage tanks, but the PM, PM₁₀, and VOC emissions will be reduced. The combined HAP emissions will also be reduced by 3.47 tons/yr.

	PM tons/yr	PM ₁₀ tons/yr	SO ₂ tons/yr	NO _x tons/yr	VOC tons/yr	CO tons/yr	Comb. HAPs tons/yr
Emissions Before Limit	159.29	42.35	93.32	98.09	24.00	7.37	20.551
Emissions After Limit	45.47	12.16	93.33	98.89	20.53	7.81	17.08
Reduction, tons/yr	-113.82	-30.19	+0.01	+0.80	-3.47	+0.44	-3.47

NEW LB/TON LIMIT:

The source has requested an equivalent change of the PM₁₀ limit from a lb/hr basis to a lb/ton basis. The PM₁₀ is currently limited to 15.2 lb/hr. The following calculations determine the lb/ton limit based on the current limit of 15.2 lb/hr, the proposed production limit of 1,000,000 tons/yr, and 8,760 hours of operation.

$$15.2 \text{ lb/hr} * 8760 \text{ hr/yr} * 1/1,000,000 \text{ yr/ton} = 0.1331 \text{ lb PM}_{10}/\text{ton}$$

Potential To Emit

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 PTE before controls due to the revision based on the above estimated emissions calculations. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	0.01
PM-10	0.03
SO ₂	neg.
VOC	0.15
CO	0.34
NO _x	0.40

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

Justification for Revision

The FESOP is being revised through a Significant Permit Revision. This revision is being performed pursuant to 326 IAC 2-8-11.1(f)(1) which states that a revision to a FESOP that is not an administrative amendment under section 10 of this rule or subject to subsection (d) (Minor Permit Revision), is a significant permit revision.

County Attainment Status

The source is located in Porter County.

Pollutant	Status
PM ₁₀	unclassifiable
SO ₂	attainment
NO ₂	attainment
Ozone	severe nonattainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Porter County has been designated as severe nonattainment for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.
- (b) Porter County has been classified as attainment or unclassifiable for all criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions

Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	159.29
PM ₁₀	42.35
SO ₂	99.00
VOC	24.00
CO	7.37
NO _x	99.00

Pollutant	Emissions (tons/year)
Acetaldehyde	1.121
Arsenic	0.002
Benzene	0.613
Beryllium	0.001
Cadmium	0.006
Chromium	0.035
Ethylbenzene	5.782
Formaldehyde	1.507
Lead	0.005
Manganese	0.007
Mercury	0.002
Nickel	0.088
Quinone	0.473
Toluene	3.154
Total Polycyclic Organics	0.223
Xylene	7.534
Total	20.551

- (a) This existing source is not a major PSD stationary source because no severe nonattainment regulated pollutant is emitted at a rate of 25 tons per year or more, no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.
- (b) This existing source is not a Title V major stationary source because no severe nonattainment regulated pollutant is emitted at a rate of 25 tons per year or more, no attainment regulated pollutant is emitted at a rate of 100 tons per year or more, no single regulated hazardous air pollutant (HAP) is emitted at a rate of 10 tons per year or more, and no regulated combined HAPs are emitted at a rate of 25 tons per year or more.
- (c) These emissions are based upon the limited emissions table in the Technical Support Document (TSD) to F127-5490-03224.

Potential to Emit of Source After Issuance

The table below summarizes the 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	Potential to Emit (tons/year)						
	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs
Existing Source PTE	159.29	42.35	99.00	24.00	7.37	99.00	20.55
Source After Proposed Revision	45.47	12.16	99.00	20.53	7.81	99.00	17.08

Part 70 Major Source Threshold	-	100	100	25	100	100	10 ind. 25 tot.
PSD Threshold Level	250	250	250	25	250	250	-

- (a) This revision to an existing minor stationary source is not major because the emissions after the modification are less than the PSD threshold levels. Therefore, pursuant to 326 IAC 2-2, 326 IAC 2-3, and 40 CFR 52.21, the PSD and emission offset requirements do not apply.
- (b) Since the potential to emit from the entire source of VOC is less than 25 tons/yr and all other criteria pollutant emissions are less than 250 tons per year, the source is a minor source pursuant to 326 IAC 2-2 and 2-3, PSD and emission offset.
- (c) This revision to the existing FESOP will not change the status of the stationary source because the emissions from the entire source will still be limited to less than the Part 70 major source thresholds.

Federal Rule Applicability

New Source Performance Standards (NSPS):

40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984:

The two proposed tanks 19B and 19C are subject to 40 CFR 60, Subpart Kb, because each tank's capacity (25,000 gallon = 94.63 m³) is greater than the applicable level of 40 m³.

Pursuant to 60.110b(c), tanks with capacities greater than or equal to 75 m³ but less than 151 m³ with a maximum true vapor pressure less 15 k Pa are subject only to the provisions of 116b(a) and (b). The tank capacity of each tank is greater than 75 m³ and less than 151m³, and the true vapor pressure of the liquid asphalt is less than 15 kPa. Thus, the tanks are subject to the provisions of 116b(a) and (b).

Pursuant to 40 CFR 60, Subpart Kb, Section 116(a) and (b), the owner or operator, shall, for new tanks 19B and 19C, keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. Said records shall be kept for the life of the tank, and shall be made available upon request of the Office of Air Quality.

National Emission Standards for Hazardous Air Pollutants (NESHAP):

There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR art 63) that are applicable due to the proposed revision.

State Rule Applicability

Entire Source:

There are no entire source state rules that become applicable due to this proposed revision. The preventive maintenance plan (326 IAC 1-6-3), opacity limitations (326 IAC 5-1), fugitive dust limitations (326 IAC 6-4 and 6-5), and emission reporting requirements (326 IAC 2-6) already apply.

Individual Facilities:

There are no individual facility state rules that become applicable due to this proposed revision. The addition of the heater will not debottleneck asphalt production and does not trigger any new applicable requirements. The addition of proposed tanks 19B and 19C are also not subject to any new applicable individual facility requirements, as described below.

Petroleum Liquid Storage Facilities (326 IAC 8-4-3):

326 IAC 8-4-3 does not apply to new proposed tanks 19B and 19C because the tank capacities (25,000 gallons each), are less than the applicable level of 39,000 gallons.

Volatile Organic Liquid Storage Vessels (326 IAC 8-9-4):

326 IAC 8-9-4 does not apply to new proposed tanks 19B and 19C because the tank capacities (25,000 gallons each), are less than the applicable level of 39,000 gallons.

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.

The compliance monitoring requirements associated with the asphalt plant (the compliance monitoring requirements for the baghouse) will remain the same. However, since compliance with the PM10 limit of 15.2 lb/hr has not been demonstrated, stack testing shall be required for PM10 to demonstrate compliance with the new equivalent 0.1331 lb/ton limit.

Proposed Changes

The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language appears in **bold**):

Condition A.2 shall be revised to include the new tank capacities.

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

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

- (a) one (1) aggregate rotary drum dryer, identified as emission unit No. 2, with a maximum capacity of 400 tons per hour, equipped with one (1) re-refined waste oil fired aggregate dryer burner with a maximum rated capacity of 118 million (MM) Btu per hour using natural gas and No. 4 distillate fuel oil as back-up fuels, and a cyclone and baghouse in series for air pollution control, exhausting at one (1) stack, identified as SV1;
- (b) one (1) drag slat hot mix conveyor and three (3) feeder conveyors;
- (c) one (1) screen;
- (d) three (3) liquid asphalt storage tanks, identified as Tanks 19A, 19B and 19C, ~~each with a maximum storage capacityies of 18,000, 4925,000 and 425,000 gallons, respectively, and~~ **with each tank exhausting at one (1) stack, identified as SV4, SV5, and SV6, respectively;**
- (e) one (1) re-refined waste oil or No. 4 distillate fuel oil storage tank, identified as Tank 18, with a maximum storage capacity of 20,400 gallons, exhausting at one (1) stack identified as SV9;
- (f) one (1) No. 2 distillate fuel oil storage tank, identified as Tank 22, with a maximum storage capacity of 9,800 gallons, exhausting at one (1) stack, identified as SV10; and
- (g) cold-mix (stockpile mix) asphalt storage piles, containing cutback asphalt with 10% diesel-like solvent by volume.

Condition A.3 shall be revised to reflect the increased capacity of the hot oil heater.

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

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(20):

- (a) one (1) re-refined waste oil fired hot oil heater, identified as emission unit No. 20, rated at ~~42.0~~ **MMBtu/hr** using natural gas and butane as back-up fuels, exhausting at one (1) stack, identified as SV2;

Condition D.1.2 shall be revised to reflect the new 0.1331 lb PM10/ton limit.

D.1.2 Particulate Matter 10 Microns (PM-10)

Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the aggregate mixing and drying operation shall not exceed ~~45.2~~ **0.1331** pounds per ~~hour~~ **ton of asphalt**, including both filterable and condensable fractions. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

A new Condition D.1.6a shall be added to implement the proposed 1,000,000 tons/yr production limit.

D.1.6a Hot Mix Asphalt Production Limit

The amount of hot mix asphalt produced shall be limited to 1,000,000 tons per twelve (12) month period, rolled on a monthly basis. During the first 12 months of operation under this permit, the asphalt production shall be limited such that the total tons of asphalt produced divided by the accumulated months of operation shall not exceed 1,000,000 tons per year. Therefore, the requirements of 326 IAC 2-7 will not apply.

Condition D.1.7 shall be amended to require PM10 stack testing at the baghouse to demonstrate compliance with the new proposed lb/ton limit.

D.1.7 Particulate Matter and PM10

The Permittee shall perform PM and PM-10 testing **for the mixing and drying operation** utilizing 40 CFR 60, Appendix A, Method 5, 17, 40 CFR Part 51, Appendix M, Method 201, 201a, 202, as approved by the Commissioner, **to demonstrate compliance with the limitations of Conditions D.1.1 and D.1.2.** This test shall be repeated at least once every five years from the date of this valid compliance demonstration. PM-10 includes filterable and condensable PM-10.

A new Condition D.1.17a shall be added to require record keeping of the amount of hot mix asphalt produced to demonstrate compliance with the new 1,000,000 ton/yr limitation.

D.1.17a Hot Mix Asphalt Production

The Permittee shall maintain records at the facility of the amount of hot mix asphalt produced each month. The records shall be complete and sufficient to establish compliance with the production limit of Condition D.1.6a. The records shall contain at a minimum, the amount of hot mix asphalt produced each current month and the amount of asphalt produced in the last 12 months.

A new Condition D.1.17b shall be added to include the new applicable record keeping requirements of 40 CFR 60, Subpart Kb.

D.1.17b Hot Mix Asphalt Production [326 IAC 12, 40 CFR 60.116(a) and (b)]

Pursuant to 40 CFR 60, Subpart Kb, Section 116(a) and (b), the owner or operator, shall, for tanks 19B and 19C, keep readily accessible records showing the dimensions of each storage vessel and an analysis showing the capacity of the storage vessel. Said records shall be kept for the life of the tank, and shall be made available upon request of the Office of Air Quality.

Condition D.1.18 shall be revised to require reporting of the amount of asphalt produced as a means of demonstrating compliance with the new 1,000,000 tons asphalt/yr limit.

D.1.18 Quarterly Reporting

A quarterly summary to document compliance with operation Conditions D.1.4, D.1.5, and D.1.6, **and D.1.6a** shall be submitted, to the address listed in Section C.17 - General Reporting Requirements, using the enclosed forms or their equivalent, within thirty (30) days after the end of the quarter being reported.

The following reporting form shall be added to accommodate the asphalt production reporting requirements.

See Next Page:

COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Rieth-Riley Construction Company, Inc.
Source Address: 361 West U.S. Highway 6, Valparaiso, Indiana 46383
FESOP No.: F127-5490-03224
Facility: Hot Mix Asphalt
Parameter: Asphalt Production
Limit: 1,000,000 tons of hot mix asphalt per last 12-month period.

Month: _____ Year: _____

Month	Hot -Mix Asphalt Production This Month (Tons)	Production Per Last 12 Months (Tons)

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

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

Conclusion

The operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP F 127-13986-03224.

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

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

**Rieth-Riley Construction Company, Inc.
361 West U.S. Highway 6, Valparaiso, Indiana 46383**

F-127-13986, Plt ID-127-03224

On May 9, 2001, the Office of Air Quality (OAQ) had a notice published in the Vidette Messenger, Valparaiso, Indiana, stating that Rieth-Riley Construction Company, Inc. had applied for a Significant Permit Revision to their existing Federally Enforceable State Operating Permit (FESOP) to change their existing PM10 limit of 15.2 lb/hr (66.57 tons/yr) to an equivalent lb/ton production limit of 0.1331 with an annual production limit of 1,000,000 tons/yr. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On May 8, 2001, Rieth-Riley Construction Company, Inc. submitted the following comment on the proposed FESOP.

Comment:

On page 11 of 11, the quarterly report table is shown for a 12 month rolling total. I would like to change the table to be a 365 day rolling total.

Response:

Condition D.1.6a limits the hot mix asphalt production to 1,000,000 tons per 12 month period, rolled on a monthly basis. Rieth-Riley has proposed that the limit be rolled on a daily basis instead of a monthly basis. The proposed 365 day rolling total is determined to be acceptable because there will be no relaxations of any limits or requirements of the proposed permit .

The affected conditions are Condition D.1.6a (the production limit) and Condition D.1.17a (the record keeping requirement associated with the limit of Condition D.1.6a). In addition, the reporting from requires modification.

Condition D.1.6 shall be changed as follows to require a 365 day rolling total.

D.1.6a Hot Mix Asphalt Production Limit

The amount of hot mix asphalt produced shall be limited to 1,000,000 tons per ~~twelve (12) month~~ **365 day** period, rolled on a ~~monthly~~ **daily** basis. During the first ~~12 months~~ **365 days** of operation under this permit, the asphalt production shall be limited such that the total tons of asphalt produced divided by the accumulated ~~months~~ **days** of operation shall not exceed 1,000,000 tons per year. Therefore, the requirements of 326 IAC 2-7 will not apply.

Day	Amount of Asphalt Concrete Produced This Day (tons/day)	Amount of Asphalt Concrete Produced Last 365 Days (tons/365 Days)	Day	Amount of Asphalt Concrete Produced This Day (tons/day)	Amount of Asphalt Concrete Produced Last 365 Days (tons/365 Days)
1			17		
2			18		
3			19		
4			20		
5			21		
6			22		
7			23		
8			24		
9			25		
10			26		
11			27		
12			28		
13			29		
14			30		
15			31		
16					

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.
 Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____