Mr. Rick Flint
J.H. Rudolph and Co., Inc.
P.O. Box 5226
Evansville, Indiana 47716-5226

Re: SMF 163-8426
First Significant Modification to
FESOP F163-5591-03308

Dear Mr. Flint:

J.H. Rudolph and Co., Inc. was issued a Federally Enforceable State Operating Permit (FESOP) on December 6, 1996 and a Minor Modification to the FESOP on July 28, 1997 for a stationary asphalt drum-mix plant. A letter requesting a significant modification was received on March 12, 1997. Pursuant to the provisions of 326 IAC 2-8-11(d) the permit is hereby approved as described in the attached Technical Support Document.

The modifications consist of the changing of responsible official and mailing address, changing the backup fuels for the 116 million British thermal units per hour asphalt drum-mix dryer from propane to butane, #2 fuel oil and #4 waste oil, allowing for the production and storage of "Winter Mix"and adding one (1) 18,000 gallon fuel oil No. 2 diesel storage tank. The Significant Permit Modification will satisfy the requirements of Enhanced New Source Review (ENSR) for the one (1) 18,000 gallon fuel oil No. 2 diesel storage tank.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this amendment 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 Cathie Moore, of my staff, at 317-233-2637 or 1-800-451-6027 (ext 3-2637).

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

Attachments
cam
cc: File - Vanderburgh County
U.S. EPA, Region V
Vanderburgh County Health Department
Evansville EPA - Christine Terry
Air Compliance Section - Gene Kelso
Compliance Data Section - Jerri Curless
Administration and Development Section - Janet Mobley
Technical Support and Modeling - Nancy Landau

Indiana Department of Environmental Management
Office of Air Management
and
Evansville EPA

Addendum to the Technical Support Document
for the Significant Modification to the Federally Enforceable State Operating Permit (FESOP) and Enhanced New Source Review (ENSR)

Source Name:	J.H. Rudolph and Co., Inc.
Source Location:	3300 South Green River Road, Evansville, Indiana 47715
County:	Vanderburgh
SIC Code:	2951
FESOP No.:	F163-5591-03308
Significant Modification No.:	SMF163-8426-03308
Permit Reviewer:	Cathie Moore

On December 31, 1997, the Office of Air Management (OAM) had a notice published in the Evansville Courier, Evansville, Indiana, stating that J.H. Rudolph and Co., Inc. had applied for a modification to their Federally Enforceable State Operating Permit (FESOP) to change the responsible official and mailing address, changing the backup fuels for the 110 million British thermal units per hour asphalt drum-mix dryer from propane to butane, #2 fuel oil and #4 waste oil, allowing for the production and storage of "Winter Mix" and adding one (1) 18,000 gallon fuel oil No. 2 diesel storage tank. The notice also stated that OAM 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.

Upon further review, OAM has made the following changes to the final Part 70 permit:

1. The plant id for this source was incorrectly written as 163-03408 on the draft modification. The correct plant ID is **163-03308**. The permit has been changed to reflect the correct plant ID.

2. Condition A.2(a) "Emission Units and Pollution Control Equipment Summary" has been changed to be as follows (bold added to show what was added):

   (a) One (1) **four hundred thirty (430) tons per hour** aggregate dryer, with a burner capacity of 116 million British thermal units per hour, exhausting through a baghouse at stack SV1. This dryer is fired by natural gas, including butane, #2 diesel and #4 Waste oil as a backup fuel.

   No conditions will be changed due to this equipment description change.

3. The equipment listed in Section D.1 "FACILITY OPERATION CONDITIONS" has been changed to be as follows (bold added to show what was added):

(1) One (1) **four hundred thirty (430) tons per hour** aggregate dryer, with a burner capacity of 116 million British thermal units per hour, exhausting through a baghouse at stack SV1. This dryer is fired by natural gas, including butane, #2 diesel and #4 Waste oil as a backup fuel.

No conditions will be changed due to this equipment description change.

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document for the Significant Modification to the Federally Enforceable State Operating Permit (FESOP) and Enhanced New Source Review (ENSR)

Source Name:	J.H. Rudolph and Co., Inc.
Source Location:	3300 South Green River Road, Evansville, Indiana 47715
County:	Vanderburgh
SIC Code:	2951
Significant Modification No.:	SMF163-8426-03408
Operation Permit No.:	F163-5591-03408
Permit Reviewer:	Cathie Moore

The Federally Enforceable State Operating Permit (FESOP) was issued on December 9, 1996 and the First Minor Modification was issued on July 28, 1997. On March 23, 1997, J.H. Rudolph and Co., Inc. filed an Amendment requesting certain changes to the permit. The following changes were agreed to and made as the First Significant Modification for this source:

(1) Condition A.1 was changed from:

A.1 General Information
The Permittee owns and operates a stationary hot drum-mix asphalt plant with a maximum capacity of 650 tons per hour.

Responsible Official:	Jerry V. Schmits
Source Address:	3300 South Green River Road, Evansville, IN 47715
Mailing Address:	14649 Hwy. 41 North, Evansville, IN 47711
SIC Code:	2951
County Location:	Vanderburgh
County Status:	Attainment for TSP, marginal nonattainment of Ozone.
Source Status:	Synthetic Minor Source, Part 70 Permit Program

to be as follows to change the responsible official and mailing address (bold added for emphasis):

A.1 General Information
The Permittee owns and operates a stationary hot drum-mix asphalt plant with a maximum capacity of 650 tons per hour.

Responsible Official:	**J. Steven Rudolph**
Source Address:	3300 South Green River Road, Evansville, IN 47715
Mailing Address:	**P. O. Box 5226, Evansville, IN 47716-5226**
SIC Code:	2951
County Location:	Vanderburgh
County Status:	Attainment for TSP, marginal nonattainment of Ozone.
Source Status:	Synthetic Minor Source, Part 70 Permit Program

This particular change is considered as an Administrative Amendment.

(2) Condition A.2 has been changed from:

A.2 Emission Units and Pollution Control Summary
The stationary source consists of the following emission units and pollution control devices:

(a) One (1) aggregate dryer, with a burner capacity of 116 million British thermal units per hour, exhausting through a baghouse at stack SV1. This dryer is fired by natural gas, including propane as a backup fuel.

(b) One (1) hot oil heater, fired by natural gas and rated at 2.10 million British thermal units per hour. The heater exhausts at stack SV2.

(c) One (1) 30,000 gallon liquid asphalt storage tank for AC-10.

(d) One (1) 30,000 gallon liquid asphalt storage tank for AC-20.

(e) One (1) 18,000 gallon tank for burner fuel propane storage.

(f) One (1) 20,000 gallon liquid storage tank (ID# 12A) for PG 64-34.

(g) One (1) baghouse with total filter area of 13,149 ft^2.

to be as follows to include three (3) backup fuels for the dryer, to remove propane as the backup fuel and to add one (1) 18,000 gallon tank (bold added for emphasis):

A.2 Emission Units and Pollution Control Summary
The stationary source consists of the following emission units and pollution control devices:

(a) One (1) aggregate dryer, with a burner capacity of 116 million British thermal units per hour, exhausting through a baghouse at stack SV1. This dryer is fired by natural gas, including **butane, #2 diesel and #4 Waste oil** as a backup fuel.

(b) One (1) hot oil heater, fired by natural gas and rated at 2.10 million British thermal units per hour. The heater exhausts at stack SV2.

(c) One (1) 30,000 gallon liquid asphalt storage tank for AC-10.

(d) One (1) 30,000 gallon liquid asphalt storage tank for AC-20.

(e) **Two (2)** 18,000 gallon tank**s** for **#2** fuel storage.

(f) One (1) 20,000 gallon liquid storage tank (ID# 12A) for PG 64-34.

(g) One (1) baghouse with total filter area of 13,149 ft^2.

See Appendix A of this document for detailed calculations of the potential emissions from the new fuel usage (four (4) pages).

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

The 116 million British thermal units per hour (mmBtu/hr) aggregate dryer is subject to the requirements of 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations) when using No. 2 diesel fuel or No. 4 Waste oil because the potential sulfur dioxide emissions are greater than twenty-five (25) tons per year. Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), the sulfur dioxide emissions from fuel combustion shall be limited to one and six-tenths (1.6) pounds per million British thermal unit when using No. 4 Waste Oil and five-tenths (0.5) pounds per million British thermal unit when using No. 2 diesel fuel.

When using No. 2 diesel fuel:

SO_2 Allowable Emission = 0.5 lb/mmBtu * 116 mmBtu/hr * 8760 hr/yr * ton/2000 lb = 254.04 tons per year

Since these SO_2 emissions are greater than PSD and FESOP level, emissions will be truncated to FESOP level of 91 tons per year.

No. 2 diesel fuel Usage Limitation = 91 tons per year * 2000 lb/ton * kgal/142 lb (0.5%) = 2,563 kgal/year

With the fuel usage limitation of 2,563 kgal/year and sulfur content limit of 0.5% by weight, 326 IAC 7-1.1 allowable emissions will be met. This limitation will also make 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

Accordingly, the NOx emissions when using No. 2 diesel fuel will also be truncated as follows:

NOx Allowable Emission = 2,563 kgal/year * 20 lb/kgal * ton/2000 lb = 25.63 tons per year

When using No. 4 Waste Oil:

SO_2 Allowable Emission = 1.6 lb/mmBtu * 116 mmBtu/hr * 8760 hr/yr * ton/2000 lb = 812.9 tons per year

Since these SO_2 emissions are greater than PSD and FESOP level, emission will be truncated to FESOP level of 91 tons per year.

No. 4 Waste oil Usage Limitation = 91 tons/year * 2000 lb/ton * kgal/147 lb (0.5%) = 2,476 kgal year

With the fuel usage limitation of 2,476 kgal/year and sulfur content limit of 0.5% by weight, 326 IAC 7-1.1 allowable emissions will be met. This limitation will also make 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration) not applicable.

Accordingly, the NOx emissions when using No. 4 Waste oil will also be truncated as follows:

NOx Allowable Emission = 2,476 kgal/year * 19 lb/kgal * ton/2000 lb = 23.52 tons per

year

(3) The equipment listed in Section D.1 was changed from:

(1)	One (1) aggregate dryer, with a burner capacity of 116 million British thermal units per hour, exhausting through a baghouse at stack SV1. This dryer is fired by natural gas, including propane as a backup fuel.
(2)	One (1) hot oil heater, fired by natural gas and rated at 2.10 million British thermal units per hour. The heater exhausts at stack SV2.
(3)	One (1) baghouse with total filter area of 13,149 ft^2.

to be as follows bold added for emphasis:

(1)	One (1) aggregate dryer, with a burner capacity of 116 million British thermal units per hour, exhausting through a baghouse at stack SV1. This dryer is fired by natural gas, including **butane, #2 diesel and #4 Waste oil** as a backup fuel.
(2)	One (1) hot oil heater, fired by natural gas and rated at 2.10 million British thermal units per hour. The heater exhausts at stack SV2.
(3)	One (1) baghouse with total filter area of 13,149 ft^2.

(4) Condition D.1.1 was changed from:

D.1.1 Nitrogen Oxides (NOx)
Pursuant to F 163-5591-03408, the total usage of natural gas shall be limited to 360 million cubic feet per year on a fixed monthly basis. This fuel usage limitation was taken voluntarily by the company and is equivalent to NOx emissions of 99 tons per year. Due to this limit, the Emission Offset (326 IAC 2-3) and Prevention of Significant Deterioration (326 IAC 2-2 and 40 CFR 52.21) rules do not apply. The fuel consumption shall not exceed the following monthly levels.

Month	Natural gas or propane (million cubic feet/mo)
January	3
February	3
March	5
April	19
May	37
June	50
July	45
August	51
September	46
October	62
November	26
December	12

to be as follows to change the fuel limitation due to the change in backup fuel from propane to butane, fuel oil No. 2 and waste oil No. 4. See detailed calculations (four (4) pages) for the new backup fuel potential emissions:

D.1.1 Nitrogen Oxides (NOx) **and Sulfur Dioxide (SO_2)**

(a) The one (1) 116 million British thermal units per hour (mmBtu/hr) natural gas fired asphalt drum mix dryer shall be limited to 331 million cubic feet per twelve month period. This is equivalent to ninety-one (91) tons NOx per year.

(b) For the purpose of determining compliance, the following fuel usage conversions shall be used:

(1) One (1) kgal butane = 0.024 million cubic feet of natural gas

(2) One (1) kgal No. 2 diesel fuel = 0.129 million cubic feet of natural gas

(3) One (1) kgal No. 4 waste oil = 0.133 million cubic feet of natural gas

(c) The one (1) 116 million British thermal units per hour (mmBtu/hr) asphalt drum mixer shall be limited to 2,563 kgal of No. 2 diesel fuel per twelve month period. This is equivalent to ninety-one (91) tons SO2 per year. When using No. 4 waste oil, the following conversion shall be used:

One (1) kgal No. 4 waste oil = 1.035 kgal No. 2 diesel fuel

(d) The one (1) 116 million British thermal units per hour (mmBtu/hr) asphalt drum mixer shall be limited to 2,476 kgal of waste oil No. 4 per twelve month period. This is equivalent to ninety-one (91) tons SO2 per year. When using No. 2 diesel fuel, the following conversion shall be used:

One (1) kgal No. 2 diesel fuel = 0.966 kgal No. 2 diesel fuel

(e) These limitations will make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration), 326 IAC 2-3 (Emission Offset), and 326 IAC 2-7 (Part 70) not applicable.

(f) Pursuant to 326 IAC 7-1.1 (SO_2 Emissions Limitations) the SO_2 emissions from the one hundred sixteen (116) mmBtu per hour aggregate dryer shall not exceed five tenths (0.5) pounds per mmBtu heat input when using No. 2 diesel fuel or No. 4 waste oil.

The conversions were established by the following equations:

The potential NOx emissions when using natural gas are 279.4 tons per year. Since the source must comply with the FESOP 12-month rolling limit, the potential NOx emissions must be limited to 91 tons per year:

91 tons per year / 279.4 tons per year * 1016.2 MMCF/year = 330 MMCF/year
The natural gas usage is limited to 330 million cubic feet of natural gas per year.

In order to show compliance with this limit, the butane, No. 2 diesel fuel and No. 4 waste oil usage must be converted to natural gas usage. The emission factors for the four fuels are as follows:

Fuel	NOx Emission Factor
Natural gas	550 pounds/MMCF
Butane	13.2 pounds/kgal
No. 2 diesel fuel	71 pounds/kgal
No. 4 waste oil	73.5 pounds/kgal

The equivalency ratio can be found by dividing the backup fuel usage emission factor by the natural gas emission factor:

For Butane: [13.2 lb/kgal] / [550 lb/MMCF] = 0.024 MMCF/kgal

For No. 2 diesel fuel: [71 lb/kgal] / [550 lb/MMCF] = 0.129 MMCF/kgal

For No. 4 waste oil: [73.5 lb/kgal] / 550 lb/MMCF] = 0.133 MMCF/kgal

(5) Condition D.1.3A was added as follows to include for the use of cutback asphalt or "Winter Mix":

D.1.3A Winter Mix Production and Storage

When the source decides to use cutback asphalt or "Winter Mix", the source will be applicable to this requirement. Pursuant to 326 IAC 8-5-2 (Asphalt Paving), the Permittee shall not cause or allow the use of cutback asphalt or asphalt emulsion containing more than seven percent (7%) oil distillate by volume of emulsion for any paving application except as used for the following purposes:

(a) penetrating prime coating;

(b) stockpile storage;

(c) application during the months of November, December, January, February, and March.

(6) Condition D.1.7 was changed from:

D.1.7 Quarterly Reporting

Quarterly summary to document compliance with operation conditions number (D.1.1) shall be submitted to the address(es) listed in Section C - General Reporting Requirements, using the enclosed forms or their equivalent, within thirty (30) days after the end of the quarter being reported. These reports shall include the number of million cubic feet of fuel used and for each month in a quarter. All records and reports shall use a calendar month averages.

to be as follows to indicate that the quarterly report will also include No. 2 diesel fuel and No. 4 Waste oil usages (bold added for emphasis):

D.1.7 Quarterly Reporting

Quarterly summary to document compliance with operation conditions number (D.1.1) shall be submitted to the address(es) listed in Section C - General Reporting Requirements, using the enclosed forms or their equivalent, within thirty (30) days after the end of the quarter being reported. These reports shall include the number of million cubic feet of fuel used**, the number of kgal of No. 2 diesel fuel used, and the number of kgal of No. 4 waste oil used** for each month in a quarter. All records and reports shall use a calendar month averages.

(7) The equipment listed in Section D.2 was changed from:

(1)	One (1) 30,000 gallon liquid asphalt storage tank (ID# 12B) for AC-10.
(2)	One (1) 30,000 gallon liquid asphalt storage tank (ID# 12C) for AC-20.
(3)	One (1) 18,000 gallon tank (ID# 16) for fuel (#2 diesel) storage.
(4)	One (1) 20,000 gallon liquid storage tank (ID# 12A) for PG 64-34.

to be as follows to add the one (1) 18,000 gallon tank. A separate Exemption approval (E 163-8426-03408) is issued to allow for construction of the 18,000 gallon tank prior to the approval of this Significant Modification to the FESOP (SMF 163-8426-03408). (bold added for emphasis):

(1)	One (1) 30,000 gallon liquid asphalt storage tank (ID# 12B) for AC-10.
(2)	One (1) 30,000 gallon liquid asphalt storage tank (ID# 12C) for AC-20.
(3)	**Two (2)** 18,000 gallon tanks (ID# 16) for #2 diesel storage.
(4)	One (1) 20,000 gallon liquid storage tank (ID# 12A) for PG 64-34.

This 18,000 gallon No. 2 diesel storage tank is subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.116b, Subpart Kb) because its capacity is greater than forty cubic meters ($40m^3$), but less than seventy-five cubic meters ($75m^3$). The Permittee shall keep records readily accessible of the dimension and an analysis of the storage capacity of the storage tank for the life of the tank.

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

The 18,000 gallon No. 2 diesel storage tank is not subject to the requirements of 326 IAC 8-9 (Volatile Organic Liquid Organic Storage Tanks) because this source is not located in Vanderburgh County, which is not one of the listed counties in this rule.

(7) The quarterly report of monthly limits has been changed to incorporate the new limits established in Condition D.1.1.

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) and ENHANCED NEW SOURCE REVIEW (ENSR) OFFICE OF AIR MANAGEMENT and Evansville EPA

J.H. Rudolph and Co., Inc.
3300 South Green River Road
Evansville, Indiana 47715

(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.: F163-5591-03308	
Original issued by Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date: December 9, 1996

First Minor Permit Modification: MMF163-8060	Pages Affected: 24
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date: July 28, 1997

First Significant Permit Modification: SMF163-8426	Pages Affected: 4, 23, 24, 25, 26, 30
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

SECTION A SOURCE SUMMARY

A.1 General Information

The Permittee owns and operates a stationary hot drum-mix asphalt plant with a maximum capacity of 650 tons per hour.

Responsible Official:	J. Steven Rudolph
Source Address:	3300 South Green River Road, Evansville, IN 47715
Mailing Address:	P. O. Box 5226, Evansville, IN 47716-5226
SIC Code:	2951
County Location:	Vanderburgh
County Status:	Attainment for TSP, marginal nonattainment of Ozone.
Source Status:	Synthetic Minor Source, Part 70 Permit Program

A.2 Emission Units and Pollution Control Summary

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

(a) One (1) four hundred thirty (430) tons per hour aggregate dryer, with a burner capacity of 116 million British thermal units per hour, exhausting through a baghouse at stack SV1. This dryer is fired by natural gas, including butane, #2 diesel and #4 Waste oil as a backup fuel.

(b) One (1) hot oil heater, fired by natural gas and rated at 2.10 million British thermal units per hour. The heater exhausts at stack SV2.

(c) One (1) 30,000 gallon liquid asphalt storage tank for AC-10.

(d) One (1) 30,000 gallon liquid asphalt storage tank for AC-20.

(e) Two (2) 18,000 gallon tanks for #2 fuel storage.

(f) One (1) 20,000 gallon liquid storage tank (ID# 12A) for PG 64-34.

(g) One (1) baghouse with total filter area of 13,149 ft^2.

A.3 Insignificant Activities

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

(1) Natural gas-fired combustion sources with a heat input equal to or less than 10 million British thermal units per hour.

(2) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than 6 million British thermal units per hour.

(3) Replacement or repair of electrostatic precipitators, bags in baghouses, and filters in other air filtration equipment.

SECTION D.1 FACILITY OPERATION CONDITIONS

(1)	One (1) four hundred thirty (430) tons per hour aggregate dryer, with a burner capacity of 116 million British thermal units per hour, exhausting through a baghouse at stack SV1. This dryer is fired by natural gas, including butane, #2 diesel and #4 Waste oil as a backup fuel.
(2)	One (1) hot oil heater, fired by natural gas and rated at 2.10 million British thermal units per hour. The heater exhausts at stack SV2.
(3)	One (1) baghouse with total filter area of 13,149 ft^2.

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

D.1.1 Nitrogen Oxides (NOx) and Sulfur Dioxide (SO_2)

(a) The one (1) 116 million British thermal units per hour (mmBtu/hr) natural gas fired asphalt drum mix dryer shall be limited to 331 million cubic feet per twelve month period. This is equivalent to ninety-one (91) tons NOx per year.

(b) For the purpose of determining compliance, the following fuel usage conversions shall be used:

(1) One (1) kgal butane = 0.024 million cubic feet of natural gas

(2) One (1) kgal No. 2 diesel fuel = 0.129 million cubic feet of natural gas

(3) One (1) kgal No. 4 waste oil = 0.133 million cubic feet of natural gas

(c) The one (1) 116 million British thermal units per hour (mmBtu/hr) asphalt drum mixer shall be limited to 2,563 kgal of No. 2 diesel fuel per twelve month period. This is equivalent to ninety-one (91) tons SO2 per year. When using No. 4 waste oil, the following conversion shall be used:

One (1) kgal No. 4 waste oil = 1.035 kgal No. 2 diesel fuel

(d) The one (1) 116 million British thermal units per hour (mmBtu/hr) asphalt drum mixer shall be limited to 2,476 kgal of waste oil No. 4 per twelve month period. This is equivalent to ninety-one (91) tons SO2 per year. When using No. 2 diesel fuel, the following conversion shall be used:

One (1) kgal No. 2 diesel fuel = 0.966 kgal No. 2 diesel fuel

(e) These limitations will make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration), 326 IAC 2-3 (Emission Offset), and 326 IAC 2-7 (Part 70) not applicable.

(f) Pursuant to 326 IAC 7-1.1 (SO_2 Emissions Limitations) the SO_2 emissions from the one hundred sixteen (116) mmBtu per hour aggregate dryer shall not exceed five tenths (0.5) pounds per mmBtu heat input when using No. 2 diesel fuel or No. 4 waste oil.

D.1.2 Particulate Matter (PM)

State: That pursuant to 326 IAC 6-3-2, particulate matter from the process emissions shall not exceed 38.63 pounds per hour (lbs/hr).

Fed: That 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 emission from the plant shall not exceed 20 percent opacity. Compliance with these limits will satisfy 326 IAC 5-1 and 326 IAC 6-3-2.

D.1.3 Particulate Matter 10 Microns (PM-10)
Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the aggregate dryer/mixer shall not exceed 17.1 pounds per hour, including both filterable and condensible 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.1.3A Winter Mix Production and Storage
When the source decides to use cutback asphalt or "Winter Mix", the source will be applicable to this requirement. Pursuant to 326 IAC 8-5-2 (Asphalt Paving), the Permittee shall not cause or allow the use of cutback asphalt or asphalt emulsion containing more than seven percent (7%) oil distillate by volume of emulsion for any paving application except as used for the following purposes:

(a) penetrating prime coating;

(b) stockpile storage;

(c) application during the months of November, December, January, February, and March.

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

D.1.4 Performance Testing
That during the period between 540 days and 720 days after issuance of this permit, the Permittee shall perform PM and PM10 testing utilizing methods per 40 CFR Part 60, Appendix A, Method 5, 17, 40 CFR Part 51 Appendix M, Method 201, 201a, 202 as approved by the Commissioner. This test shall be replaced at least once every five years from the date of this valid compliance demonstration. PM10 includes filterable and condensible PM10.

D.1.5 Daily Monitoring of Baghouse Operational Parameters
That the baghouse shall be operated at all times when the aggregate dryer is in operation. The Permittee shall monitor the following parameters once per shift.

(a) The Permittee shall take readings of the total static pressure drop across all baghouses controlling this operation, at least once per day when the mixing and drying process is in operation. Unless operated under conditions fro which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 2.0 and 4.0 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Condition C.11 - Pressure Gauge Specifications, be subject to approval by IDEM, OAM, and be calibrated at least once every six (6) months.

(b) Inlet temperature to the baghouse
The inlet temperature to the baghouse shall be maintained within a range of 200°F to 390°F to prevent overheating of the baghouse and to prevent low temperatures from mudding up the bags.

The operational parameters shall be monitored for indications of bag failure. The thermocouple at the inlet has a temperature switch which automatically shuts the burner off if the high end range is exceeded.

In the event that bag failure has occurred due to rupture, melting, etc., corrective action shall be taken. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the inlet temperature is outside of the above mentioned range for any one reading. The baghouse shall shutdown for visual inspection within 24 hours and bags shall be replaced as needed.

D.1.6 Daily Visible Emissions Notations

Visible emission notations of the conveyors, material transfers, aggregate stroage piles, and the mixing and drying operation stack exhaust shall be performed once per working shift. A trained employee will record whether emission are normal or abnormal. For processes operated continuously “normal” means those conditions prevailing, or expected to prevail, 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 month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

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

D.1.7 Quarterly Reporting

Quarterly summary to document compliance with operation conditions number (D.1.1) shall be submitted to the address(es) listed in Section C - General Reporting Requirements, using the enclosed forms or their equivalent, within thirty (30) days after the end of the quarter being reported. These reports shall include the number of million cubic feet of fuel used, the number of kgal of No. 2 diesel fuel used, and the number of kgal of No. 4 waste oil used for each month in a quarter. All records and reports shall use a calendar month averages.

Preventive Maintenance [326 IAC 2-8-4(9)]

D.1.8 Preventive Maintenance [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Condition B.13 of this permit, is required for this facility.

SECTION D.2 FACILITY OPERATION CONDITIONS

(1)	One (1) 30,000 gallon liquid asphalt storage tank (ID# 12B) for AC-10.
(2)	One (1) 30,000 gallon liquid asphalt storage tank (ID# 12C) for AC-20.
(3)	Two (2) 18,000 gallon tanks (ID# 16) for #2 diesel storage.
(4)	One (1) 20,000 gallon liquid storage tank (ID# 12A) for PG 64-34.

D.2.1 That storage tanks (#12b, #12C, #16) shall comply with the New Source Performance Standards (NSPS), 326 IAC 12 (40 CFR Part 60.116b only, Subpart Kb). 40 CFR Part 60.116b requires the permittee to maintain accessible records showing the dimension of each storage vessel and an analysis showing the capacity of the storage vessel. Records shall be kept for the life of the storage tanks.

Indiana Department of Environmental Management
Office of Air Management
Compliance Data Section

FESOP Quarterly Report

Source Name: J.H. Rudolph and Co., Inc.
Source Address: 3300 South Green River Road, Evansville, Indiana 47715
Mailing Address: P.O. Box 5226, Evansville, Indiana 47716-5226
FESOP No.: F163-5591-03408
Facility: 116 mmBtu/hr asphalt drum-mix dryer
Parameter: NOx, SO2
Limit: 331 million cubic feet natural gas per 12 month period 2,563 kgal of No. 2 diesel fuel per 12 month period, and 2,476 kgal of waste oil No. 4 per 12 month period.

YEAR: _____

Month	Million Cubic Feet of natural gas this month*	Million Cubic Feet of natural gas past 11 months*	Total Million Cubic Feet of natural gas past 12 months*	Kgal of No. 2 diesel fuel **only** this month	Kgal of No. 2 diesel fuel **only** past 11 months	Total Kgal of No. 2 diesel fuel **only** past 12 months	Kgal of waste oil No. 4 **only** this month	Kgal of waste oil No. 4 **only** past 11 months	Total Kgal of waste oil No. 4 **only** past 12 months	Total Kgal of No. 2 diesel fuel and waste oil No. 4 (converted to No. 2 diesel fuel usage) past 12 months**

*One (1) kgal butane = 0.024 MMCF natural gas, One (1) kgal No. 2 diesel fuel = 0.129 MMCF natural gas, One (1) kgal No. 4 waste oil = 0.133 MMCF natural gas
** One (1) kgal waste oil No. 4 = 1.035 kgal No. 2 diesel fuel

9 No deviation occurred in this quarter.

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

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Appendix A: Emissions Calculations
Asphalt Drum Mix Dryer
#1 and #2 Fuel Oil

Company Name: **J. H. Rudolph and Co., Inc.**
Address, City IN Zip: **3300 South Green River Road, Evansville, IN 47715**
SMF: **SMF 163-8426-03408**
Plt ID: **163-03408**
Reviewer: Cathie Moore
Date: 12/5/97

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
		0.5
116	7258.28571	

	Pollutant				
	PM	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	2.0	71 *(142.0S)*	20.0	0.20	5.0
Potential Emission in tons/yr	7.3	257.7	72.6	0.7	18.1

Methodology

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

Emission Factors are from AP 42, Tables 1.3-2 and 1.3-4 (SCC 1-02-005-01/02/03)

Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

Appendix A: Emission Calculations
Natural Gas Combustion Only
MMBTU/HR >100
Asphalt Drum-mix Dryer

Company Name: J.H. Rudolph and Co., Inc.
Address City IN Zip: 3300 South Green River Road, Evansville, Indiana 47715
SMF: SMF163-8426-03408
Plt ID: 163-03408
Reviewer: Cathie Moore
Date: 12/8/97

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
116.0	1016.2

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	5.0	5.0	0.6	550.0	1.4	40.0
Potential Emission in tons/yr	2.5	2.5	0.3	279.4	0.7	20.3

Methodology

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: Uncontrolled = 550, Low NOx Burner = 81, Flue gas recirculation = 53

Emission Factors for CO: Uncontrolled = 40, Low NOx Burner = ND, Flue gas recirculation = ND

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-01-006-01, 1-01-006-04

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emission Calculations
LPG-Butane - Asphalt Drum Mix Dryer
(Heat input capacity: > 100 MMBtu/hr)

Company Name: J. H. Rudolph and Co., Inc.
Address City IN Zip: 3300 South Green River Road, Evansville, IN 47715
SMF: SMF 163-8426-03408
Plt ID: 163-03408
Reviewer: Cathie Moore
Date: 12/5/97

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	SO2 Emission factor = 0.10 x S S = Weight % Sulfur =	0.0000008
116.00	10810.21		

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	0.3	0.3	0.0 *(0.10S)*	13.2	0.3	3.3
Potential Emission in tons/yr	1.5	1.4	0.0	71.3	1.4	17.8

Methodology

1 gallon of LPG has a heating value of 94,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.094 MMBtu

Emission Factors are from AP42, Fifth Edition (January 1995), Table 1.5-2 (SCC #1-02-010-02)

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

Appendix A: Emissions Calculations
Waste Oil Combustion
116 mmBtu/hr Dryer

Company Name: J. H. Rudolph and Co., Inc.
Address City IN Zip: 3300 South Green River Road, Evansville, IN 47715
SMF: SMF 163-8426-03408
Plt ID: 163-03408
Reviewer: Cathie Moore
Date: 12/5/97

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year			
		A =	Weight % Ash =	0.33
		L =	Weight % Lead =	0.0057
116	7310.5036	S =	Weight % Sulfur =	0.5

	Pollutant						
	PM	PM10	SO2	NOx	TOC	CO	Pb
Emission Factor in lb/kgal	20.1 *(61A)*	16.83 *(51A)*	73.5 *(147S)*	19.0	0.1	5.0	0.3135 *(55L)*
Potential Emission in tons/yr	73.6	61.5	268.7	69.4	0.4	18.3	1.1459

Methodology

Emission Factor Units are lb/1000 gal
A = weight% ash in fuel, L = weight% lead in fuel, S = weight % sulfur in fuel
Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.139 MM Btu
Emission Factors from AP-42, Chapter 1.11, SCC 1-03-013-02
Emission (tons/yr) = Throughput kgals per year x Emission Factor (lb/kgal)/2,000 lb/ton