

Mr. Matt Mabrey  
Rogers Group, Inc.  
P.O. Box 849  
Bloomington, Indiana 47404

Re: **105-14300**  
First Significant Revision to  
**FESOP 105-7579-03182**

Dear Mr. Mabrey:

Rogers Group, Inc. - Bloomington Asphalt was issued a Federally Enforceable State Operating Permit (FESOP) on June 19, 1997 for a stationary batch mix asphalt plant. A first minor permit revision (105-12036-03182) was issued on May 11, 2000. 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 revision is for the use of No. 2 fuel oil, No. 4 fuel oil and waste oil, in addition to natural gas, at the one (1) aggregate dryer.

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 Office of Air Quality (OAQ).
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 CarrieAnn Ortolani, c/o OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, at 631-691-3395 or in Indiana at 1-800-451-6027 (ext 631-691-3395).

Sincerely,

Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

Attachments  
CAO/MES

cc: File - Monroe County  
U.S. EPA, Region V  
Monroe County Health Department  
Air Compliance Section Inspector - Joe Foyst  
Compliance Data Section - Mendy Jones  
Administrative and Development - Janet Mobley  
Technical Support and Modeling - Michele Boner

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

**Rogers Group, Inc. - Bloomington Asphalt  
1100 Oard Road  
Bloomington, Indiana 47401**

(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 70 and contains the conditions and provisions specified in 326 IAC 2-8 and 40 CFR 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.: F 105-7579-03182	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: June 19, 1997  Expiration Date: June 19, 2002

First Minor Permit Revision 105-12036-03182, issued on May 11, 2000

First Significant Permit Revision: SPR 105-14300-03182	Pages affected: 3, 4, 5, 23, and 24; and 24a, 24b, 24c, 24d and 28a are added
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: July 24, 2001

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	One (1) batch mixer capable of producing 300 tons per hour of asphalt and exhausting through a cyclone (CE2) and jet pulse baghouse (CE1) and exiting through stack S1. One (1) 79 million British thermal units per hour aggregate dryer also exhausting through a cyclone (CE2) and scrubber (CE1) and exiting through stack S1, fired by natural gas, No. 2 fuel oil, No. 4 fuel oil, or reused (waste) oil. One (1) jet pulse baghouse (CE1) with an air flow rate of 65,000 actual cubic feet per minute.	
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	Four (4) emulsified asphalt storage tanks (TV4, TV5, TV6, TV7) with capacities of 25,000 gallons, each. Two (2) liquid asphalt storage tanks (TV2, TV3) with capacities of 25,000 gallons each, heated by a 2.50 million British thermal units per hour natural gas fired heater.	
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## SECTION A

## SOURCE SUMMARY

### A.1 General Information

The Permittee owns and operates a stationary batch mix asphalt plant with a maximum capacity of 300 tons per hour.

Responsible Official: John P. Torres  
Source Address: 1100 Oard Road, Bloomington, Indiana 47401  
Mailing Address: P.O. Box 849, Bloomington, Indiana 47402  
SIC Code: 2951  
County Location: Monroe  
County Status: Attainment for all criteria pollutants  
Source Status: Synthetic Minor Source, FESOP Program  
Minor Source, PSD Program

### A.2 Emission Units and Pollution Control Summary

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

- (a) One (1) batch mixer capable of producing 300 tons per hour of asphalt and exhausting through a cyclone (CE2) and jet pulse baghouse (CE1) and exiting through stack S1.
- (b) One (1) 79 million British thermal units per hour aggregate dryer also exhausting through a cyclone (CE2) and jet pulse baghouse (CE1) and exiting through stack S1, fired by natural gas, No. 2 fuel oil, No. 4 fuel oil or reused (waste) oil.
- (c) One (1) jet pulse baghouse (CE1) with an air flow rate of 65,000 actual cubic feet per minute.
- (d) Four (4) emulsified asphalt storage tanks (TV4, TV5, TV6, TV7) with capacities of 25,000 gallons, each.
- (e) Two (2) liquid asphalt storage tanks (TV2, TV3) with capacities of 25,000 gallons each, heated by a 2.50 million British thermal units per hour natural gas fired heater.

### A.3 Insignificant Activities

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

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.
- (b) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (c) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (d) Two (2) 6,000 gallon self contained storage tanks.
- (e) One (1) heavy fuel preheater heat exchanger with no burner.
- (f) Two (2) duplex strainers and associated piping.
- (g) One (1) twenty-five (25) gallon per minute oil pump.

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

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

A.5 Prior Permit Conditions Superseded [326 IAC 2]

This permit supersedes the conditions of all construction and operating permits issued under 326 IAC 2 prior to the effective date of this permit.

## SECTION D.1 FACILITY OPERATION CONDITIONS

One (1) batch mixer capable of producing 300 tons per hour of asphalt and exhausting through a cyclone (CE2) and jet pulse baghouse (CE1) and exiting through stack S1.

One (1) 79 million British thermal units per hour aggregate dryer also exhausting through a cyclone (CE2) and jet pulse baghouse (CE1) and exiting through stack S1, fired by natural gas, No. 2 fuel oil, No. 4 fuel oil or reused (waste) oil.

One (1) jet pulse baghouse (CE1) with an air flow rate of 65,000 actual cubic feet per minute.

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

#### D.1.1 Particulate Matter (PM) [326 IAC 6-3-2] [326 IAC 2-2]

- (a) Pursuant to 326 IAC 6-3-2, particulate matter (PM) emissions from the aggregate dryer/mixer shall not exceed 63.0 pounds per hour when operating at a process weight rate of 300 tons per hour. The particulate matter (PM) limitation is based on the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

- (b) The PM emissions from the aggregate dryer/mixer shall not exceed 55.0 pounds per hour. The PM from the entire asphalt plant shall not exceed 56.8 pounds per hour, equivalent to 249 tons per year. Thus, the requirements of 326 IAC 2-2, PSD, are not applicable.
- (c) Pursuant to 40 CFR 60.92, the PM emissions from the aggregate dryer/mixer stack (S1) shall be limited to less than 90 milligrams per dry standard cubic foot (0.04 grains per dry standard cubic foot) and the opacity of emissions shall be less than twenty percent (20%).

#### D.1.2 Particulate matter less than 10 microns (PM-10) [326 IAC 2-8]

Pursuant to 326 IAC 2-8-4, particulate matter - 10 microns emissions from the aggregate dryer/mixer shall not exceed 7.74 pounds per hour, and the particulate matter - 10 microns emissions from the entire asphalt plant shall not exceed 7.95 pounds per hour, which is less than 100 tons per year. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

#### D.1.3 Sulfur Dioxide Emission Limitations [326 IAC 7] [326 IAC 2-8]

- (a) Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emissions Limitations) the SO<sub>2</sub> emissions from the aggregate dryer shall not exceed five tenths (0.5) pounds per million British thermal unit heat input when operating on No. 2 fuel oil or No. 4 distillate fuel oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a thirty (30) day rolling weighted average. 326 IAC 7-1.1 and 326 IAC 7-2-1 are not federally enforceable.
- (b) Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emissions Limitations) the SO<sub>2</sub> emissions from the aggregate dryer shall not exceed one and six-tenths (1.6) pounds per million British thermal unit heat input when operating on waste oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a thirty (30) day rolling weighted average. 326 IAC 7-1.1 and 326 IAC 7-2-1 are not federally enforceable.

- (c) The use of No. 2 fuel oil shall be limited to no more than 2,788,732 gallons per year. Each gallon of No. 4 fuel oil used shall be considered equal to using 1 gallon of No. 2 fuel oil and each gallon of waste oil used shall be considered equal to using 1.13 gallons of No. 2 fuel oil. The sulfur content of the waste oil shall not exceed three-quarters of a percent (0.75%) by weight and the sulfur content of the No. 2 and No. 4 fuel oils shall not exceed one half of a percent (0.5%) by weight. This will limit SO<sub>2</sub> emissions from the use of fuel oils or waste oil to less than 99 tons per year and the potential to emit SO<sub>2</sub> from the entire source to less than 100 tons per year. Thus, the requirements of 326 IAC 2-7, Part 70, do not apply.

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

#### D.1.4 Particulate Matter

- (a) Between 60 and 180 days of beginning the use of any fuel other than natural gas, the Permittee shall perform PM and PM<sub>10</sub> testing utilizing methods approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>.

A test protocol shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

at least thirty-five (35) days before the intended test date. The Permittee shall develop and submit for approval with the protocol, standard operating procedures to be followed during sampling, handling, analysis, quality control, quality assurance, and data reporting.

- (b) The Permittee shall perform particulate emissions testing on the aggregate dryer/ mixer every five (5) years in accordance with IDEM requirements.
- (c) Pursuant to 40 CFR 60.93, compliance with the PM standards in 40 CFR 60.92 shall be determined by using Method 5 to determine particulate concentration and Method 9 to determine opacity. When determining the particulate concentration, the sampling time and sampling volume for each run shall be at least 60 minutes and 0.90 dry standard cubic meters (31.8 dry standard cubic feet).

#### D.1.5 Particulate Matter

In order to comply with Conditions D.1.1 and D.1.2, the baghouse for the aggregate dryer/mixer shall be in operation at all times when the aggregate dryer/mixer is in operation.

#### D.1.6 Sulfur Dioxide Emissions and Sulfur Content

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 British thermal unit heat input when operating on No. 2 fuel oil or No. 4 distillate fuel oil and one and six-tenths (1.6) pounds per million British thermal unit heat input when operating on waste oil 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 aggregate dryer/mixer, 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.

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

#### **D.1.7 Visible Emissions Observations**

- (a) Visible emission notations of the aggregate dryer/mixer stack exhaust 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 Permittee shall perform weekly visible emissions observations on the cyclone, jet pulse baghouse, scavenger system ductwork and associated components (e.g., hoppers, etc.) for evidence of fugitive emissions, holes, corrosion, audible leaks, and the like. This does not require the use of a certified visible emissions reader. In the event that visible emissions are detected above the limit required by operation Condition D.1.1 or any visible emissions are detected on the jet pulse baghouse components, the Corrective Action Contingency Plan shall be implemented. Corrective action shall be taken within 8 hours of discovery. If the initial corrective action plan does not correct the problem, then additional corrective actions shall be devised within 8 hours of discovery and shall include a timetable for completion. The corrective actions shall be implemented immediately in accordance with those timetables.

#### **D.1.8 Pressure Drop Readings**

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the aggregate dryer and batch mixer, at least once a day when the dryer or mixer is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within a range of 3.0 and 6.0 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

drop reading 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. The instrument used for determining the pressure shall comply with Condition C.14 - Pressure Gauge Specifications, be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

The inlet temperature to the baghouse shall be maintained within a range of 200-400 degrees Fahrenheit (°F) to prevent overheating of the bags and to prevent low temperatures from mudding up the bags. 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 reading 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. The Permittee shall take pressure and scrubbing liquid (water) flow rate readings from the scrubber controlling the aggregate drying operation, every four hours while the dryer is in operation.

**D.1.9 Baghouse Inspections**

An inspection shall be performed each calendar quarter of all bags controlling the aggregate dryer/mixer 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.1.10 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 Monitoring Plan - Failure to Take Response Steps, 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.1.11 Preventive Maintenance [326 IAC 2-8-4(9)]**

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

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

**D.1.12 Record Keeping Requirements**

- (a) To document compliance with Condition D.1.3, 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, 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.

- (b) To document compliance with Condition D.1.7, the Permittee shall maintain records of visible emission notations of the aggregate dryer/mixer stack exhaust weekly and once per shift.
- (c) To document compliance with Condition D.1.8, the Permittee shall maintain records of the inlet and outlet differential static pressure and cleaning cycle operation once per shift during normal operation when venting to the atmosphere:
- (d) To document compliance with Condition D.1.9, the Permittee shall maintain records of the results of the inspections required under Conditions D.1.9 and the dates the vents are redirected.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.1.13 Reporting Requirements

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

#### D.1.14 Used Oil Requirements

The waste oil burned in the aggregate dryer/mixer 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.

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

**FESOP Quarterly Report**

Source Name: Rogers Group, Inc. - Bloomington Asphalt  
Source Address: 1100 Oard Road, Bloomington, Indiana 47401  
Mailing Address: P.O. Box 849, Bloomington, Indiana 47402  
FESOP No.: F 105-7579-03182  
Facility: One (1) aggregate dryer burner  
Parameter: SO<sub>2</sub> emissions; fuel usage  
Limit: No. 2 fuel oil shall be limited to no more than 2,788,732 gallons per year. Each gallon of No. 4 fuel oil used shall be considered equal to using 1 gallon of No. 2 fuel oil and each gallon of waste oil used shall be considered equal to using 1.13 gallons of No. 2 fuel oil.

YEAR: \_\_\_\_\_

Month	No. 2 fuel oil usage plus equivalent of other fuels to No. 2 fuel oil	No. 2 fuel oil usage plus equivalent of other fuels to No. 2 fuel oil	No. 2 fuel oil usage plus equivalent of other fuels to No. 2 fuel oil
	This Month	Previous 11 Months	12 Month Total

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: \_\_\_\_\_

Attach a signed certification to complete this report.

## 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

<b>Source Name:</b>	<b>Rogers Group, Inc. - Bloomington Asphalt</b>
<b>Source Location:</b>	<b>1100 Oard Road, Bloomington, Indiana 47402</b>
<b>County:</b>	<b>Monroe</b>
<b>SIC Code:</b>	<b>2951</b>
<b>Operation Permit No.:</b>	<b>F 105-7579-03182</b>
<b>Operation Permit Issuance Date:</b>	<b>June 19, 1997</b>
<b>Significant Permit Revision No.:</b>	<b>SPR 105-14300-03182</b>
<b>Permit Reviewer:</b>	<b>CarrieAnn Ortolani</b>

The Office of Air Quality (OAQ) has reviewed a significant permit revision application from Rogers Group, Inc. - Bloomington Asphalt relating to the construction and operation of the following emission units and pollution control devices:

The proposed revision is for the use of No. 2 fuel oil, No. 4 fuel oil and reused (waste) oil, in addition to natural gas, at the one (1) aggregate dryer. Item (b) of the equipment list will be revised to appear as follows:

- (b) One (1) 79 million British thermal units per hour aggregate dryer also exhausting through a cyclone (CE2) and jet pulse baghouse (CE1) and exiting through stack S1, fired by natural gas, No. 2 fuel oil, No. 4 fuel oil or reused (waste) oil.

To make this modification possible, the following insignificant activities are also being added:

- (a) Two (2) 6,000 gallon self contained storage tanks.
- (b) One (1) heavy fuel preheater heat exchanger with no burner.
- (c) Two (2) duplex strainers and associated piping.
- (d) One (1) twenty-five (25) gallon per minute oil pump.

#### History

On March 2, 2001, Rogers Group, Inc. - Bloomington Asphalt submitted an application to the OAQ requesting the use of No. 2 fuel oil, No. 4 fuel oil and reused (waste) oil, in addition to natural gas, at the one (1) aggregate dryer. Rogers Group, Inc. - Bloomington Asphalt was issued a Federally Enforceable State Operating Permit (FESOP) (F 105-7579-03182) on June 19, 1997. A first minor permit revision (105-12036-03182) was issued on May 11, 2000.

### Enforcement Issue

There are no enforcement actions pending.

### Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
SV1	Existing stack for the aggregate dryer	40.0	14.1	60,785	250

### Recommendation

The staff recommends to the Commissioner that the FESOP 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 March 2, 2001. Additional information was received on April 26 and April 27, 2001.

### Emission Calculations

See pages 1 through 4 of 4 of Appendix A of this document for detailed emissions calculations.

### Potential To Emit of Revision

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 for this revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit. The numbers in this table represent the worst case potential to emit of each pollutant from the aggregate dryer burner, when operating on No. 2 fuel oil, No. 4 fuel oil or reused (waste) oil, which are the new fuels at the source.

Pollutant	Potential To Emit (tons/year)
PM	118
PM <sub>10</sub>	101
SO <sub>2</sub>	204
VOC	2.54
CO	12.5
NO <sub>x</sub>	50.1

HAPs	Potential To Emit (tons/year)
Individual	Less than 10
TOTAL	Less than 25

### Justification for Revision

The potentials to emit particulate matter (PM), particulate matter with an aerodynamic diameter less than or equal to ten (10) micrometers (PM<sub>10</sub>), Sulfur dioxide (SO<sub>2</sub>), and nitrogen oxides (NO<sub>x</sub>) are greater than or equal to twenty-five (25) tons per year. Therefore, the FESOP is being revised through a FESOP Significant Permit Revision pursuant to 326 IAC 2-8-11.1 (f)(1)(E).

### County Attainment Status

The source is located in Monroe County.

Pollutant	Status
PM <sub>10</sub>	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to the ozone standards. Monroe County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Monroe County has been classified as attainment or unclassifiable for all remaining criteria pollutant(s). 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 or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):



- (a) This revision to an existing minor stationary source is not major because the emission increase is less than the PSD threshold levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.
- (b) This revision to an existing minor stationary source will not make the source a major source pursuant to 326 IAC 2-2 and 40 CFR 52.21, PSD, because the potential to emit each criteria pollutant will remain less than 250 tons per year.
- (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**

- (a) This change in the fuels used will make the batch mix asphalt manufacturing source subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.90, Subpart I) because, the change is considered a modification and is taking place in 2001, which is after the June 11, 1973 applicability date of this subpart. A modification is defined by 40 CFR 60.2 as, "any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted." Since the potential to emit PM is increasing by 0.054 pounds per hour, the actual emissions of PM are expected to increase by 0.054 pounds per hour, when operating at maximum capacity. The hot mix asphalt plant will be required to comply with the following:
  - (1) Pursuant to 40 CFR 60.93, performance tests are required as specified in this Subpart and as outlined in Part 60.8 (copy enclosed).
  - (2) Pursuant to 40 CFR 60.92, on or after the date on which the performance tests are completed, no owner or operator subject to the provisions of Subpart I shall discharge into the atmosphere from any affected facility any gases which:
    - (A) Contain particulate matter in excess of 90 milligrams per dry standard cubic foot (0.04 grains per dry standard cubic foot).
    - (B) Exhibit 20 percent opacity, or greater.

As a result of the performance tests conducted in accordance with F 105-7579-03182, issued on June 19, 1997, the maximum PM concentration in any of the three (3) test runs was 0.0023 grains per dry standard cubic foot, which is significantly less than 0.04 grains per dry standard cubic foot. Since the only increase in PM emissions is 0.054 pounds per hour from combustion, the hot mix asphalt plant will comply with this rule. Pursuant to 40 CFR 60.93, an initial performance test is required between 60 and 180 days of beginning the use of any fuel other than natural gas.

- (b) The two (2) 6,000 gallon self contained storage tanks are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.110, 60.110a and 60.110b, Subparts K, Ka and Kb) because each storage tank has a capacity less than 40 cubic meters.

- (c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14, 326 IAC 20, 40 CFR Part 61 and 40 CFR Part 63) applicable to this proposed revision.

### State Rule Applicability - Individual Facilities

#### 326 IAC 2-2 (Prevention of Significant Deterioration)

The potential to emit PM is greater than 250 tons per year for this modification. Pursuant to F 105-7579-03182, issued on June 19, 1997, the PM emissions from the aggregate dryer/mixer are limited to 55.0 pounds per hour. The PM from the entire asphalt plant shall not exceed 56.8 pounds per hour, equivalent to 249 tons per year. This emission limitation is accomplished by using a cyclone and baghouse connected in series as control. Thus the requirements of 326 IAC 2-2, PSD, are not applicable.

#### 326 IAC 2-8-4 (FESOP)

- (a) Pursuant to this rule and F 105-7579-03182, issued on June 19, 1997, the PM<sub>10</sub> emissions from the aggregate dryer/mixer shall not exceed 7.74 pounds per hour, and the PM<sub>10</sub> from the entire plant shall not exceed 7.95 pounds per hour. This will limit annual PM<sub>10</sub> emissions from the entire source to 34.8 tons per year, which is less than 100 tons per year. Therefore, the requirements of 326 IAC 2-7, Part 70, do not apply.
- (b) The potential to emit SO<sub>2</sub> from this modification is greater than 100 tons per year. The use of No. 2 fuel oil shall be limited to no more than 2,788,732 gallons per year. Each gallon of No. 4 fuel oil used shall be considered equal to using 1 gallon of No. 2 fuel oil and each gallon of waste oil used shall be considered equal to using 1.13 gallons of No. 2 fuel oil. The sulfur content of the waste oil shall not exceed three-quarters of a percent (0.75%) by weight and the sulfur content of the No. 2 and No. 4 fuel oils shall not exceed one half of a percent (0.5%) by weight. This will limit SO<sub>2</sub> emissions from the use of fuel oils or waste oil to less than 99 tons per year and the potential to emit SO<sub>2</sub> from the entire source to less than 100 tons per year. Thus, the requirements of 326 IAC 2-7, Part 70, do not apply.

#### 326 IAC 6-3-2 (Particulate Emissions Limitations for process operations)

The asphalt manufacturing operations are subject to 326 IAC 6-3, Particulate Emission Limitations. Pursuant to 326 IAC 6-3-2, Process Operations, the PM from the aggregate dryer/mixer shall not exceed 63.0 pounds per hour when operating at a process weight rate of 300 tons per hour. The particulate matter (PM) limitation is based on the following equation:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The cyclone and baghouse shall be in operation at all times the aggregate dryer/mixer is in operation, in order to comply with this limit.

#### 326 IAC 7 (Sulfur Dioxide Rules)

Since the potential to emit SO<sub>2</sub> from the dryer burner is twenty-five (25) tons per year or more as a result of this modification, the requirements of 326 IAC 7-1.1 are applicable.

- (a) When operating on No. 2 or No. 4 fuel oil (distillate oil), the sulfur dioxide emissions shall be limited to five-tenths (0.5) pound per million British thermal units. Compliance with this limitation shall be accomplished by limiting the weight percent sulfur in the No. 2 fuel oil and the No. 4 fuel oil to no more than one half of one percent (0.5%).
- (b) When operating on waste oil, the sulfur dioxide emissions shall be limited to one and six tenths (1.6) pounds per million British thermal units. Compliance with this limitation shall be accomplished by limiting the weight percent sulfur in the waste oil to no more than two percent (2%).

### 326 IAC 12-1 (New Source Performance Standards)

The hot mix asphalt plant will be required to comply with the requirements of 40 CFR 60.90, Subpart I, Standards of Performance for Hot Mix Asphalt Facilities, as described in the "Federal Rule Applicability" section of this TSD.

### 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 applicable to this modification are as follows:

- (a) Visible emission notations of the aggregate dryer stack exhaust 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. 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. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

- (b) The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the aggregate dryer, at least once per shift when the aggregate dryer is in operation when venting to the atmosphere. 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 3.0 and 6.0 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. Failure to take response steps in accordance with Section C - Compliance Monitoring 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 shall be calibrated at least once every six (6) months.

- (c) An inspection shall be performed each calendar quarter of all bags controlling the aggregate dryer 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) An inspection shall be performed each calendar quarter of all cyclones controlling the aggregate dryer when venting to the atmosphere. A cyclone 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.
- (e) In the event that bag failure has been observed:
- (1) 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 Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
  - (2) 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).

- (f) In the event that cyclone failure has been observed:

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 cyclone and baghouse for the aggregate dryer/mixer must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-8 (FESOP), and keep the requirements of 326 IAC 2-2 (PSD) not applicable.

### Testing Requirements

Pursuant to this rule and F 105-7579-03182, issued on June 19, 1997, the Permittee is required to perform PM and PM<sub>10</sub> testing of the aggregate dryer every five (5) years. Pursuant to 40 CFR 60.93, an initial performance test is required between 60 and 180 days of beginning the use of any fuel other than natural gas. Pursuant to 40 CFR 60.93, compliance with the PM standards in 40 CFR 60.92 shall be determined by using Method 5 to determine particulate concentration and Method 9 to determine opacity. When determining the particulate concentration, the sampling time and sampling volume for each run shall be at least 60 minutes and 0.90 dry standard cubic meters (31.8 dry standard cubic feet).

### Proposed Changes

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

#### A.1 General Information

The Permittee owns and operates a stationary batch mix asphalt plant with a maximum capacity of 300 tons per hour.

Responsible Official: John P. Torres  
Source Address: 1100 Oard Road, Bloomington, Indiana 47401  
Mailing Address: ~~P.O. Box 25250, Nashville, Tennessee 37202-5250~~ **P.O. Box 849, Bloomington, Indiana 47402**  
SIC Code: 2951  
County Location: Monroe  
County Status: Attainment for all criteria pollutants  
Source Status: Synthetic Minor Source, FESOP Program  
Minor Source, PSD Program

#### A.2 Emission Units and Pollution Control Summary

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

- (a) One (1) batch mixer capable of producing 300 tons per hour of asphalt and exhausting through a cyclone (CE2) and jet pulse baghouse (CE1) and exiting through stack S1.
- (b) One (1) 79 million British thermal units per hour ~~natural gas fired~~ aggregate dryer also exhausting through a cyclone (CE2) and jet pulse baghouse (CE1) and exiting through stack S1, **fired by natural gas, No. 2 fuel oil, No. 4 fuel oil or reused (waste) oil.**
- (c) One (1) cyclone (CE2) with an air flow rate of 60,785 actual cubic feet per minute.
- (d) One (1) jet pulse baghouse (CE1) with an air flow rate of 65,000 actual cubic feet per minute.
- (e) Four (4) emulsified asphalt storage tanks (TV4, TV5, TV6, TV7) with capacities of 25,000 gallons, each.

- (f) Two (2) liquid asphalt storage tanks (TV2, TV3) with capacities of 25,000 gallons each, heated by a 2.50 million British thermal units per hour natural gas fired heater.

A.3 Insignificant Activities

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

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.
- (b) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (c) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (d) **Two (2) 6,000 gallon self contained storage tanks.**
- (e) **One (1) heavy fuel preheater heat exchanger with no burner.**
- (f) **Two (2) duplex strainers and associated piping.**
- (g) **One (1) twenty-five (25) gallon per minute oil pump.**

**SECTION D.1 FACILITY OPERATION CONDITIONS**

One (1) batch mixer capable of producing 300 tons per hour of asphalt and exhausting through a cyclone (CE2) and jet pulse baghouse (CE1) and exiting through stack S1.

One (1) 79 million British thermal units per hour ~~natural gas fired~~ aggregate dryer also exhausting through a cyclone (CE2) and jet pulse baghouse (CE1) and exiting through stack S1, **fired by natural gas, No. 2 fuel oil, No. 4 fuel oil or reused (waste) oil.**

One (1) cyclone (CE2) with an air flow rate of 60,785 actual cubic feet per minute.

One (1) jet pulse baghouse (CE1) with an air flow rate of 65,000 actual cubic feet per minute.

D.1.1 Particulate Matter (PM) [326 IAC 6-3-2] [326 IAC 2-2]

- (a) Pursuant to 326 IAC 6-3-2, particulate matter (PM) emissions from the aggregate dryer/mixer shall not exceed ~~63.0 55.0~~ pounds per hour equivalent to ~~0.146~~ grains per dry standard cubic foot, and the particulate matter emissions from the entire asphalt plant shall not exceed ~~56.8~~ pounds per hour. Therefore, PSD requirements (326 IAC 2-2) do not apply **when operating at a process weight rate of 300 tons per hour. The particulate matter (PM) limitation is based on the following equation:**

**Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:**

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour and  
P = process weight rate in tons per hour

- (b) **The PM emissions from the aggregate dryer/mixer shall not exceed 55.0 pounds per hour. The PM from the entire asphalt plant shall not exceed 56.8 pounds per hour, equivalent to 249 tons per year. Thus, the requirements of 326 IAC 2-2, PSD, are not applicable.**
- (c) **Pursuant to 40 CFR 60.92, the PM emissions from the aggregate dryer/mixer stack (S1) shall be limited to less than 90 milligrams per dry standard cubic foot (0.04 grains per dry standard cubic foot) and the opacity of emissions shall be less than twenty percent (20%).**

D.1.2 Opacity Limitations

~~Visible emissions shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings. Visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes (60 readings) in a six (6) hour period.~~

D.1.32 Particulate matter less than 10 microns (PM-10) [326 IAC 2-8]

Pursuant to 326 IAC 2-8-4, particulate matter - 10 microns emissions from the aggregate dryer/mixer shall not exceed 7.74 pounds per hour, and the particulate matter - 10 microns emissions from the entire asphalt plant shall not exceed 7.95 pounds per hour, **which is less than 100 tons per year**. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

D.1.3 Sulfur Dioxide Emission Limitations [326 IAC 7] [326 IAC 2-8]

- (a) **Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emissions Limitations) the SO<sub>2</sub> emissions from the aggregate dryer shall not exceed five tenths (0.5) pounds per million British thermal unit heat input when operating on No. 2 fuel oil or No. 4 distillate fuel oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a thirty (30) day rolling weighted average. 326 IAC 7-1.1 and 326 IAC 7-2-1 are not federally enforceable.**
- (b) **Pursuant to 326 IAC 7-1.1 (SO<sub>2</sub> Emissions Limitations) the SO<sub>2</sub> emissions from the aggregate dryer shall not exceed one and six-tenths (1.6) pounds per million British thermal unit heat input when operating on waste oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a thirty (30) day rolling weighted average. 326 IAC 7-1.1 and 326 IAC 7-2-1 are not federally enforceable.**
- (c) **The use of No. 2 fuel oil shall be limited to no more than 2,788,732 gallons per year. Each gallon of No. 4 fuel oil used shall be considered equal to using 1 gallon of No. 2 fuel oil and each gallon of waste oil used shall be considered equal to using 1.13 gallons of No. 2 fuel oil. The sulfur content of the waste oil shall not exceed three-quarters of a percent (0.75%) by weight and the sulfur content of the No. 2 and No. 4 fuel oils shall not exceed one half of a percent (0.5%) by weight. This will limit SO<sub>2</sub> emissions from the use of fuel oils or waste oil to less than 99 tons per year and the potential to emit SO<sub>2</sub> from the entire source to less than 100 tons per year. Thus, the requirements of 326 IAC 2-7, Part 70, do not apply.**

D.1.4 Particulate Matter

- (a) ~~Within 180 days after issuance of this permit,~~ **Between 60 and 180 days of beginning the use of any fuel other than natural gas,** the Permittee shall perform PM and PM<sub>10</sub> testing utilizing methods approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration. PM<sub>10</sub> includes filterable and condensable PM<sub>10</sub>.

A test protocol shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

at least thirty-five (35) days before the intended test date. The Permittee shall develop and submit for approval with the protocol, standard operating procedures to be followed during sampling, handling, analysis, quality control, quality assurance, and data reporting.

- (b) **The Permittee shall perform particulate emissions testing on the aggregate dryer/mixer every five (5) years in accordance with IDEM requirements.**
- (c) **Pursuant to 40 CFR 60.93, compliance with the PM standards in 40 CFR 60.92 shall be determined by using Method 5 to determine particulate concentration and Method 9 to determine opacity. When determining the particulate concentration, the sampling time and sampling volume for each run shall be at least 60 minutes and 0.90 dry standard cubic meters (31.8 dry standard cubic feet).**

**D.1.5 Particulate Matter**

**In order to comply with Conditions D.1.1 and D.1.2, the cyclone and baghouse for the aggregate dryer/mixer shall be in operation at all times when the aggregate dryer/mixer is in operation.**

**D.1.6 Sulfur Dioxide Emissions and Sulfur Content**

**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 British thermal unit heat input when operating on No. 2 fuel oil or No. 4 distillate fuel oil and one and six-tenths (1.6) pounds per million British thermal unit heat input when operating on waste oil 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 aggregate dryer/mixer, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.**

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

**D.1.57 Daily and Weekly Visible Emissions Observations**

- (a) ~~The Permittee shall perform daily visible emissions observations per a method approved by the OAM to determine compliance with operation condition D.1.1.~~ **Visible emission notations of the aggregate dryer/mixer stack exhaust 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.**
- (b)(e) The Permittee shall perform weekly visible emissions observations on the cyclone, jet pulse baghouse, scavenger system ductwork and associated components (e.g., hoppers, etc.) for evidence of fugitive emissions, holes, corrosion, audible leaks, and the like. This does not require the use of a certified visible emissions reader. In the event that visible emissions are detected above the limit required by operation Condition D.1.1 or any visible emissions are detected on the external cyclone and jet pulse baghouse, components, the Corrective Action Contingency Plan shall be implemented. Corrective action shall be taken within 8 hours of discovery. If the initial corrective action plan does not correct the problem, then additional corrective actions shall be devised within 8 hours of discovery and shall include a timetable for completion. The corrective actions shall be implemented immediately in accordance with those timetables.

**D.1.6 8 Pressure Drop Readings**

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the aggregate dryer and batch mixer, at least once a day when the dryer or mixer is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within a range of 3.0 and 6.0 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 drop reading 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. The instrument used for determining the pressure shall comply with Condition C.14 - Pressure Gauge Specifications, be subject to approval by IDEM, ~~OAM~~ **OAQ**, and shall be calibrated at least once every six (6) months.

The inlet temperature to the baghouse shall be maintained within a range of 200-400 degrees Fahrenheit (°F) to prevent overheating of the bags and to prevent low temperatures from mudding up the bags. 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 reading 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. The Permittee shall take pressure and scrubbing liquid (water) flow rate readings from the scrubber controlling the aggregate drying operation, every four hours while the dryer is in operation.

**D.1.9 Baghouse Inspections**

An inspection shall be performed each calendar quarter of all bags controlling the aggregate dryer/mixer 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.1.10 Cyclone Inspections**

An inspection shall be performed each calendar quarter of all cyclones controlling the aggregate dryer/mixer when venting to the atmosphere. A cyclone 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.

**D.1.11 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 Monitoring Plan - Failure to Take Response Steps, 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.1.12 Cyclone Failure Detection**

In the event that cyclone failure has been observed:

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

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

~~D.1.8 Periodic Emissions Testing~~

~~The Permittee shall perform particulate emissions testing on the aggregate dryer/burner every 5 years in accordance with IDEM requirements.~~

**D.1.14 Record Keeping Requirements**

- (a) To document compliance with Condition D.1.3, 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, 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.

- (b) To document compliance with Condition D.1.7, the Permittee shall maintain records of visible emission notations of the aggregate dryer/mixer stack exhaust weekly and once per shift.
- (c) To document compliance with Condition D.1.8, the Permittee shall maintain records of the inlet and outlet differential static pressure and cleaning cycle operation once per shift during normal operation when venting to the atmosphere:
- (d) To document compliance with Conditions D.1.9 and D.1.10, the Permittee shall maintain records of the results of the inspections required under Conditions D.1.9 and D.1.10 and the dates the vents are redirected.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### **D.1.15 Reporting Requirements**

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

**D.1.16 Used Oil Requirements**

**The waste oil burned in the aggregate dryer/mixer 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.**

On January 1, 2001, the name of the Office of Air Management (OAM) was changed to the Office of Air Quality (OAQ). All references to the Office of Air Management or OAM in the cover page of the permit have been changed to Office of Air Quality or OAQ. All references to Office of Air Management or OAM in the FESOP should be read as Office of Air Quality or OAQ. The reference to Office of Air Management (OAM) in Condition A.4, which is included in this revision's updated FESOP pages, has been changed as follows:

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

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

The following report form has been added to the permit:

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

**FESOP Quarterly Report**

Source Name: Rogers Group, Inc. - Bloomington Asphalt  
 Source Address: 1100 Oard Road, Bloomington, Indiana 47402  
 Mailing Address: P.O. Box 849, Bloomington, Indiana 47402  
 FESOP No.: F 105-7579-03182  
 Facility: One (1) aggregate dryer burner  
 Parameter: SO<sub>2</sub> emissions; fuel usage  
 Limit: No. 2 fuel oil shall be limited to no more than 2,788,732 gallons per year. Each gallon of No. 4 fuel oil used shall be considered equal to using 1 gallon of No. 2 fuel oil and each gallon of waste oil used shall be considered equal to using 1.13 gallons of No. 2 fuel oil.

YEAR: \_\_\_\_\_

Month	No. 2 fuel oil usage plus equivalent of other fuels to No. 2 fuel oil	No. 2 fuel oil usage plus equivalent of other fuels to No. 2 fuel oil	No. 2 fuel oil usage plus equivalent of other fuels to No. 2 fuel oil
	This Month	Previous 11 Months	12 Month Total

- 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: \_\_\_\_\_

Attach a signed certification to complete this report.

**Conclusion**

The construction of this proposed revision shall be subject to the conditions of the attached proposed FESOP Significant Permit Revision No. 105-14300-03182.

## Indiana Department of Environmental Management Office of Air Quality

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

<b>Source Name:</b>	<b>Rogers Group, Inc. - Bloomington Asphalt</b>
<b>Source Location:</b>	<b>1100 Oard Road, Bloomington, Indiana 47401</b>
<b>County:</b>	<b>Monroe</b>
<b>SIC Code:</b>	<b>2951</b>
<b>Operation Permit No.:</b>	<b>F 105-7579-03182</b>
<b>Operation Permit Issuance Date:</b>	<b>June 19, 1997</b>
<b>Significant Permit Revision No.:</b>	<b>SPR 105-14300-03182</b>
<b>Permit Reviewer:</b>	<b>CarrieAnn Ortolani</b>

On May 24, 2001, the Office of Air Quality (OAQ) had a notice published in The Herald Times, Bloomington, Indiana, stating that Rogers Group, Inc. - Bloomington Asphalt had applied for a Significant Permit Revision to a Federally Enforceable State Operating Permit (FESOP) to use No. 2 fuel oil, No. 4 fuel oil and reused (waste) oil, in addition to natural gas, at the one (1) existing aggregate dryer using a baghouse as control. The notice also stated that OAQ proposed to issue a Significant Permit Revision to a FESOP for this operation and provided information on how the public could review the proposed Significant Permit Revision to a FESOP 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 Significant Permit Revision to a FESOP should be issued as proposed.

On June 6, 2001, Matt Mabrey of Rogers Group, Inc. submitted a comment on the proposed Significant Permit Revision to a FESOP. The comment is as follows (The permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded**.):

### Comment 1:

Page 4, Item A.2 part (c) should be removed. The cyclone was removed when the scrubber was replaced by a baghouse in June 2000. This was pointed out in a letter addressed to the OAQ at the time the work was done. Any language further in the draft that refers to a cyclone should be removed.

### Response 1:

Minor Permit Modification 105-12036, issued on May 11, 2000, was for the replacement of a scrubber by the baghouse. Although the Permittee indicated in their application that the cyclone was removed at that time, the cyclone was not removed from the permit. The overall control efficiency used in the calculation of the potential to emit PM and PM<sub>10</sub> after controls is 99.799 percent, which is the same control efficiency used in the initial FESOP. The actual control efficiency due to replacing the scrubber and cyclone with the baghouse is greater than 99.799 percent. Therefore, there is no change in the potential to emit or the applicability of any rule resulting from the removal of the cyclone. The monitoring conditions for the cyclone that were added in this Significant Permit Modification, have been removed. All references to the cyclone have been removed as follows:

A.2 Emission Units and Pollution Control Summary

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

- (a) One (1) batch mixer capable of producing 300 tons per hour of asphalt and exhausting through a cyclone (CE2) and jet pulse baghouse (CE1) and exiting through stack S1.
- (b) One (1) 79 million British thermal units per hour aggregate dryer also exhausting through a cyclone (CE2) and jet pulse baghouse (CE1) and exiting through stack S1, fired by natural gas, No. 2 fuel oil, No. 4 fuel oil or reused (waste) oil.
- ~~(c) One (1) cyclone (CE2) with an air flow rate of 60,785 actual cubic feet per minute.~~
- ~~(d)~~(c) One (1) jet pulse baghouse (CE1) with an air flow rate of 65,000 actual cubic feet per minute.
- ~~(e)~~(d) Four (4) emulsified asphalt storage tanks (TV4, TV5, TV6, TV7) with capacities of 25,000 gallons, each.
- ~~(f)~~(e) Two (2) liquid asphalt storage tanks (TV2, TV3) with capacities of 25,000 gallons each, heated by a 2.50 million British thermal units per hour natural gas fired heater.

**SECTION D.1 FACILITY OPERATION CONDITIONS**

One (1) batch mixer capable of producing 300 tons per hour of asphalt and exhausting through a cyclone (CE2) and jet pulse baghouse (CE1) and exiting through stack S1.

One (1) 79 million British thermal units per hour aggregate dryer also exhausting through a cyclone (CE2) and jet pulse baghouse (CE1) and exiting through stack S1, fired by natural gas, No. 2 fuel oil, No. 4 fuel oil or reused (waste) oil.

~~One (1) cyclone (CE2) with an air flow rate of 60,785 actual cubic feet per minute.~~

One (1) jet pulse baghouse (CE1) with an air flow rate of 65,000 actual cubic feet per minute.

D.1.5 Particulate Matter

In order to comply with Conditions D.1.1 and D.1.2, the ~~cyclone and~~ baghouse for the aggregate dryer/mixer shall be in operation at all times when the aggregate dryer/mixer is in operation.

D.1.7 Visible Emissions Observations

- (a) Visible emission notations of the aggregate dryer/mixer stack exhaust 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 Permittee shall perform weekly visible emissions observations on the ~~cyclone~~; jet pulse baghouse, scavenger system ductwork and associated components (e.g., hoppers, etc.) for evidence of fugitive emissions, holes, corrosion, audible leaks, and the like. This does not require the use of a certified visible emissions reader. In the event that visible emissions are detected above the limit required by operation Condition D.1.1 or any visible emissions are detected on the ~~external cyclone~~ and jet pulse baghouse components, the Corrective Action Contingency Plan shall be implemented. Corrective action shall be taken within 8 hours of discovery. If the initial corrective action plan does not correct the problem, then additional corrective actions shall be devised within 8 hours of discovery and shall include a timetable for completion. The corrective actions shall be implemented immediately in accordance with those timetables.

D.1.10 Cyclone Inspections

~~An inspection shall be performed each calendar quarter of all cyclones controlling the aggregate dryer/mixer when venting to the atmosphere. A cyclone 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.~~

~~D.1.12 Cyclone Failure Detection~~

~~In the event that cyclone failure has been observed:~~

~~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.1.142 Record Keeping Requirements

- (a) To document compliance with Condition D.1.3, 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, 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.

- (b) To document compliance with Condition D.1.7, the Permittee shall maintain records of visible emission notations of the aggregate dryer/mixer stack exhaust weekly and once per shift.
- (c) To document compliance with Condition D.1.8, the Permittee shall maintain records of the inlet and outlet differential static pressure and cleaning cycle operation once per shift during normal operation when venting to the atmosphere:
- (d) To document compliance with Conditions ~~D.1.9 and D.1.10~~, the Permittee shall maintain records of the results of the inspections required under ~~Conditions D.1.9 and D.1.10~~ and the dates the vents are redirected.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Section D.1 has been renumbered accordingly.

On June 19, 2001 Joyce Pace of the Monroe County League of Woman Voters and on June 29, 2001, resident Anne McLaughlin each submitted a comment on the proposed Significant Permit Revision to a FESOP. The comments are as follows (The permit language, if changed, has deleted language as strikeouts and new language bolded.):

**Comment 1 (Joyce Pace):**

The Rogers Group has generally been a good corporate resident of Bloomington and Monroe County. While the economic rationale for the adoption of fuel oil and re-refined (recycled) oil as alternative fuels for the aggregate drying kiln as an intermittent alternative to the natural gas for which the facility was originally permitted is clear, and the Rogers Group is understood to have equipped the kiln with a baghouse filter to reduce particulate emissions last year, the possible increase in gaseous pollutant emissions by two orders of magnitude, principally sulfur dioxide, is very disturbing. Even though the fuel-switching regimen sketched in Herald-Times indicates an overall yearly sum of effluent SO<sub>2</sub> under 99 tons per year (but possibly up to 200 tons annually), the episodic rate of release of this toxic gas at times when the alternate fuels are being burned would be much greater than the original permitting of the facility allowed. Operating at 10,000,000 British thermal units per hour and consuming oil at 145,000 British thermal units per gallon of a sulfur content of 0.5%, one can calculate that about 5 pounds of sulfur dioxide will be produced per hour. The environmental and health consequences of acute exposure to this amount of SO<sub>x</sub> has not been addressed.

It is also troubling to the League that the nature of the "used oil" is not fully specified. Used motor oil is notorious for containing a variety of toxic metals. Depending on the nature of the purification process, if any, undergone by the recycled oil, these metals may appear in volatile form to some extent in the stack gas yet their possible toxicity and presence seems to be ignored.

The Oard Road location of the Rogers kiln is in a rapidly developing area. It is also south and west of Ellettsville and Bloomington, respectively. This places the kiln site upwind of the two major population centers in Monroe County and near non-industrial neighbors who may be unaware of what may lie in store for them.

For all of these reasons we find the proposed permit modification request troubling. The League would like to see some of the above issues addressed explicitly rather than glossing over them in what seems otherwise to be a process of routine re-permitting. The potential implications of operations under the proposed modified permit for the public health and the environment of our area are too important to ignore.

**Comment 2** (Anne McLaughlin):

I am writing regarding the Rogers Group's application to burn fuel oil and recycled oil. I live less than a mile from the Oard Road plant and am extremely concerned about the emissions of sulfur dioxide. I am aware that IDEM has stated that there will be no significant environmental impact. You do not know that.

I am firmly in opposition of granting this permit. My children love to play outside and will be breathing in these emissions. Bloomington is, by design, expanding westward. This has become a highly populated area, with an increase in family housing. I understand that this is an economic decision, but some things are more important than money - namely, our children.

Please consider whether or not you would want your children, grandchildren, nieces, nephews, etc., living near a plant which emits sulfur dioxide.

I rely on your humanity and common sense to guide you to the appropriate decision; deny this application. If the Rogers Group must do this, encourage them to do so in a less populated area.

**Responses 1 and 2:**

The OAQ thanks Joyce Pace and Anne McLaughlin for their comments regarding Bloomington Asphalt. This FESOP Revision contains conditions that will ensure that Bloomington Asphalt remains in compliance with all applicable State and Federal air regulations.

The IDEM inspector assigned to this source is Joe Foyst. Mr. Foyst can be contacted at (317) 232-8412 if you suspect that Bloomington Asphalt is out of compliance with any of the applicable regulations. IDEM generates a schedule that determines when the inspector will visit the source. Inspector visits are unannounced. There will be enforcement actions if Bloomington Asphalt is found to be in violation of any conditions in this FESOP Revision.

One of the purposes of the Clean Air Act is to set NAAQS for protecting public health. The US EPA has designated Monroe County as an attainment area for all of the criteria pollutants. That means that air quality currently does not exceed the levels set by the NAAQS for particulate matter, sulfur dioxide, ozone, carbon monoxide and lead.

OAQ has conducted screening modeling using a US EPA approved model to assess the air emissions from this source. The model examines worst case hourly meteorological conditions and the stack parameters to predict the increase in the concentrations over the existing background levels at all distances. The purpose is to determine if the introduction of that amount of pollutants is going to cause a concentration in the air of any of these pollutants above health-related standards. The modeling results indicated that the SO<sub>2</sub> concentrations were well below the NAAQS.

The SO<sub>2</sub> was modeled at the maximum hourly emission rate of 46.7 pounds per hour to determine maximum impacts. The maximum predicted increases are added to representative background concentrations in units of micrograms per cubic meter (ug/m<sup>3</sup>) taken from the nearest SO<sub>2</sub> monitor located off State Road 57, in Davies County. The total is compared to the SO<sub>2</sub> 3 hour, 24 hour and annual NAAQS at a level to protect public health and welfare with a margin of safety. The results are as follows:

	<b>Maximum Concentration</b>	<b>Background Concentration</b>	<b>Total</b>	<b>NAAQS</b>
3 hour (ug/m <sup>3</sup> )	278	217	495	1,300
24 hour (ug/m <sup>3</sup> )	124	75	199	365
Annual (ug/m <sup>3</sup> )	24.7	18	42.7	80

The maximum concentration of SO<sub>2</sub> resulting from this modification, using the worst case meteorological conditions, occurs at 171 meters from the stack. The maximum concentration of SO<sub>2</sub> in the vicinity of Rogers Group, Inc. - Bloomington Asphalt will still be less than 38.1 percent of the three-hour NAAQS, less than 54.6 percent of the twenty-four-hour NAAQS and less than 53.4 percent of the annual NAAQS. Therefore, this plant will not cause or contribute to a violation of the NAAQS and will not pose a health threat due to the emissions of sulfur dioxide.

HAPs were also modeled to estimate the worst case contribution of HAPs to the atmosphere due to the operation of this plant. The Rogers Group total HAPs potential to emit is 9.99 tons per year (2.28 pounds per hour). The modeling assumed that the maximum hourly emission rate of 2.28 pounds per hour (9.99 tons per year) applied for each of the individual HAPs. The HAPs include benzene, ethyl benzene, formaldehyde, methyl chloroform, naphthalene, toluene, xylene, arsenic, cadmium, chromium, manganese and nickel compounds. The use of the full 2.28 pounds per hour emission rate for each HAP is extremely conservative since this total HAPs emission rate was assumed to apply to each of the individual HAPs. These concentrations are compared to the 8-hour OSHA PELs, a level to protect public health and welfare with a margin of safety. The results are as follows:

	<b>Maximum 8-hr. Concentration (ug/m<sup>3</sup>)</b>	<b>OSHA PEL (ug/m<sup>3</sup>)</b>	<b>Percent of OSHA PEL (%)</b>
8 hour (ug/m <sup>3</sup> ) for all HAPs combined	10.6	-	-
Toluene		375,000	0.00283
Benzene		3,200	0.331
Ethyl benzene		435,000	0.00244
Formaldehyde		1,200	0.883
Methyl chloroform		1,900,000	0.000558
Naphthalene		50,000	0.0212
Xylene		435,000	0.00244
Arsenic Compounds		500	2.12
Cadmium Compounds		100	10.60
Chromium Compounds		500	2.12
Manganese Compounds		1,000	1.06
Nickel Compounds		1,000	1.06

The OSHA PEL for mercury is 10.0 micrograms per cubic meter. Since mercury emissions represent less than ten (10.0) percent of the total potential HAPs emissions the potential worst case mercury emissions are less than 10.0% of the OSHA PEL.

Due to the emission increase resulting from this modification, compliance monitoring requirements, including parametric monitoring of the baghouse and visible emission notations, have been added to the permit. The source is also subject to a used oil requirement, and, pursuant to Condition D.1.14 (formerly D.1.16), the burning of mixtures of used oil and hazardous waste that is regulated under 329 IAC 3.1 is prohibited at this source.

Testing for PM and PM<sub>10</sub> emissions is also required by this permit. In addition, the requirements of 326 IAC 7 for Sulfur Dioxide Emissions are applicable, and the source is required to show compliance with this rule. There are no changes to the proposed permit as a result of these comments.

**Appendix A: Emission Calculations**

**Company Name: Rogers Group, Inc. - Bloomington Asphalt**  
**Plant Location: 1100 Oard Road, Bloomington, Indiana 47404**  
**County: Monroe**  
**SPR: 105-14300**  
**Plt. ID: 105-03182**  
**Date: March 2, 2001**  
**Permit Reviewer: CarrieAnn Ortolani**

**I. Potential Emissions**

**Dryer Burner (gas/<100MMBTU/uncontrolled) Already permitted**

The following calculations determine the amount of emissions created by natural gas combustion, based on 8760 hours of use, AP-42 Ch. 1.4, Tables 1.4-1, 1.4-2, 1.4-3

Pollutant:	<u>79.0 MMBtu/hr * 8760 hrs/yr</u>	* Ef (lbs/MMcf) = (tons/yr)
	1000 Btu/cf * 2000 lbs/ton	
P M:	1.9 lbs/MMcf =	<u>0.657 tons/yr</u>
P M-10:	7.6 lbs/MMcf =	<u>2.63 tons/yr</u>
S O x:	0.6 lbs/MMcf =	<u>0.208 tons/yr</u>
N O x:	100.0 lbs/MMcf =	<u>34.6 tons/yr</u>
V O C:	5.5 lbs/MMcf =	<u>1.90 tons/yr</u>
C O:	84.0 lbs/MMcf =	<u>29.1 tons/yr</u>

**(#2 & #1 oil) Dryer Burner <100 Proposed change**

The following calculations determine the amount of emissions created by #2 & #1 distillate fuel oil @ 0.5 % sulfur, based on 8760 hours of use and AP-42, Tables 1.3-1, 1.3-2, 1.3-3

Pollutant:	<u>79.0 MMBtu/hr * 8760 hrs/yr</u>	* Ef (lbs/1000 gal) = (tons/yr)
	139000 Btu/gal * 2000 lbs/ton	
P M:	2.0 lbs/1000 gal =	<u>4.98 tons/yr</u>
PM-10:	3.3 lbs/1000 gal =	<u>8.21 tons/yr</u>
S O x:	71.0 lbs/1000 gal =	<u>177 tons/yr</u>
N O x:	20.0 lbs/1000 gal =	<u>49.8 tons/yr</u>
V O C:	0.34 lbs/1000 gal =	<u>0.846 tons/yr</u>
C O:	5.0 lbs/1000 gal =	<u>12.4 tons/yr</u>

If Rating >100 mmBtu	
N O x:	<b>24.0</b>
V O C:	<b>0.20</b>

**(#4 oil/ <100MMBTU) Dryer Burner Proposed change**

The following calculations determine the amount of emissions created by #4 distillate fuel oil @ 0.5 % sulfur, based on 8760 hours of use and AP-42, Tables 1.3-1, 1.3-2, 1.3-3

Pollutant:	<u>79.0 MMBtu/hr * 8760 hrs/yr</u>	* Ef (lbs/1000 gal) = (tons/yr)
	138000 Btu/gal * 2000 lbs/ton	
P M:	2.0 lbs/1000 gal =	<u>5.01 tons/yr</u>
PM-10:	3.3 lbs/1000 gal =	<u>8.27 tons/yr</u>
S O x:	71.0 lbs/1000 gal =	<u>178 tons/yr</u>
N O x:	20.0 lbs/1000 gal =	<u>50.1 tons/yr</u>
V O C:	0.34 lbs/1000 gal =	<u>0.853 tons/yr</u>
C O:	5.0 lbs/1000 gal =	<u>12.5 tons/yr</u>

**(waste oil/atomizing burner)**

The following calculations determine the amount of emissions created by waste fuel oil @ 0.75 % sulfur, based on 8760 hours of use and AP-42 Chapter 1.11

0.700 % Ash  
0.002 % Lead

Pollutant: 79.0 MMBtu/hr \* 8760 hrs/yr \* Ef (lbs/1000 gal) = (tons/yr)  
136000 Btu/gal \* 2000 lbs/ton

P M:	46.2 lbs/1000 gal =	<u>118</u> tons/yr
P M-10:	39.9 lbs/1000 gal =	<u>102</u> tons/yr
S O x:	80.3 lbs/1000 gal =	<u>204</u> tons/yr
N O x:	16.0 lbs/1000 gal =	<u>40.7</u> tons/yr
VOC:	1.0 lbs/1000 gal =	<u>2.54</u> tons/yr
C O:	2.10 lbs/1000 gal =	<u>5.34</u> tons/yr
Pb:	0.10 lbs/1000 gal =	<u>0.254</u> tons/yr

**\*\* aggregate drying: batch-mix plant \*\***

The following calculations determine the amount of emissions created by aggregate drying, based on 8760 hours of use and EPA SCC #3-05-002-05:

P M:	32 lbs/ton x	<u>300.0</u> tons/hr x	8760 hrs/yr =	<u>42048</u> tons/yr
		2000 lbs/ton		
P M-10:	4.5 lbs/ton x	<u>300</u> tons/hr x	8760 hrs/yr =	<u>5913</u> tons/yr
		2000 lbs/ton		
Lead:	3.30000000E-06 lbs/ton x	<u>300</u> tons/hr x	8760 hrs/yr =	<u>0.004</u> tons/yr
		2000 lbs/ton		
HAPs:	0.0076 lbs/ton x	<u>300</u> tons/hr x	8760 hrs/yr =	<u>9.99</u> tons/yr
		2000 lbs/ton		

HAPs include benzene, ethylbenzene, formaldehyde, methyl chloroform, naphthalene, toluene, xylene; arsenic, cadmium, chromium, manganese, mercury, and nickel compounds.

**Emissions before controls (combustion plus production) are as follows:**

natural gas	#2 oil	#4 oil	waste oil
P M: <u>42049</u> tons/yr	P M: <u>42053</u> tons/yr	P M: <u>42053</u> tons/yr	P M: <u>42166</u> tons/yr
P M-10: <u>5916</u> tons/yr	P M-10: <u>5921</u> tons/yr	P M-10: <u>5921</u> tons/yr	P M-10: <u>6015</u> tons/yr
S O x: <u>0.208</u> tons/yr	S O x: <u>177</u> tons/yr	S O x: <u>178</u> tons/yr	S O x: <u>204</u> tons/yr
N O x: <u>34.6</u> tons/yr	N O x: <u>49.8</u> tons/yr	N O x: <u>50.1</u> tons/yr	N O x: <u>40.7</u> tons/yr
V O C: <u>1.90</u> tons/yr	V O C: <u>0.846</u> tons/yr	V O C: <u>0.853</u> tons/yr	V O C: <u>2.54</u> tons/yr
C O: <u>29.1</u> tons/yr	C O: <u>12.4</u> tons/yr	C O: <u>12.5</u> tons/yr	C O: <u>5.3</u> tons/yr
Lead: <u>0.004</u> tons/yr	Lead: <u>0.004</u> tons/yr	Lead: <u>0.004</u> tons/yr	Lead: <u>0.004</u> tons/yr
HAPs: <u>9.99</u> tons/yr	HAPs: <u>9.99</u> tons/yr	HAPs: <u>9.99</u> tons/yr	HAPs: <u>9.99</u> tons/yr

**B. Source emissions after controls**

**dryer combustion: gas**

P M:	0.66 tons/yr x	<u>0.00201</u> emitted after controls =	<u>0.001</u> tons/yr
P M-10:	2.63 tons/yr x	<u>0.00201</u> emitted after controls =	<u>0.005</u> tons/yr

**dryer combustion: #2 oil**

P M:	4.98 tons/yr x	<u>0.00201</u> emitted after controls =	<u>0.010</u> tons/yr
P M-10:	8.21 tons/yr x	<u>0.00201</u> emitted after controls =	<u>0.017</u> tons/yr

**dryer combustion: #4 oil**

P M: 5.01 tons/yr x 0.00201 emitted after controls = 0.010 tons/yr  
 P M-10: 8.27 tons/yr x 0.00201 emitted after controls = 0.017 tons/yr

**dryer combustion: waste oil**

P M: 117.55 tons/yr x 0.00201 emitted after controls = 0.236 tons/yr  
 P M-10: 101.52 tons/yr x 0.00201 emitted after controls = 0.204 tons/yr

**aggregate drying:**

P M: 42048.00 tons/yr x 0.00201 emitted after controls = 84.5 tons/yr  
 P M-10: 5913.00 tons/yr x 0.00201 emitted after controls = 11.9 tons/yr

**Emissions after controls (combustion plus production) are as follows:**

	Gas	#2 Oil	#4 Oil	Waste Oil	
P M:	<b>84.5</b>	<b>84.5</b>	<b>84.5</b>	<b>84.8</b>	tons/yr
P M-10:	<b>11.9</b>	<b>11.9</b>	<b>11.9</b>	<b>12.1</b>	tons/yr

**II. Allowable Emissions**

A. The following calculations determine the maximum sulfur content of distillate #2 fuel oil allowable by 326 IAC 7:

limit: 0.5 lbs/MMBtu  
 0.5 lbs/MMBtu x 139000 Btu/gal= 69.5 lbs/1000gal  
 69.5 lbs/1000gal / 142 lb/1000 gal = 0.489

Sulfur content must be less than or equal to 0.5 % to comply with 326 IAC 7  
 and to limit SO2 emissions to 99 tons per year or less.

B. The following calculations determine the maximum sulfur content of residual waste fuel oil allowable by 326-IAC 7:

limit: 1.6 lbs/MMBtu  
 1.6 lbs/MMBtu x 136000 Btu/gal= 217.6 lbs/1000gal  
 217.6 lbs/1000gal / 107 lbs/1000 gal = 2.03

Sulfur content must be less than or equal to 2.0 % to comply with 326 IAC 7  
 and to limit SO2 emissions to 99 tons per year or less.

C. The following calculations determine the maximum sulfur content of distillate #4 fuel oil allowable by 326-IAC 7:

limit: 0.5 lbs/MMBtu  
 0.5 lbs/MMBtu x 138000 Btu/gal= 69 lbs/1000gal  
 69 lbs/1000gal / 142 lbs/1000 gal = 0.486

Sulfur content must be less than or equal to 0.5 % to comply with 326 IAC 7  
 and to limit SO2 emissions to 99 tons per year or less.

### III. Limited Potential Emissions

#### FUEL USAGE LIMITATION: BASED ON NOx

The potential to emit NOx from the entire source is less than 100 tons per year. Therefore, no FESOP limit is required.

#### FUEL USAGE LIMITATION: BASED ON SO2

##### FUEL USAGE LIMITATION FOR BURNER (Gas)

$$\begin{array}{rclclcl}
 0.208 \frac{\text{tons SO}_2}{\text{year}} & * & 2000 \frac{\text{lbs}}{\text{ton}} & = & 415.22 \frac{\text{lbs SO}_2}{\text{year}} \\
 415.22 \frac{\text{lbs SO}_2}{\text{year}} & / & 0.6 \frac{\text{lbs SO}_2}{\text{MMcf}} & = & 692.04 \frac{\text{MMcf}}{\text{year}} \\
 692.04 \frac{\text{MMcf}}{\text{year}} & * & \frac{99.0 \text{ tons/yr}}{0.21 \text{ tons/yr}} & = & 0.0 \frac{\text{MMcf}}{\text{year}} \text{ No FESOP Limit}
 \end{array}$$

##### FUEL USAGE LIMITATION FOR BURNER (#2 Oil)

$$\begin{array}{rclclcl}
 176.7 \frac{\text{tons SO}_2}{\text{year}} & * & 2000 \frac{\text{lbs}}{\text{ton}} & = & 353488.06 \frac{\text{lbs SO}_2}{\text{year}} \\
 353488.06 \frac{\text{lbs SO}_2}{\text{year}} & / & 71.0 \frac{\text{lbs}}{1000 \text{ gal}} & = & 4978705.036 \frac{\text{gal}}{\text{year}} \\
 4978705.04 \frac{\text{gal}}{\text{year}} & * & \frac{99.0 \text{ tons/yr}}{176.74 \text{ tons/yr}} & = & 2788732 \frac{\text{gal}}{\text{year}} \text{ FESOP Limit}
 \end{array}$$

##### FUEL USAGE LIMITATION FOR BURNER (#4 Oil)

$$\begin{array}{rclclcl}
 178.0 \frac{\text{tons SO}_2}{\text{year}} & * & 2000 \frac{\text{lbs}}{\text{ton}} & = & 356049.56522 \frac{\text{lbs SO}_2}{\text{year}} \\
 356049.57 \frac{\text{lbs SO}_2}{\text{year}} & / & 71.0 \frac{\text{lbs}}{1000 \text{ gal}} & = & 5014782.6087 \frac{\text{gal}}{\text{year}} \\
 5014782.61 \frac{\text{gal}}{\text{year}} & * & \frac{99.0 \text{ tons/yr}}{178.02 \text{ tons/yr}} & = & 2788732 \frac{\text{gal}}{\text{year}} \text{ FESOP Limit}
 \end{array}$$

##### FUEL USAGE LIMITATION FOR BURNER (Waste Oil)

$$\begin{array}{rclclcl}
 204.2 \frac{\text{tons SO}_2}{\text{year}} & * & 2000 \frac{\text{lbs}}{\text{ton}} & = & 408354.49 \frac{\text{lbs SO}_2}{\text{year}} \\
 408354.49 \frac{\text{lbs SO}_2}{\text{year}} & / & 80.3 \frac{\text{lbs}}{1000 \text{ gal}} & = & 5088529.41 \frac{\text{gal}}{\text{year}} \\
 5088529.41 \frac{\text{gal}}{\text{year}} & * & \frac{99.0 \text{ tons/yr}}{204.18 \text{ tons/yr}} & = & 2467290 \frac{\text{gal}}{\text{year}} \text{ FESOP Limit}
 \end{array}$$