INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Joseph E. Kernan
Governor

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100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

December 21, 2004

TO: Interested Parties / Applicant

RE: J.H. Rudolph and Company. Inc. / F123-19457-00025

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

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

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot 9/16/03

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FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) AND NEW SOURCE REVIEW OFFICE OF AIR QUALITY

J.H. Rudolph & Company, Inc.
12050 Optical Road
English, Indiana 47118

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

The Permittee must comply with all conditions of this permit. Noncompliance with any provision of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; and denial of a permit renewal application. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses new source review requirements and is intended to fulfill the new source review procedures and permit revision requirements pursuant to 326 IAC 2-8-11.1, applicable to those conditions.

Operation Permit No.: F123-19457-00025	
Issued by: Original signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: December 20, 2004 Expiration Date: December 20, 2009

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SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary drum mix asphalt plant.

Authorized individual:	Alvin C. Evans
Source Address:	12050 Optical Road, English, Indiana 47118
Mailing Address:	P.O. Box 5226, Evansville, Indiana 47716
General Source Phone:	812-476-4921
SIC Code:	2951
Source Location Status:	Perry County Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD rules; Minor Source, Section 112 of the Clean Air Act

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

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

(a) One (1) hot asphalt drum mixer capable of processing 325 tons per hour of raw material, equipped with one (1) 120 million British thermal units (MMBtu) per hour re-refined waste fuel fired burner, using natural gas, No. 2 distillate fuel oil, and No. 4 fuel oil as backup fuels, controlling particulate emissions with one (1) jetpulse baghouse, exhausting at one (1) stack, identified as EP1;

(b) One (1) 20,000 gallon liquid asphalt storage tank, to be installed in 2005;

(c) One (1) 25,000 gallon liquid asphalt storage tank, to be installed in 2005;

(d) One (1) 18,000 gallon liquid asphalt storage tank, to be installed in 2005;

(e) One (1) 15,500 gallon No. 2 distillate fuel oil storage tank, to be installed in 2005;

(f) One (1) 15,500 gallon waste oil storage tank, to be installed in 2005;

(g) One (1) 10,000 gallon emulsified asphalt storage tank, to be installed in 2005;

(h) One (1) 15,000 gallon split compartment prime asphalt storage tank, to be installed in 2005; and

(i) cold-mix (stockpile mix) asphalt storage piles.

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

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

(a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million BTU per hour:

(1) One (1) natural gas fired hot oil heater, with a maximum rated heat input capacity of 2.115 MMBtu/hr, using No. 2 distillate fuel oil, No. 4 fuel oil and waste oil as backup fuels, and exhausting at one (1) stack, identified as EP2;

(2) One (1) natural gas fired inert gas generator, with a maximum rated heat input capacity of 0.0228 MMBtu/hr.

(b) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.

(1) One (1) gasoline storage tank with a maximum capacity of 1,200 gallons.

(c) 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.

(1) One (1) No. 2 on road fuel tank with a maximum capacity of 1,200 gallons.

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

(e) Paved and unpaved roads and parking lots with public access;

(f) Four (4) aggregate conveyors;

(g) One (1) scalping screen;

(h) Five (5) recycled asphalt conveyors;

(i) Six (6) cold feed bins;

(j) Two (2) RAP feeder bins;

(k) One (1) RAP screen.

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 Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either

(1) incorporated as originally stated,

(2) revised, or

(3) deleted

by this permit.

(b) All previous registrations and permits are superseded by this permit.

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [IC 13]

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

B.2 Definitions [326 IAC 2-8-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2, and 326 IAC 2-7) shall prevail.

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

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

B.4 Enforceability [326 IAC 2-8-6]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.6 Severability [326 IAC 2-8-4(4)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

This permit does not convey any property rights of any sort, or any exclusive privilege.

B.8 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ, may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1 when furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.10 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an authorized individual of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

B.11 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

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

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

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and

(5) Such other facts as specified in Sections D of this permit, IDEM, OAQ, may require to determine the compliance status of the source.

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

B.12 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

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

The PMP extension notification does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall implement the PMPs, including any required record keeping, as necessary to ensure that failure to implement a PMP does not cause or contribute to an exceedance of any limitation on emissions or potential to emit.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMP does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.13 Emergency Provisions [326 IAC 2-8-12]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ and the Southwest Regional Office, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section) or,
Telephone No.: 317-233-5674 (ask for Compliance Section)
Facsimile No.: 317-233-5967

Southwest Regional Office:
Telephone No.: 1-888-672-8323 or,
Telephone No.: 812-436-2570
Facsimile No.: 812-436-2572

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

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

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.14 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

(a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provision), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

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

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.16 Permit Renewal [326 IAC 2-8-3(h)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

(b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]

(1) A timely renewal application is one that is:

(A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(2) If IDEM, OAQ upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

(c) Right to Operate After Application for Renewal [326 IAC 2-8-9]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as needed to process the application.

B.17 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

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

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

(c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

(d) No permit amendment or modification is required for the addition, operation or removal of a nonroad engine, as defined in 40 CFR 89.2.

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any approval required by 326 IAC 2-8-11.1 has been obtained;

(3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

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

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

(5) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-8-15(b) through (d) and makes such records available, upon reasonable request, to public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-8-15(b)(2), (c)(1), and (d).

(b) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).

(c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.

(d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.19 Permit Revision Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-17-3-2] [IC13-30-3-1]

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

(a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

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

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Failure to pay may result in administrative enforcement action, or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4320 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.23 Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9]

(a) The requirements to obtain a permit revision under 326 IAC 2-8-11.1 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3.

(b) Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction work is suspended for a continuous period of one (1) year or more.

B.24 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314]

Notwithstanding the conditions of this permit that state specific methods that may be used to demonstrate compliance with, or a violation of, applicable requirements, any person (including the Permittee) may also use other credible evidence to demonstrate compliance with, or a violation of, any term or condition of this permit.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [40 CFR 52 Subpart P][326 IAC 6-3-2]

(a) Pursuant to 40 CFR 52 Subpart P, particulate matter emissions from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.

(b) Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

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

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

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period;

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

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

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

C.3 Opacity [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

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

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

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

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

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

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

C.7 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the plan submitted on August 5, 2004. The plan is included as Attachment A.

C.8 Operation of Equipment [326 IAC 2-8-5(a)(4)]

Except as otherwise provided by statute, rule or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.9 Stack Height [326 IAC 1-7]

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

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

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1 emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

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

C.11 Performance Testing [326 IAC 3-6]

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.12 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

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

C.13 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

in writing, prior to the end of the initial ninety (90) day compliance schedule with full justification of the reasons for inability to meet this date.

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

Unless otherwise specified in the approval for the new emissions unit, compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

C.14 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63 or other approved methods as specified in this permit.

C.15 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]

(a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ("2%) of full scale reading.

(b) Whenever a condition in this permit requires the measurement of a temperature or flow rate, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ("2%) of full scale reading.

(c) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

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

C.16 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

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

C.17 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-8-4] [326 IAC 2-8-5]

(a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and is comprised of:

(1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected time frame for taking reasonable response steps.

(2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.

(b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:

(1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or

(2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

(3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be ten (10) days or more until the unit or device will be shut down, then the Permittee shall promptly notify the IDEM, OAQ of the expected date of the shut down. The notification shall also include the status of the applicable compliance monitoring parameter with respect to normal, and the results of the response actions taken up to the time of notification.

(4) Failure to take reasonable response steps shall be considered a deviation from the permit.

(c) The Permittee is not required to take any further response steps for any of the following reasons:

(1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.

(3) An automatic measurement was taken when the process was not operating.

(4) The process has already returned or is returning to operating within “normal” parameters and no response steps are required.

(d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.

(e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-8-12 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

(f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.18 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.19 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.20 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

(a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC2-1.1-1(1).

(b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

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

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) The first report covered the period commencing on the date of issuance of the original FESOP and ended on the last day of the reporting period. All subsequent reporting periods shall be based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

C.21 Compliance with 40 CFR 82 and 326 IAC 22-1

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

(a) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156

(b) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

(c) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS

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

(a) One (1) hot asphalt drum mixer capable of processing 325 tons per hour of raw material, equipped with one (1) 120 million British thermal units (MMBtu) per hour re-refined waste fuel fired burner, using natural gas and No. 2 distillate fuel oil as backup fuels, controlling particulate emissions with one (1) jetpulse baghouse, exhausting at one (1) stack, identified as EP1;

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

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 326 IAC 2-8-11.1, WITH CONDITIONS LISTED BELOW.

General Construction Conditions

D.1.1 Permit No Defense

This permit 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.

Effective Date of the Permit

D.1.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this section of this permit becomes effective upon its issuance.

D.1.3 Modification to Construction Conditions [326 IAC 2]

All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for revisions pursuant to 326 IAC 2.

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

D.1.4 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]

The provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 12-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 60, Subpart I.

D.1.5 Particulate Matter (PM) [326 IAC 12] [40 CFR 60.90, Subpart I]

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

D.1.6 Particulate Matter (PM) [326 IAC 2-2]

PM emissions from the aggregate dryer shall be limited to 0.137 pound PM per ton of asphalt mix equivalent to 54.09 pounds per hour, based on a maximum throughput of 325 tons of asphalt mix per hour. Based on 8,760 hours of operation per 12 consecutive month period, this limits PM emissions from the aggregate mixing and drying operation to less than 194.91 tons per year for a source-wide total potential to emit of less than 250 tons per year. Therefore, this limit shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.7 Particulate Matter 10 Microns (PM-10) [326 IAC 2-8-4][326 IAC 2-2]

Pursuant to 326 IAC 2-8-4, particulate matter 10 microns emissions from the aggregate mixing and drying operation shall not exceed 0.059 pound of PM-10 per ton of asphalt mix equivalent to a PM-10 emission limit of 19.13 pounds per hour, including both filterable and condensible fractions, based on a maximum throughput of 325 tons of asphalt mix per hour. Based on 8,760 hours of operation per 12 consecutive month period, this limits PM-10 emissions from the aggregate mixing and drying operation to 83.79 tons per year for a source-wide total potential to emit of less than 100 tons per year. Therefore, compliance with this limit will satisfy 326 IAC 2-8-4, and will render the Part 70 rules (326 IAC 2-7) not applicable. This limit will also render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.8 Opacity [326 IAC 12] [40 CFR 60.90, Subpart I]

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

D.1.9 Sulfur Dioxide (SO2) [326 IAC 7-1.1-1][326 IAC 7-2-1]

Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), sulfur dioxide emissions from the 120 million Btu per hour burner for the aggregate dryer shall be limited to:

(a) 0.5 pounds per million Btu heat input or a sulfur content of less than or equal to 0.5% when using distillate oil, and

(b) 1.6 pounds per million Btu heat input or a sulfur content of less than or equal to 1.5% when using re-refined waste oil.

Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

D.1.10 Fuel Oil and Equivalent Fuel Usage [326 IAC 2-8-4][326 IAC 2-2]

Pursuant to 326 IAC 2-8-4(1), the following limits shall apply:

(a) The sulfur content of the No. 2 distillate fuel oil and the No. 4 fuel oil in the 120 MMBtu per hour burner for the aggregate dryer shall each not exceed 0.5 percent.

(b) The sulfur content of the re-refined waste oil in the 120 MMBtu per hour burner for the aggregate dryer shall not exceed 0.7 percent.

(c) The usage of re-refined waste oil with a sulfur content of 0.7% and re-refined waste oil equivalents in the 120 MMBtu per hour burner for the aggregate dryer shall be limited to 1,793,780 U.S. gallons per twelve (12) consecutive month period, with compliance determined at the end of each month, so that SO2 emissions are limited below 100 tons per year.

(d) The usage of natural gas and natural gas equivalents in the 120 MMBtu per hour burner for the aggregate dryer shall be limited to 1,028.0 million (MM) cubic feet per twelve (12) consecutive month period, with compliance determined at the end of each month, so that NOx emissions are limited below 100 tons per year.

(e) For the purposes of determining compliance, the following shall apply:

(1) Every MMCF of natural gas burned shall be equivalent to 5.83 gallons of re-refined waste oil based on SO2 emissions, such that the total gallons of re-refined waste oil and re-refined waste oil equivalent input does not exceed the limit specified.

(2) Every 1,000 gallons of No. 2 distillate fuel oil burned shall be equivalent to 690.0 gallons of re-refined waste oil based on SO_2 emissions, such that the total gallons of re-refined waste oil and re-refined waste oil equivalent input does not exceed the limit specified.

(3) Every 1,000 gallons of No. 4 fuel oil burned shall be equivalent to 729.0 gallons of re-refined waste oil based on SO_2 emissions, such that the total gallons of re-refined waste oil and re-refined waste oil equivalent input does not exceed the limit specified.

(4) Every 1,000 gallons of No. 2 distillate fuel oil burned shall be equivalent to 0.1053 MMcf of natural gas based on NOx emissions and 0.5 percent sulfur content of the fuel oil, such that the total input of natural gas and natural gas equivalent input does not exceed the limit specified.

(5) Every 1,000 gallons of re-refined waste oil burned shall be equivalent to 0.0241 MMcf of natural gas based on NOx emissions and 0.7 percent sulfur content of the fuel oil, such that the total input of natural gas and natural gas equivalent input does not exceed the limit specified.

(6) Every 1,000 gallons of No. 4 fuel oil burned shall be equivalent to 0.1053 MMcf of natural gas based on NOx emissions and 0.5 percent sulfur content of the fuel oil, such that the total input of natural gas and natural gas equivalent input does not exceed the limit specified.

Therefore, the requirements of 326 IAC 2-7 will not apply. This limitation will also render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.11 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of his permit, is required for this facility and any control devices.

Compliance Determination Requirements

D.1.12 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

(a) Within one hundred and eighty (180) days after initial startup, in order to demonstrate compliance with Conditions D.1.5, D.1.6, D.1.7, and D.1.8, the Permittee shall perform PM and PM-10 testing utilizing methods as approved by the Commissioner. PM-10 includes filterable and condensible PM-10.

(b) Opacity testing utilizing 40 CFR Part 60 Appendix A, Method 9, to demonstrate compliance with the opacity limitation of Condition D.1.8 shall be performed within one hundred and eighty (180) days after initial startup.

This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C-Performance Testing.

D.1.13 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 Btu heat input when burning No. 2 distillate fuel oil and 1.6 pounds per million But heat input when burning re-refined 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 120 MMBtu per hour burner for the aggregate dryer, 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.1.14 Particulate Matter (PM) and PM-10

In order to comply with Conditions D.1.5, D.1.6, D.1.7, and D.1.8, the baghouse for PM and PM-10 control shall be in operation and control emissions at all times when aggregate mixing and drying are in operation.

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

D.1.15 Visible Emissions Notations

(a) Visible emission notations of the asphalt drum mixer burner baghouse stack exhaust and conveyor transfer points shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

D.1.16 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the aggregate mixing and drying operation, at least once per shift when the process is in operation when venting to the atmosphere. When or any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a deviation from 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.

D.1.17 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the process 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 required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

D.1.18 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. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

(b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then 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).

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

D.1.19 Record Keeping Requirements

(a) To document compliance with Conditions D.1.9 and D.1.10, the Permittee shall maintain records in accordance with (1) through (7) below.

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

(2) Actual re-refined waste oil and re-refined waste oil equivalent usage in the 120 MMBtu per hour burner for the aggregate dryer per month since last compliance determination period and equivalent SO_2 emissions;

(3) Actual natural gas and natural gas equivalent usage in the 120 MMBtu per hour burner for the aggregate dryer per month since last compliance determination period and equivalent NOx emissions;

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

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

(5) Fuel supplier certifications.

(6) The name of the fuel supplier; and

(7) A statement from the fuel supplier that certifies the sulfur content of the 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) The Permittee shall maintain records sufficient to verify compliance with the procedures specified in condition D.1.13. Records shall be maintained for a period of five (5) years and shall be made available upon request by IDEM.

(c) To document compliance with Condition D.1.15, the Permittee shall maintain records of visible emission notations of the aggregate dryer/burner baghouse stack exhaust once per shift.

(d) To document compliance with Condition D.1.16, the Permittee shall maintain records once per shift of the total static pressure drop during normal operation when venting to the atmosphere.

(e) To document compliance with Condition D.1.17, the Permittee shall maintain records of the results of the inspections required under Condition D.1.17 and the dates the vents are redirected.

(f) To document compliance with Condition D.1.11, the Permittee shall maintain of records of any additional inspections prescribed by the Preventive Maintenance Plan.

(g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.20 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.10 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

D.1.21 Used Oil Requirements [329 IAC 13-8]

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

(a) Receipt of an EPA identification number as outlined in 329 IAC 13-8-3 (Notification),

(b) Compliance with the used oil storage requirements specified in 329 IAC 13-8-5 (Used Oil Storage), and

(c) Maintaining records pursuant to 329 IAC 13-8-6 (Tracking).

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

SECTION D.2 FACILITY OPERATION CONDITIONS

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

(b) One (1) 20,000 gallon liquid asphalt storage tank, to be installed in 2005;

(c) One (1) 25,000 gallon liquid asphalt storage tank, to be installed in 2005;

(d) One (1) 18,000 gallon liquid asphalt storage tank, to be installed in 2005;

(e) One (1) 15,500 gallon No. 2 distillate fuel oil storage tank, to be installed in 2005;

(f) One (1) 15,500 gallon waste oil storage tank, to be installed in 2005;

(g) One (1) 10,000 gallon emulsified asphalt storage tank, to be installed in 2005;

(h) One (1) 15,000 gallon split compartment prime asphalt storage tank, to be installed in 2005.

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

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

D.2.1 Volatile Organic Compounds (VOCs) [326 IAC 12] [40 CFR 60.110b, Subpart Kb]

Pursuant to 40 CFR Part 60.110b, Subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels), the one (1) 20,000 gallon liquid asphalt storage tank, the one (1) 25,000 gallon liquid asphalt storage tank, the one (1) 18,000 gallon liquid asphalt storage tank, the one (1) 15,500 gallon No. 2 fuel oil storage tank, the one (1) 15,500 gallon waste oil storage tank, the one (1) 10,000 gallon emulsified asphalt storage tank, and the one (1) 15,000 gallon split compartment prime asphalt storage tank, each with a vapor pressure of less than 15.0 kPa, are subject to 40 CFR Part 60.116b, paragraphs (a) and (b) which require record keeping.

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

D.2.2 Record Keeping Requirements

(a) To document compliance with Condition D.2.1, the Permittee shall maintain permanent records at the source in accordance with (1) through (3) below:

(1) The dimension of each storage vessel;

(2) An analysis showing the capacity of each storage vessel; and

(3) The true vapor pressure of each VOC stored, indicating that the maximum true vapor pressure of VOC is less than 15.0 kPa for the one (1) 20,000 gallon liquid asphalt storage tank, the one (1) 25,000 gallon liquid asphalt storage tank, the one (1) 18,000 gallon liquid asphalt storage tank, the one (1) 15,500 gallon No. 2 fuel oil storage tank, the one (1) 15,500 gallon waste oil storage tank, the one (1) 10,000 gallon emulsified asphalt storage tank, and the one (1) 15,000 gallon split compartment prime emulsified asphalt storage tank.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.3 FACILITY OPERATION CONDITIONS

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

(i) cold-mix (stockpile mix) asphalt storage piles.

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

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

D.3.1 Volatile Organic Compound (VOC) [326 IAC 8-5-2][326 IAC 2-8-4][326 IAC 2-2]

(a) Pursuant to 326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving), the use of cutback asphalt or asphalt emulsion shall not contain more than seven percent (7%) oil distillate by volume of emulsion for any paving application except the following purposes:

(1) penetrating prime coating

(2) stockpile storage

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

(b) The VOC solvent usage as cut back diluent in the liquid binder used in cold mix asphalt production shall be limited such that VOC emissions shall not exceed 82.80 tons per twelve (12) consecutive months. This shall be achieved by limiting the total VOC solvent usage of any one selected binder to not exceed the stated limit above for that binder during the last twelve (12) months. When more than one binder is used, the formula in (c)(4) must be applied so that the total VOC emitted does not exceed 82.80 tons per twelve (12) consecutive month period, based on the following liquid binder definitions:

(1) Cut back asphalt rapid cure, containing a maximum of 25.3% of the liquid binder by weight of VOC solvent and 95% by weight of VOC solvent evaporating.

(2) Cut back asphalt medium cure, containing a maximum of 28.6% of the liquid binder by weight of VOC solvent and 70% by weight of VOC solvent evaporating.

(3) Cut back asphalt slow cure, containing a maximum of 20% of the liquid binder by weight of VOC solvent and 25% by weight of VOC solvent evaporating.

(c) The liquid binder used in cold mix asphalt production shall be limited as follows:

(1) Cutback asphalt rapid cure liquid binder usage shall not exceed 87.16 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.

(2) Cutback asphalt medium cure liquid binder usage shall not exceed 118.29 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.

(3) Cutback asphalt slow cure liquid binder usage shall not exceed 331.20 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.

(4) The VOC solvent allotments in subpart (c)(1) through (c)(3) of this condition shall be adjusted when more than one type of binder is used per twelve (12) month consecutive period. In order to determine the tons of VOC emitted per each type of binder, use the following formula and divide the tons of VOC solvent used for each type of binder by the corresponding adjustment ratio listed in the table that follows.

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

Type of binder	tons VOC solvent	adjustment ratio	tons VOC emitted
cutback asphalt rapid cure		1	
cutback asphalt medium cure		1.36	
cutback asphalt slow cure		3.8	

The equivalent total tons of VOC of the combined liquid binders shall be less than 82.80 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Therefore, the requirements of 326 IAC 2-7 (Part 70) and 327 IAC 2-2 (PSD) do not apply.

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

D.3.2 Record Keeping Requirements

To document compliance with Condition D.3.1(b), the Permittee shall maintain records in accordance with (a) through (d) below. Records maintained for (a) through (d) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.3.1(b).

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

(b) Cutback asphalt binder usage per month since the last compliance determination period;

(c) VOC solvent content by weight of the cutback asphalt binder used each month; and

(d) Amount of VOC solvent used in the production of cold mix asphalt, and the amount of VOC emitted each month.

All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.3 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.3.1(b) 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).

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: J.H. Rudolph & Company, Inc.
Source Address: 12050 Optical Road, English, Indiana 47118
Mailing Address: P.O. Box 5226, Evansville, Indiana 47716
FESOP No.: F123-19457-00025

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify)_____

☐ Report (specify)_____

☐ Notification (specify)_____

☐ Affidavit (specify)_____

☐ Other (specify)_____

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

Signature:

Printed Name:

Title/Position:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT

Source Name: J.H. Rudolph & Company, Inc.
Source Address: 12050 Optical Road, English, Indiana 47118
Mailing Address: P.O. Box 5226, Evansville, Indiana 47716
FESOP No.: F123-19457-00025

This form consists of 2 pages **Page 1 of 2**

☐ This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____
Title / Position: _____
Date: _____
Phone: _____

A certification is not required for this report.

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

FESOP Quarterly Report

Source Name: J.H. Rudolph & Company, Inc.
Source Address: 12050 Optical Road, English, Indiana 47118
Mailing Address: P.O. Box 5226, Evansville, Indiana 47716
FESOP No.: F123-19457-00025
Facility: 120 MMBtu per hour aggregate dryer burner
Parameter: Re-refined waste oil usage limit to limit SO_2 emissions
Limit: the usage of re-refined waste oil with a sulfur content of 0.70% and re-refined waste oil equivalents in the 120 MMBtu per hour burner for the aggregate dryer shall be limited to 1,793,780 U.S. gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. For purposes of determining compliance with this limit, the fuel equivalency ratios in Condition D.1.10 shall be used.

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	Re-refined waste oil and equivalent usage this month (gallons)	Re-refined waste oil and equivalent usage previous 11 months (gallons)	12 month total Re-refined waste oil and equivalent usage (gallons)
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ 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
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: J.H. Rudolph & Company, Inc.
Source Address: 12050 Optical Road, English, Indiana 47118
Mailing Address: P.O. Box 5226, Evansville, Indiana 47716
FESOP No.: F123-19457-00025
Facility: 120 MMBtu per hour aggregate dryer burner
Parameter: Natural gas usage limit to limit NOx emissions
Limit: the usage of natural gas with and natural gas equivalents in the 120 MMBtu per hour burner for the aggregate dryer shall be limited to 1,028.0 million (MM) cubic feet per twelve (12) consecutive month period, with compliance determined at the end of each month. For purposes of determining compliance with this limit, the fuel equivalency ratios in Condition D.1.10 shall be used.

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	Natural gas and equivalent usage this month (MMcf)	Natural gas and equivalent usage previous 11 months (MMcf)	12 month total Natural gas and equivalent usage (MMcf)
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ 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
COMPLIANCE BRANCH

Single Liquid Binder Solvent Quarterly Report

Source Name: J.H. Rudolph & Company, Inc.
Source Address: 12050 Optical Road, English, Indiana 47118
Mailing Address: P.O. Box 5226, Evansville, Indiana 47716
FESOP No.: F123-19457-00025
Facility: Cold-mix asphalt storage piles
Parameter: VOC
Limit: Cutback asphalt rapid cure liquid binder usage shall not exceed 87.16 tons of VOC solvent per twelve (12) consecutive month period. Cutback asphalt medium cure liquid binder usage shall not exceed 118.29 tons of VOC solvent per twelve (12) consecutive month period. Cutback asphalt slow cure liquid binder usage shall not exceed 331.20 tons of VOC solvent per twelve (12) consecutive month period. Compliance shall be determined at the end of each month.

YEAR:

The following liquid binder solvent was the only liquid binder solvent used over the previous 12 month period:_____ Limit applicable:_____
(use of more than one binder requires the use of the "Multiple Liquid Binder Solvents" report form)

Month	Column 1	Column 2	Column 1 + Column 2
	Liquid Binder Usage This Month (tons)	Liquid Binder Usage Previous 11 Months (tons)	Liquid Binder Usage 12 Month Total (tons)
Month 1			
Month 2			
Month 3			

No deviation occurred in this reporting period.
Deviation/s occurred in this reporting period.
Deviation has been reported on:

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

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
Multiple Liquid Binder Solvent Quarterly Report

Source Name: J.H. Rudolph & Company, Inc.
Initial Source Address: 12050 Optical Road, English, Indiana 47118
Mailing Address: P.O. Box 5226, Evansville, Indiana 47716
FESOP No.: F123-19457-00025
Facility: Cold-mix asphalt storage piles
Parameter: VOC
Limit:: 82.80 tons per year
Year:

Month	Type of Liquid binder	Solvent Usage This Month (tons)	Divisor	VOC emitted This Month (tons) for each solvent	VOC emitted This Month (tons)	VOC emitted Previous 11 Months (tons)	This month + Previous 11 months =VOC emitted 12 Month Total(tons)
Month 1	Cutback asphalt rapid cure		1				
	Cutback asphalt medium cure		1.36				
	Cutback asphalt slow cure		3.8				
	Emulsified asphalt		2.04				
	other asphalt		38				
Month 2	Cutback asphalt rapid cure		1				
	Cutback asphalt medium cure		1.36				
	Cutback asphalt slow cure		3.8				
	Emulsified asphalt		2.04				
	other asphalt		38				
Month 3	Cutback asphalt rapid cure		1				
	Cutback asphalt medium cure		1.36				
	Cutback asphalt slow cure		3.8				
	Emulsified asphalt		2.04				
	other asphalt		38				

9 No deviation occurred in this reporting period.
9 Deviation/s occurred in this reporting period.
Deviation has been reported on:

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

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

COMPLIANCE DATA SECTION

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

Source Name: J.H. Rudolph & Company, Inc.
Source Address: 12050 Optical Road, English, Indiana 47118
Mailing Address: P.O. Box 5226, Evansville, Indiana 47716
FESOP No.: F123-19457-00025

Months: _____ **to** _____ **Year:** _____

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

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)

Date of Deviation:	**Duration of Deviation:**

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)

Date of Deviation:	**Duration of Deviation:**

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Attachment A

J.H. Rudolph Company, Inc.

ASPHALT PLANT SITE FUGITIVE DUST CONTROL PLAN

(a) Fugitive particulate matter emissions from plant roadways, parking lots and yards shall be controlled by one of the following methods:

1) Application of water and/or water-dust control material solutions;
2) Sweeping between watering;
3) Limiting vehicular speed to 10 miles per hour.

(b) Fugitive particulate matter emissions from conveying/handling operations shall be controlled by minimizing all drop distances.

(c) Fugitive particulate matter emissions from storage piles shall be controlled by one of the following methods:

1) minimizing drop distances; and
2) maintaining moisture content of materials above 1.5%.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a New Source Construction and Federally Enforceable State Operating Permit (FESOP)

Source Background and Description

Source Name:	**J.H. Rudolph & Company, Inc.**
Source Location:	**12050 Optical Road, English, Indiana 47118**
County:	**Perry**
SIC Code:	**2951**
Operation Permit No.:	**F123-19457-00025**
Permit Reviewer:	**Linda Quigley/EVP**

The Office of Air Quality (OAQ) has reviewed an application from J.H. Rudolph & Company, Inc. relating to the construction and operation of stationary drum mix asphalt plant.

New Emission Units and Pollution Control Equipment

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

(a) One (1) hot asphalt drum mixer capable of processing 325 tons per hour of raw material, equipped with one (1) 120 million British thermal units (MMBtu) per hour re-refined waste fuel fired burner, using natural gas, No. 2 distillate fuel oil, and No. 4 fuel oil as backup fuels, controlling particulate emissions with one (1) jetpulse baghouse, exhausting at one (1) stack, identified as EP1;

(b) One (1) 20,000 gallon liquid asphalt storage tank, to be installed in 2004;

(c) One (1) 25,000 gallon liquid asphalt storage tank, to be installed in 2004;

(d) One (1) 18,000 gallon liquid asphalt storage tank, to be installed in 2004;

(e) One (1) 15,500 gallon No. 2 distillate fuel oil storage tank, to be installed in 2004;

(f) One (1) 15,500 gallon waste oil storage tank, to be installed in 2004.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted emission units operating at this source during this review process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million BTU per hour:

(1) One (1) natural gas fired hot oil heater, with a maximum rated heat input capacity of 2.115 MMBtu/hr, using No. 2 distillate fuel oil, No. 4 fuel oil and waste oil as backup fuels, and exhausting at one (1) stack, identified as EP2;

(2) One (1) natural gas fired inert gas generator, with a maximum rated heat input capacity of 0.0228 MMBtu/hr.

(b) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons.

(1) One (1) gasoline storage tank with a maximum capacity of 1,200 gallons.

(c) 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.

(1) One (1) No. 2 on road fuel tank with a maximum capacity of 1,200 gallons.

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

(e) Paved and unpaved roads and parking lots with public access;

(f) Four (4) aggregate conveyors;

(g) One (1) scalping screen;

(h) Five (5) recycled asphalt conveyors;

(i) Six (6) cold feed bins;

(j) Two (2) RAP feeder bins;

(k) One (1) RAP screen.

Existing Approvals

This source does not have any existing approvals.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (ft)	Diameter (in)	Flow Rate (acfm)	Temperature (^{o}F)
EP1	Aggregate dryer	30.00	45.00	64,000	240
EP2	Hot oil heater	10.00	10.00	485	600

Recommendation

The staff recommends to the Commissioner that the construction and operation 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 administratively complete FESOP application for the purposes of this review was received on August 5, 2004. Additional information was received on October 12, 2004 and October 15, 2004.

There was no notice of completeness letter mailed to the source.

Emission Calculations

See Appendix A of this document for detailed emission calculations, pages 1 through 10.

Potential to Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit 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, inclulding 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, the department, or the appropriate local air pollution control agency."

Pollutant	Potential to Emit (tons/yr)
PM	Greater than 250
PM-10	Greater than 250
SO_2	Greater than 250
VOC	Less than 100
CO	Less than 100
NO_x	Greater than 100, Less than 250

HAPs	Potential to Emit (tons/yr)
Arsenic	Less than 10
Benzene	Less than 10
Beryllium	Less than 10
Cadmium	Less than 10
Chromium	Less than 10
Cobalt	Less than 10
Ethylbenzene	Less than 10
Formaldehyde	Less than 10
Hexane	Less than 10
Lead	Less than 10
2,2,4 Trimethylpentane	Less than 10
Manganese	Less than 10
Mercury	Less than 10
Methyl chloroform	Less than 10
Nickel	Less than 10

HAPs	Potential to Emit (tons/yr)
Selenium	Less than 10
Toluene	Less than 10
Total POM	Less than 10
Xylene	Less than 10
Total	Less than 25

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM10, SO_2, and NO_X are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 2-7. The source will be issued a FESOP because the source will limit its emissions below the Title V levels.

(b) Fugitive Emissions
This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, however there are applicable New Source Performance Standards that were in effect on August 7, 1980. Therefore, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are counted toward determination of PSD and Emission Offset applicability.

Potential to Emit After Issuance

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

	Potential To Emit (tons/year)						
Process/emission unit	PM	PM-10	SO_2	VOC	CO	NO_x	HAPs[1]
Aggregate Drying	194.91[4]	83.79 [3]	92.29	16.13	43.19	97.66	12.41
Conveying and Handling[2]	3.64	1.72	--	--	--	--	--
Paved and Unpaved Roads[2]	45.96	10.28	--	--	--	--	--
Storage Piles[2]	2.22	0.78	--	--	--	--	--
Insignificant Activities	2.71	3.33	6.71	0.07	0.77	1.34	
Total Emissions	249.00	99.90	99.00	16.20	43.96	99.00	12.41

(1) Largest single HAP is Formaldehyde with a PTE of 4.41.
(2) Potential to emit after controls.
(3) Maximum allowable PM10 emissions in order to qualify for 326 IAC 2-8 (FESOP).
(4) Maximum allowable PM emissions in order to render 326 IAC 2-2 (PSD) not applicable.

County Attainment Status

The source is located in Perry County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
1-hour Ozone	attainment
8-hour Ozone	attainment
CO	attainment
Lead	attainment

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

(b) Perry County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

Source Status

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

Pollutant	Emissions (tons/yr)
PM	249.00
PM-10	99.90
SO_2	99.00
VOC	16.20
CO	43.96
NO_x	99.00
Single HAP	4.41
Combination HAPs	12.41

This new source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories.

Federal Rule Applicability

(a) This source is subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.90, Subpart I) because it meets the definition of a hot mix asphalt facility pursuant to the rule and will be constructed after the June 11, 1973 rule applicability date. This rule limits particulate matter emissions to 0.04 grains per dry standard cubic foot (gr/dscf) and also limits visible emissions to 20% opacity. The source will comply with this rule by using a baghouse to limit particulate matter emissions to less than 0.04 gr/dscf (see Appendix A, page 10 of 10, for detailed calculations).

(b) The one (1) 20,000 gallon and the one (1) 25,000 gallon liquid asphalt storage tanks, both to be installed in 2004, are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.110b, Subpart Kb) (Standards of Performance for Volatile Organic Liquid Storage Vessels). Although they will be constructed after July 23, 1984, and have a storage capacity greater than 75 cubic meters each, the tanks have a storage capacity greater than 75 cubic meters but less than 151 cubic meters each, and the liquid asphalt stored in the tanks have a maximum true vapor pressure of less than 15.0 kPa each. Therefore, pursuant to 40 CFR 60.110b(b), as amended in the October 15, 2003 Federal Register, these tanks are not subject to this rule. However, the two (2) storage tanks are still subject to the requirements of 40 CFR 60.116b(a) and (b) due to the state rules not yet reflecting the October 15, 2003 changes made to this NSPS.

The one (1) 18,000 gallon liquid asphalt storage tank, the one (1) 15,500 gallon re-refined waste oil fuel tank, and the one (1) 15,500 gallon No. 2 fuel oil tank, each to be installed in 2004, are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.110b, Subpart Kb) (Standards of Performance for Volatile Organic Liquid Storage Vessels) since each tank has a storage capacity of less than 75 cubic meters. However, the tanks are still subject to the requirements of 40 CFR 60.116b(a) and (b) due to the state rules not yet reflecting the October 15, 2003 changes made to this NSPS.

(c) The insignificant activities identified as "a petroleum fuel, other than gasoline, dispensing facility with storage capacity less than or equal to 10,500 gallons" and "a gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons" are not subject to the New Source Performance Standards, 40 CFR Parts 60.110, 110a - 115a or 110b - 117b, as Subparts K, Ka, and Kb, respectively since the storage capacities associated with these activities are below the minimum applicable threshold to the three rules (i.e., 75 cubic meters or 40,000 gallons).

(d) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) included in the permit for this source.

(e) The requirements of 40 CFR Part 64, Compliance Assurance Monitoring, are not included in this permit. Generally, such requirements apply to a Part 70 source that involves a pollutant-specific emissions unit (PSEU), as defined in 40 CFR 64.1, which meets the following criteria:

(1) The unit is subject to an emission limitation or standard for an applicable regulated air pollutant;

(2) The unit uses a control device as defined in 40 CFR 64.1 to comply with that emission limitation or standard; and

(3) The unit has a potential to emit before controls equal to or greater than the applicable Part 70 major source threshold for the regulated pollutant.

As a FESOP source, this source has accepted federally enforceable limits such that the requirements of 326 IAC 2-7 (Part 70) do not apply.

State Rule Applicability – Entire Source

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

This source, to be constructed in 2004, is not subject to the requirements of this rule. As shown in the Potential to Emit After Issuance Table on page 4 above, the allowable emissions of SO_2, NO_X and PM10, are less than 100 tons per year after application of all federally enforceable emission limits. The uncontrolled potential to emit of VOC and CO is less than 100 tons per year each. This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2. The following limit shall apply in order to render the requirements of PSD not applicable:

PM emissions from the aggregate dryer shall be limited to 0.137 pound PM per ton of asphalt mix equivalent to 54.09 pounds per hour, based on a maximum throughput of 325 tons of asphalt mix per hour. Based on 8,760 hours of operation per 12 consecutive month period, this limits PM emissions from the aggregate mixing and drying operation to less than 194.91 tons per year for a source-wide total potential to emit of less than 250 tons per year. The source will comply with the PM emission limit by utilizing a wet scrubber for controlling PM emissions to 54.93 pounds per hour from the aggregate dryer.

326 IAC 2-4.1-1 (New Source Toxics Control)

Pursuant to 326 IAC 2-4.1-1 (New Source Toxics Control), any source that constructs or reconstructs a major source of HAPs, which has the potential to emit (PTE) 10 tons per year of any single HAP or 25 tons per year of any combination of HAPs, must control emissions from that source using technologies consistent with the Maximum Achievable Control Technology (MACT). This source has potential single HAP and total HAP emissions of less than 10 and 25 tons per year, respectively, therefore, this rule does not apply.

326 IAC 2-6 (Emission Reporting)

Since this source is not required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, this FESOP source, located in Perry County, is not subject to 326 IAC 2-6 (Emission Reporting).

326 IAC 2-8-4 (FESOP)

This source is subject to 326 IAC 2-8-4 (FESOP). Pursuant to this rule, the following limits shall apply:

(a) The usage of re-refined waste fuel oil with a limited sulfur content of 0.70% and re-refined waste fuel oil equivalents in the 120 MMBtu/hr aggregate dryer burner shall not exceed 1,793,780 U.S. gallons per twelve (12) consecutive month period with compliance determined at the end of each month, so that SO2 emissions are limited to less than 100 tons per year.

(b) The usage of natural gas and natural gas equivalents shall be limited to 1,028.0 million (MM) cubic feet per twelve (12) consecutive month period, with compliance determined at the end of each month, so that NOx emissions are limited below 100 tons per year.

(c) PM-10 emissions from the aggregate dryer shall be limited to 0.059 pound PM-10 per ton of asphalt mix equivalent to 19.13 pounds per hour, based on a maximum throughput of 325 tons of asphalt mix per hour. Based on 8,760 hours of operation per 12 consecutive month period, this limits PM-10 emissions from the aggregate mixing and drying operation to 83.79 tons per year for a source-wide total potential to emit of less than 100 tons per year. The source will comply with the PM-10 emission limit by utilizing a baghouse for controlling PM-10 emissions to less than 19.13 pounds per hour from the aggregate dryer.

(d) This source does not produce cutback or emulsified asphalt. The only VOC emissions from this source are from the aggregate dryer burner (combustion) which has the potential to emit VOC of less than twenty-five (25) tons per year. This source therefore does not need to limit VOC emissions to comply with 326 IAC 2-8-4 (FESOP). Any change or modification that results in the use of cutback or emulsified asphalt, must have prior approval from the Office of Air Quality

These limits will render the requirements of 326 IAC 2-7 (Part 70), and 326 IAC 2-2 (PSD), not applicable.

326 IAC 5-1 (Opacity Limitations)

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

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

326 IAC 6-4 (Fugitive Dust Emissions)

This source is subject to 326 IAC 6-4 for fugitive dust emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), fugitive dust shall not be visible crossing the boundary or property line of a source. Observances of visible emissions crossing property lines may be refuted by factual data expressed in 326 IAC 6-4-2(1), (2) or (3).

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

This source is subject to 326 IAC 6-5 for fugitive particulate matter emissions. Pursuant to 326 IAC 6-5, for any new source which has not received all the necessary pre-construction approvals before December 13, 1985, a fugitive dust control plan must be submitted, reviewed and approved. The fugitive dust control plan for this source includes the following:

(a) Fugitive particulate matter emissions from plant roadways, parking lots and yards shall be controlled by one of the following methods:

1) Application of water and/or water-dust control material solutions;
2) Sweeping between watering;
3) Limiting vehicular speed to 10 miles per hour.

(b) Fugitive particulate matter emissions from conveying/handling operations shall be controlled by minimizing all drop distances.

(c) Fugitive particulate matter emissions from storage piles shall be controlled by one of the following methods:

1) minimizing drop distances; and
2) maintaining moisture content of materials above 1.5%.

State Rule Applicability – Individual Facilities

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

The aggregate mixing and drying operation is not subject to the requirements of 326 IAC 6-3-2. This rule does not apply if the limitation established in the rule is less stringent than applicable limitations in 326 IAC 6-1 or 326 IAC 12. Since the applicable PM emission limits established by 326 IAC 12, 40 CFR 60, Subpart I (0.04 grains per dry standard cubic foot), is lower than the PM limit that would be established by 326 IAC 6-3-2 (63.91 pounds per hour), see Appendix A, page 10 of 10, the more stringent limits apply and the limit pursuant to 326 IAC 6-3-2 does not apply.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

This rule applies to all facilities with a potential to emit greater than twenty-five (25) tons per year or ten (10) pounds per hour of sulfur dioxide. The 120 MMBtu/hr dryer burning distillate oil and re-refined waste oil is subject to the requirements of this rule because the potential sulfur dioxide emissions from this facility is greater than twenty-five (25) tons per year. Therefore, pursuant to this rule the sulfur dioxide emissions from the 120 MMBtu/hr dryer burning No. 2 distillate oil shall be limited to 0.5 lb/MMBtu heat input. This equates to a fuel oil sulfur content limit of 0.5%. Therefore, the sulfur content of the No. 2 fuel oil must be less than or equal to 0.5% in order to comply with this rule (See Appendix A, Page 10 of 10 for detailed calculations). The source will comply with this rule by using No. 2 distillate oil with a sulfur content of 0.5% or less in the dryer.

The sulfur dioxide emissions from the 120 MMBtu/hr dryer burning re-refined waste oil shall be limited to 1.6 lb/MMBtu heat input. This equates to a fuel oil sulfur content limit of 1.5%.

Therefore, the sulfur content of the re-refined waste oil must be less than or equal to 1.5% in order to comply with this rule (See Appendix A, Page 10 of 10 for detailed calculations). The source will comply with this rule by using re-refined waste oil with a sulfur content of 1.5% or less in the dryer.

The 2.115 MMBtu/hr hot oil heater is not subject to the requirements of this rule because potential SO2 emissions is less than 25 tons per year.

326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements)

This source is subject to 326 IAC 7-2-1 (Reporting Requirements) because it has a potential to emit greater than twenty-five (25) tons per year of sulfur dioxide. This rule requires the source to submit to the Office of Air Quality upon request records of sulfur content, heat content, fuel consumption, and sulfur dioxide emission rates based on a calendar-month average.

326 IAC 8-1-6 (New Facilities, General Reduction Requirements)

This source is not subject to the provisions of 326 IAC 8-1-6. This rule requires all facilities constructed after January 1, 1980, which have potential VOC emission rates of greater than or equal to 25 tons per year, and which are not otherwise regulated by other provisions of 326 IAC 8, to reduce VOC emissions using Best Available Control Technology (BACT). No facilities at this source have potential VOC emission rates of greater than or equal to 25 tons per year, therefore it is not subject to the requirements of this 326 IAC 8-1-6.

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

This rule applies to any paving application anywhere in the state. No person shall cause or allow the use of cutback asphalt or asphalt emulsion containing more than seven percent (7%) oil distillate by volume of emulsion for any paving application except the following purposes:

1) penetrating prime coating
2) stockpile storage
3) application during the months of November, December, January, February and March.

This source is not using cutback asphalt or asphalt emulsion.

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

326 IAC 8-4-3 applies to petroleum liquid storage vessels with capacities greater than 39,000 gallons containing volatile organic compounds whose true vapor pressure is greater than 10.5 kPa (1.52 psi). The storage tanks at this source are not subject to 326 IAC 8-4-3 because the tanks have storage capacities less than 39,000 gallons each.

329 IAC 13-8 (Used Oil Requirements)

(a) 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:

(1) Receipt of an EPA identification number as outlined in 329 IAC 13-8-3 (Notification),

(2) Compliance with the used oil storage requirements specified in 329 IAC 13-8-5 (Used Oil Storage), and

(3) Maintain records pursuant to 329 IAC 13-8-6 (Tracking).

(b) The waste oil burned in the dryer/mixer burner shall comply with the used oil requirements specified in 329 IAC 13 (Used Oil Management). The burning of mixtures of used oil and hazardous waste that is regulated by 329 IAC 3.1 is prohibited at this source.

326 IAC 12 (New Source Performance Standards)

(a) The one (1) 20,000 gallon and the one (1) 25,000 gallon liquid asphalt storage tanks to be installed in 2004, are subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.110b, Subpart Kb) (Standards of Performance for Volatile Organic Liquid Storage Vessels) because they were constructed after July 23, 1984, and each tank has a storage capacity greater than 40 cubic meters. However, since each tank has a storage capacity greater than 75 cubic meters but less than 151 cubic meters, and the liquid asphalt stored in the tanks have a maximum true vapor pressure of less than 15.0 kPa, the tanks are subject to only 40 CFR 60.116b, paragraphs (a) and (b) which require record keeping.

(b) The one (1) 18,000 gallon liquid asphalt storage tank, the one (1) 15,500 gallon re-refined waste oil fuel tank, and the one (1) 15,500 gallon No. 2 fuel oil tank are subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.110b, Subpart Kb) (Standards of Performance for Volatile Organic Liquid Storage Vessels) because the tanks were constructed after July 23, 1984, and the tanks each have a storage capacity greater than 40 cubic meters. This rule requires the Permittee to keep readily accessible records showing the dimension of the storage tanks.

(c) The insignificant activities identified as “a petroleum fuel, other than gasoline, dispensing facility with storage capacity less than or equal to 10,500 gallons” and “a gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons” are not subject to the New Source Performance Standard, 326 IAC 12, since the storage capacities associated with these activities are below the minimum applicable threshold of 40 cubic meters.

Testing Requirements

Within one hundred and eighty (180) days after initial startup, the Permittee shall conduct performance tests in order to demonstrate compliance with Conditions D.1.5, D.1.6, D.1.7, and D.1.8 of the permit. The Permittee shall perform PM, PM-10 and Opacity testing utilizing methods as approved by the Commissioner.

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 in 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 approporiate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

(a) The asphalt drum mixer burner has applicable compliance monitoring conditions as specified below:

(1) Visible emission notations of the asphalt drum mixer burner baghouse stack exhaust and the conveyor transfer points shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(2) 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.

(3) 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.

(4) 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.

(5) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit.

(6) The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the asphalt drum mixer burner, at least once per shift when the process is in operation when venting to the atmosphere. When or any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan -Failure to Take Response. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a deviation from 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.

(7) An inspection shall be performed each calendar quarter of all bags controlling the process 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. Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

(8) 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. Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan -Preparation, Implementation, Records, and Reports, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

(B) For single compartment baghouses, if failure is indicated by a significant drop in the baghouses pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

These monitoring conditions are necessary because the baghouse for the asphalt drum mixer burner must operate properly to ensure compliance with 40 CFR Part 60.90 (Subpart I-Standards of Performance for Hot Mix Asphalt Facilities), 326 IAC 2-8 (FESOP) and 326 IAC 2-2 (PSD).

Conclusion

The construction and operation of this stationary drum mix asphalt plant shall be subject to the conditions of the attached proposed **New Source Construction and FESOP 123-19457-00025.**

Company Name: J.H. Rudolph & Company, Inc.
Plant Location: 12050 Optical Road, English, IN 47118
County: Perry
Permit Reviewer: Linda Quigley/EVP

**** aggregate dryer burner****

The following calculations determine the amount of emissions created by natural gas combustion, from the aggregate dryer burner, based on 8,760 hours of operation and US EPA's AP-42, 5th Edition, Section 1.4 - Natural Gas Combustion, Tables 1.4-1 and 1.4-2.

Criteria Pollutant: 120 MMBtu/hr * 8,760 hr/yr * Ef (lb/MMcf) = (ton/yr)
1000 Btu/cf * 2,000 lb/ton

P M:	1.9	lb/MMcf =	**1.00**	**ton/yr**
P M-10:	7.6	lb/MMcf =	**3.99**	**ton/yr**
S O 2:	0.6	lb/MMcf =	**0.32**	**ton/yr**
N O x:	190.0	lb/MMcf =	**99.86**	**ton/yr**
V O C:	5.5	lb/MMcf =	**2.89**	**ton/yr**
C O:	84.0	lb/MMcf =	**44.15**	**ton/yr**

The following calculations determine the amount of emissions created by the combustion of re-refined waste oil
@ 0.70 % sulfur, and
@ 0.65 % ash, from the aggregate dryer burner, based on 8,760 hours of use and
US EPA's AP-42, 5th Edition, Section 1.11 - Waste Oil Combustion, Tables 1.11-1, 1.11-2, , 1.11-3, and 1.11-4.

Criteria Pollutant: 120 MMBtu/hr * 8,760 hr/yr * Ef (lb/1,000 gal) = (ton/yr)
141,000 Btu/gal * 2,000 lb/ton

P M:	41.6	lb/1000 gal =	**155.07**	**ton/yr**
P M-10:	51.0	lb/1000 gal =	**190.11**	**ton/yr**
S O 2:	102.9	lb/1000 gal =	**383.58**	**ton/yr**
N O x:	19.0	lb/1000 gal =	**70.83**	**ton/yr**
V O C:	1.00	lb/1000 gal =	**3.73**	**ton/yr**
C O:	5.0	lb/1000 gal =	**18.64**	**ton/yr**

The following calculations determine the amount of emissions created by the combustion of No. 2 distillate fuel oil
@ 0.50 % sulfur, from the aggregate dryer burner, based on 8,760 hours of use and
US EPA's AP-42, 5th Edition, Section 1.3 - Fuel Oil Combustion, Tables 1.3-1, 1.3-2, and 1.3-5.

Criteria Pollutant: 120 MMBtu/hr * 8,760 hr/yr * Ef (lb/1,000 gal) = (ton/yr)
138,500 Btu/gal * 2,000 lb/ton

P M:	2.0	lb/1000 gal =	**7.59**	**ton/yr**
P M-10:	1.0	lb/1000 gal =	**3.79**	**ton/yr**
S O 2:	71.0	lb/1000 gal =	**269.44**	**ton/yr**
N O x:	20.0	lb/1000 gal =	**75.90**	**ton/yr**
V O C:	0.20	lb/1000 gal =	**0.76**	**ton/yr**
C O:	5.0	lb/1000 gal =	**18.97**	**ton/yr**

The following calculations determine the amount of emissions created by the combustion of #4 distillate fuel oil
@ 0.50 % sulfur, from the aggregate dryer burner, based on 8,760 hours of use and
US EPA's AP-42, 5th Edition, Section 1.3 - Fuel Oil Combustion, Tables 1.3-1, 1.3-3, and 1.3-7.

Criteria Pollutant: 120 MMBtu/hr * 8,760 hr/yr * Ef (lb/1,000 gal) = (ton/yr)
141,000 Btu/gal * 2,000 lb/ton

P M:	7.0	lb/1000 gal =	**26.09**	**ton/yr**
P M-10:	3.9	lb/1000 gal =	**14.35**	**ton/yr**
S O 2:	75.0	lb/1000 gal =	**279.57**	**ton/yr**
N O x:	20.0	lb/1000 gal =	**74.55**	**ton/yr**
V O C:	0.34	lb/1000 gal =	**1.27**	**ton/yr**
C O:	5.0	lb/1000 gal =	**18.64**	**ton/yr**

The maximum potential emissions from the aggregate dryer burner due to fuel combustion are the following:

Criteria Pollutant:			**Worst Case Fuel**
P M:	**155.07**	**ton/yr**	Re-refined Waste Oil
P M-10:	**190.11**	**ton/yr**	Re-refined Waste Oil
S O 2:	**383.58**	**ton/yr**	Re-refined Waste Oil
N O x:	**99.86**	**ton/yr**	Natural Gas
V O C:	**3.73**	**ton/yr**	Re-refined Waste Oil
C O:	**44.15**	**ton/yr**	Natural Gas

****hot oil heater****

The following calculations determine the amount of emissions created by natural gas combustion, from the hot oil heater based on 8,760 hours of operation and US EPA's AP-42, 5th Edition, Section 1.4 - Natural Gas Combustion, Tables 1.4-1, 1.4-2, and 1.4-3.

Criteria Pollutant: 2.1 MMBtu/hr * 8,760 hr/yr / 1,000 Btu/cf * 2,000 lb/ton * Ef (lb/MMcf) = (ton/yr)

P M:	1.9	lb/MMcf =	**0.02 ton/yr**
P M-10:	7.6	lb/MMcf =	**0.07 ton/yr**
S O 2:	0.6	lb/MMcf =	**0.01 ton/yr**
N O x:	100.0	lb/MMcf =	**0.92 ton/yr**
V O C:	5.5	lb/MMcf =	**0.05 ton/yr**
C O:	84.0	lb/MMcf =	**0.77 ton/yr**

The following calculations determine the amount of emissions created by the combustion of #2 distillate fuel oil @ 0.5 % sulfur, based on 8,760 hours of use and US EPA's AP-42, 5th Edition, Section 1.3 - Fuel Oil Combustion, Tables 1.3-1, 1.3-2, and 1.3-3.

Criteria Pollutant: 2.1 MMBtu/hr * 8,760 hr/yr / 138,500 Btu/gal * 2,000 lb/ton * Ef (lb/1,000 gal) = (ton/yr)

P M:	2.0	lb/1000 gal =	**0.13 ton/yr**
P M-10:	1.0	lb/1000 gal =	**0.07 ton/yr**
S O 2:	71.0	lb/1000 gal =	**4.72 ton/yr**
N O x:	20.0	lb/1000 gal =	**1.33 ton/yr**
V O C:	0.20	lb/1000 gal =	**0.01 ton/yr**
C O:	5.0	lb/1000 gal =	**0.33 ton/yr**

The following calculations determine the amount of emissions created by the combustion of #4 distillate fuel oil @ 0.50 % sulfur, based on 8,760 hours of use and US EPA's AP-42, 5th Edition, Section 1.3 - Fuel Oil Combustion, Tables 1.3-1, 1.3-3, and 1.3-7.

Criteria Pollutant: 2.1 MMBtu/hr * 8,760 hr/yr / 141,000 Btu/gal * 2,000 lb/ton * Ef (lb/1,000 gal) = (ton/yr)

P M:	7.0	lb/1000 gal =	**0.46 ton/yr**
P M-10:	3.9	lb/1000 gal =	**0.25 ton/yr**
S O 2:	75.0	lb/1000 gal =	**4.89 ton/yr**
N O x:	20.0	lb/1000 gal =	**1.30 ton/yr**
V O C:	0.34	lb/1000 gal =	**0.02 ton/yr**
C O:	5.0	lb/1000 gal =	**0.33 ton/yr**

The following calculations determine the amount of emissions created by the combustion of re-refined waste oil @ 0.70 % sulfur, and @ 0.65 % ash, from the hot oil heater, based on 8,760 hours of use and US EPA's AP-42, 5th Edition, Section 1.11 - Waste Oil Combustion, Tables 1.11-1, 1.11-2, , 1.11-3, and 1.11-4.

Criteria Pollutant: 2.1 MMBtu/hr * 8,760 hr/yr / 141,000 Btu/gal * 2,000 lb/ton * Ef (lb/1,000 gal) = (ton/yr)

P M:	41.6	lb/1000 gal =	**2.71 ton/yr**
P M-10:	51.0	lb/1000 gal =	**3.33 ton/yr**
S O 2:	102.9	lb/1000 gal =	**6.71 ton/yr**
N O x:	19.0	lb/1000 gal =	**1.24 ton/yr**
V O C:	1.00	lb/1000 gal =	**0.07 ton/yr**
C O:	5.0	lb/1000 gal =	**0.33 ton/yr**

The maximum potential emissions from the hot oil heater due to fuel combustion are the following:

Criteria Pollutant:		**Worst Case Fuel**
P M:	**2.71 ton/yr**	Waste Oil
P M-10:	**3.33 ton/yr**	Waste Oil
S O 2:	**6.71 ton/yr**	Waste Oil
N O x:	**1.33 ton/yr**	No. 2 Fuel Oil
V O C:	**0.07 ton/yr**	Waste Oil
C O:	**0.77 ton/yr**	Natural Gas

****Insignificant Combustion Sources****

Insignificant combustion units at this source include one (1) natural gas fired 0.0228 MMBtu/hr inert gas generator.

The following calculations determine the amount of emissions created by natural gas combustion, based on 8,760 hours of operation and US EPA's AP-42, 5th Edition, Section 1.4 - Natural Gas Combustion, Tables 1.4-1, 1.4-2, and 1.4-3.

Criteria Pollutant: 0.0228 MMBtu/hr * 8,760 hr/yr / 1,000 Btu/cf * 2,000 lb/ton * Ef (lb/MMcf) = (ton/yr)

P M:	1.9	lb/MMcf =	**1.90E-04 ton/yr**
P M-10:	7.6	lb/MMcf =	**7.59E-04 ton/yr**
S O 2:	0.6	lb/MMcf =	**5.99E-05 ton/yr**
N O x:	94.0	lb/MMcf =	**9.39E-03 ton/yr**
V O C:	5.5	lb/MMcf =	**5.49E-04 ton/yr**
C O:	84.0	lb/MMcf =	**8.39E-03 ton/yr**

*** * aggregate drying: drum-mix plant * ***

The following calculations determine the amount of worst case emissions created by aggregate drying before controls, based on 8,760 hours of use and USEPA's AP-42, 5th Edition, Section 11.1 - Hot Mix Asphalt Plants, Tables 11.1-5 and 11.1-10 for a drum mix dryer which has the capability of combusting either fuel oil or natural gas:

Pollutant: Ef lb/ton x 325 / 2,000 ton/hr x 8,760 hr/yr

Criteria Pollutant:

P M:	28	lb/ton =	**39,858.00 ton/yr**
P M-10:	6.4	lb/ton =	**9,110.40 ton/yr**
VOC:	0.008718	lb/ton =	**12.41 ton/yr**

The VOC emission factor for aggregate drying includes HAP emissions which are assumed to be VOC.

*** * conveying / handling * ***

The following calculations determine the amount of emissions created by material handling, based on 8.760 hours of use and AP-42, Section 13.2.4, Equation 1. The emission factor for calculating PM emissions is calculated as follows:

PM-10 Emissions:

E = k*(0.0032)*(((U/5)^1.3)/((M/2)^1.4))

=	2.42E-03	lb PM-10/ton
	5.12E-03	lb PM/ton
where k =	0.35	(particle size multiplier for <10um)
	0.74	(particle size multiplier for <30um)
U =	12	mph mean wind speed
M =	2.6	material moisture content (%)

325 / 2,000 ton/hr * 8,760 hrs/yr * Ef (lb/ton of material) = (ton/yr)

Total PM 10 Emissions:	**3.45**	**tons/yr**
Total PM Emissions:	**7.29**	**tons/yr**

*** * unpaved roads * ***

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (12/2003).

I. Loader

43800 trip/year x
0.15 mile/trip x
2 (round trip) x = 13140 miles per year

Ef = k*(s/12)^a*(W/3)^b
= 1.71 lb PM-10/mile
= 6.70 lb PM/mile

where k =	1.5	(particle size multiplier for PM-10)
k=	4.9	(particle size multiplier for PM)
s=	4.8	mean % silt content of unpaved roads
a=	0.9	Constant for PM-10
a=	0.7	Constant for PM
b=	0.45	Constant for PM and PM-10
W=	25	tons average vehicle weight

PM-10: 1.71 lb/mi x 13140 mi/yr = / 2000 lb/ton = **11.22 tons/yr**

PM: 6.70 lb/mi x 13140 mi/yr = / 2000 lb/ton = **44.01 tons/yr**

*** * paved roads * ***

The following calculations determine the amount of emissions created by vehicle traffic on paved roads, based on 8,760 hours of use and USEPA's AP-42, 5th Edition, Section 13.2.1.

70080 Tri Axle Dump Truck; twenty (20) round trips per hour * 0.2 miles/trip * 8,760 hours per year.

Ef = k*(sL/2)^0.65*(W/3)^1.5 - C
= 0.27 lb PM-10/mile
= 1.37 lb PM/mile

where k =	0.016	(particle size multiplier for PM-10)	(k=0.082 for PM-30 or TSP)
sL =	0.6	road surface silt loading (g/m^2)	
W =	33.0	tons average weight of all vehicles traveling the road	
C =	0.00047	emission factor for 1980's vehicle exhaust, brake wear and tire wear for PM and PM10	

PM-10: 0.27 lb/mi x 70080 mi/yr = / 2000 lb/ton = **9.34 tons/yr**

PM: 1.37 lb/mi x 70080 mi/yr = / 2000 lb/ton = **47.91 tons/yr**

Total PM Emissions From Paved Roads = 91.92 tons/yr

Total PM-10 Emissions From Paved Roads = 20.55 tons/yr

*** * storage * ***

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8,760 hours of use and USEPA's AP-42 (Pre 1983 Edition), Section 11.2.3.

Material	Silt Content	Pile Size	Storage Capacity	P M Emissions	P M-10 Emissions
	(wt %)	(acres)	(tons)	tons/yr	tons/yr
Stone/Gravel	7.0	1.00	60,000	1.48	0.52
Sand	7.0	1.00	15,000	1.48	0.52
Recycle Asphalt	7.0	1.00	30,000	1.48	0.52
Total				**4.44**	**1.55**

Methodology: PM Emissions = 1.7*(wt% silt content/1.5)*(365-p)/235*(f/15)*pile size/2000*365
Where:

p =	125	days of rain greater than or equal to 0.01 inches
f =	15	% of wind greater than or equal to 12 mph

PM-10 Emissions = 35% of PM emissions

*** * summary of source emissions before controls * ***

Criteria Pollutants:

P M:	**40,119.43**	**ton/yr**	
P M-10:	**9,329.39**	**ton/yr**	
S O 2:	**390.29**	**ton/yr**	
N O x:	**101.20**	**ton/yr**	
V O C:	**16.20**	**ton/yr**	(VOCs include HAPs from aggregate drying operation)
C O:	**44.93**	**ton/yr**	

*** * source emissions after controls * ***

In order to qualify for the FESOP program, this facility must limit PM10, SO2, and NOx to 99.9 tons per year. Consequently, SO2 emissions from the aggregate dryer are being limited to 92.29 tons per year (99.0 ton/yr - 6.71 ton/yr from the other combustion sources). NOx emissions from the aggregate dryer are being limited to 97.66 tons per year (99.0 ton/yr - 1.34 ton/yr from the other combustion sources).

* Emissions of PM and PM-10 from aggregate drying operations are controlled with a 99.960 % control efficiency.

The following calculations determine the amount of emissions created by natural gas combustion based on a maximum fuel usage of 1,028.00 MMcf

Natural Gas: 1,028.00 MMcf/yr * Ef (lb/MMcf) = (ton/yr)
2,000 lb/ton

P M:	1.9	lb/MMcf =	**3.91E-04**	**ton/yr ***
P M-10:	7.6	lb/MMcf =	**1.56E-03**	**ton/yr ***
S O 2:	0.6	lb/MMcf =	**0.31**	**ton/yr**
N O x:	190.0	lb/MMcf =	**97.66**	**ton/yr**
V O C:	5.5	lb/MMcf =	**2.83**	**ton/yr**
C O:	84.0	lb/MMcf =	**43.18**	**ton/yr**

The following calculations determine the amount of emissions created by No. 2 fuel oil @ 0.50 % sulfur based on a fuel usage limitation of 2,599,718 gal/yr:

No. 2 Distillate Oil: 2,599,718 gal/yr * Ef (lb/1,000 gal) = (ton/yr)
2,000 lb/ton

P M:	2.0	lb/1000 gal =	**1.04E-03**	**ton/yr ***
P M-10:	1.0	lb/1000 gal =	**5.20E-04**	**ton/yr ***
S O 2:	71.0	lb/1000 gal =	**92.29**	**ton/yr**
N O x:	20.0	lb/1000 gal =	**26.00**	**ton/yr**
V O C:	0.2	lb/1000 gal =	**0.26**	**ton/yr**
C O:	5.0	lb/1000 gal =	**6.50**	**ton/yr**

The following calculations determine the amount of emissions created by No. 4 distillate fuel oil @ 0.50 % sulfur based on a fuel usage limitation of 2,461,067 gal/yr:

No. 4 Distillate (2,461,067 gal/yr / 2000 lb/ton * Ef (lb/1000 gal) = (ton/yr)

P M:	7.0	lb/1000 gal =	**8.61E+00**	**ton/yr ***
P M-10:	3.9	lb/1000 gal =	**4.74E+00**	**ton/yr ***
S O 2:	75.0	lb/1000 gal =	**92.29**	**ton/yr**
N O x:	20.0	lb/1000 gal =	**24.61**	**ton/yr**
V O C:	0.34	lb/1000 gal =	**0.42**	**ton/yr**
C O:	5.0	lb/1000 gal =	**6.15**	**ton/yr**

The following calculations determine the amount of emissions created by re-refined waste oil @ 0.50 % sulfur based on a fuel usage limitation of 1,793,780 gal/yr:

Re-refined Waste Oil: 1,793,780 gal/yr / 2,000 lb/ton * Ef (lb/1,000 gal) = (ton/yr)

P M:	41.6	lb/1000 gal =	**1.49E-02**	**ton/yr ***
P M-10:	51.0	lb/1000 gal =	**1.83E-02**	**ton/yr ***
S O 2:	102.9	lb/1000 gal =	**92.29**	**ton/yr**
N O x:	19.0	lb/1000 gal =	**17.04**	**ton/yr**
V O C:	1.0	lb/1000 gal =	**0.90**	**ton/yr**
C O:	5.0	lb/1000 gal =	**4.48**	**ton/yr**

Criteria Pollutant:			**Worst Case Fuel**
P M:	**1.49E-02**	**ton/yr ***	Re-refined Waste Oil
P M-10:	**1.83E-02**	**ton/yr ***	Re-refined Waste Oil
S O 2:	**92.29**	**ton/yr**	Re-refined Waste Oil/No. 2 Fuel Oil
N O x:	**97.66**	**ton/yr**	Natural Gas
V O C:	**2.83**	**ton/yr**	Natural Gas
C O:	**43.18**	**ton/yr**	Natural Gas

Primary Fuel Usage Limitations

Fuel Oil: Re-refined waste oil

92.29 tons SO2/year limited / 383.58 tons SO2/year potential * 7455.32 Kgals/year potential = 1793.78 Kgals/year limited

Secondary Fuel Usage Limitations

Fuel Oil: No. 2 distillate fuel oil

92.29 tons SO2/year limited / 269.44 tons SO2/year potential * 7589.89 Kgals/year potential = 2599.72 Kgals/year limited

Fuel Oil: #4 distillate fuel oil

92.29 tons SO2/year limited / 279.57 tons SO2/year potential * 7455.32 Kgals/year potential = 2461.07 Kgals/year limited

Natural Gas:

97.66 tons NOx/year limited / 99.86 tons NOx/year potential * 1051.20 MMCF/year potential = 1028.00 MMCF/year limited

Secondary Fuel equivalence for re-refined waste oil is determined from the limiting pollutant, SO2, as follows:

0.6 lb/MMcf = 5.83 gallons per million cubic feet (MMcf) natural gas (i.e., every 1 MMcf natural gas burned is equivalent to 5.83 gallons of oil burned, based on SO2 emissions)
102.90 lb/1000 gal

Secondary fuel equivalence limit for #2 distillate fuel oil based on SO2 emissions from re-refined waste oil

269.44 #2 F.O. potential emissions (ton/yr) / 7589.89 #2 F.O. potential usage (kgal/yr) / 383.58 W.O. potential emissions (ton/yr) / 7455.32 W.O. potential usage (kgal/yr)

= 0.6900 Kgal W.O. burned / Kgal #2 F.O. burned

Secondary fuel equivalence limit for #4 distillate fuel oil based on SO2 emissions from re-refined waste oil

279.57	#4 F.O. potential emissions (ton/yr)	/	383.58	W.O. potential emissions (ton/yr)
7455.32	#4 F.O. potential usage (kgal/yr)		7455.32	W.O. potential usage (kgal/yr)

= 0.7289 Kgal W.O. burned / Kgal #4 F.O. burned

Secondary fuel equivalence limit for natural gas based on NOx emissions from re-refined waste oil

17.04	W.O. potential emissions (ton/yr)	/	99.86	n.g. potential emissions (ton/yr)
7455.32	W.O. potential usage (kgal/yr)		1051.20	n.g. potential usage (MMCF/yr)

= 0.0241 MMCF n.g. burned / kgal W.O. burned

Secondary fuel equivalence limit for natural gas based on NOx emissions from No. 2 fuel oil

75.90	No. 2 oil potential emissions (ton/yr)	/	99.86	n.g. potential emissions (ton/yr)
7589.89	No. 2 oil potential usage (kgal/yr)		1051.20	n.g. potential usage (MMCF/yr)

= 0.1053 MMCF n.g. burned / kgal #2 F.O. burned

Secondary fuel equivalence limit for natural gas based on NOx emissions from No. 4 fuel oil

74.55	No. 4 oil potential emissions (ton/yr)	/	99.86	n.g. potential emissions (ton/yr)
7455.32	No. 4 oil potential usage (kgal/yr)		1051.20	n.g. potential usage (MMCF/yr)

= 0.1053 MMCF n.g. burned / kgal #4 F.O. burned

*** * source emissions after controls * ***

hot oil heater:			nonfugitive			
P M:	2.71	ton/yr x	100.00%	emitted after controls =	**2.71**	**ton/yr**
P M-10:	7.60	ton/yr x	100.00%	emitted after controls =	**7.60**	**ton/yr**
aggregate drying:			nonfugitive			
P M:	40,013.07	ton/yr x	0.04%	emitted after controls =	**16.01**	**ton/yr**
P M-10:	9,300.51	ton/yr x	0.04%	emitted after controls =	**3.72**	**ton/yr**
VOC:	12.41	ton/yr x	100.00%	emitted after controls =	**12.41**	**ton/yr**
conveying/handling:			fugitive			
P M:	7.29	ton/yr x	50%	emitted after controls =	**3.64**	**ton/yr**
P M-10:	3.45	ton/yr x	50%	emitted after controls =	**1.72**	**ton/yr**
inert gas generator:			fugitive			
P M:	1.90E-04	ton/yr x	100.00%	emitted after controls =	**1.90E-04**	**ton/yr**
P M-10:	7.59E-04	ton/yr x	100.00%	emitted after controls =	**7.59E-04**	**ton/yr**
unpaved roads:			fugitive			
P M:	91.92	ton/yr x	50%	emitted after controls =	**45.96**	**ton/yr**
P M-10:	20.55	ton/yr x	50%	emitted after controls =	**10.28**	**ton/yr**
storage piles:			fugitive			
P M:	4.44	ton/yr x	50%	emitted after controls =	**2.22**	**ton/yr**
P M-10:	1.55	ton/yr x	50%	emitted after controls =	**0.78**	**ton/yr**

*** * summary of source emissions after controls * ***

Criteria Pollutant:

	Non-Fugitive	Fugitive	Total
PM:	**18.72 ton/yr**	**51.82 ton/yr**	**70.54 ton/yr**
PM-10:	**11.32 ton/yr**	**12.78 ton/yr**	**24.10 ton/yr**
S O 2:	**99.00 ton/yr**	**0.00 ton/yr**	**99.00 ton/yr**
N O x:	**99.00 ton/yr**	**0.00 ton/yr**	**99.00 ton/yr**
V O C:	**16.20 ton/yr**	**0.00 ton/yr**	**16.20 ton/yr**
C O:	**43.96 ton/yr**	**0.00 ton/yr**	**43.96 ton/yr**

Hazardous Air Pollutants (HAPs)

**** aggregate dryer burner****

The following calculations determine the amount of HAP emissions created by the combustion of distillate fuel oil before & after controls @ 0.50 % sulfur, from the aggregate dryer burner, based on 8,760 hours of use and US EPA's AP-42, 5th Edition, Section 1.3 - Fuel Oil Combustion, Table 1.3-10.

Hazardous Air Pollutants (HAPs):

120 MMBtu/hr * 8760 hr/yr * Ef (lb/10^12 Btu) = (ton/yr)
2,000 lb/ton

			Potential To Emit		Limited Emissions	
Arsenic:	4	lb/10^12 Btu =	2.10E-03	ton/yr	8.41E-07	ton/yr
Beryllium:	3	lb/10^12 Btu =	1.58E-03	ton/yr	6.31E-07	ton/yr
Cadmium:	3	lb/10^12 Btu =	1.58E-03	ton/yr	6.31E-07	ton/yr
Chromium:	3	lb/10^12 Btu =	1.58E-03	ton/yr	6.31E-07	ton/yr
Lead:	9	lb/10^12 Btu =	4.73E-03	ton/yr	1.89E-06	ton/yr
Manganese:	6	lb/10^12 Btu =	3.15E-03	ton/yr	1.26E-06	ton/yr
Mercury:	3	lb/10^12 Btu =	1.58E-03	ton/yr	6.31E-07	ton/yr
Nickel:	3	lb/10^12 Btu =	1.58E-03	ton/yr	6.31E-07	ton/yr
Selenium:	15	lb/10^12 Btu =	7.88E-03	ton/yr	3.15E-06	ton/yr
		Total HAPs =	2.58E-02	ton/yr	1.03E-05	ton/yr

The following calculations determine the amount of HAP emissions created by the combustion of waste oil before & after controls @ 0.70 % sulfur, from the aggregate dryer burner, based on 8,760 hours of use and US EPA's AP-42, 5th Edition, Section 1.3 - Fuel Oil Combustion, Table 1.11-5.

Hazardous Air Pollutants (HAPs):

120 MMBtu/hr * 8,760 hr/yr * Ef (lb/1,000 gal) = (ton/yr)
129,142 Btu/gal * 2,000 lb/ton

			Potential To Emit		Limited Emissions	
Arsenic:	1.10E-01	lb/1000 gal =	4.48E-01	ton/yr	1.79E-04	ton/yr
Cadmium:	9.30E-03	lb/1000 gal =	3.79E-02	ton/yr	1.51E-05	ton/yr
Chromium:	2.00E-02	lb/1000 gal =	8.14E-02	ton/yr	3.26E-05	ton/yr
Cobalt:	2.10E-04	lb/1000 gal =	8.55E-04	ton/yr	3.42E-07	ton/yr
Lead:	1.87E-01	lb/1000 gal =	7.61E-01	ton/yr	3.04E-04	ton/yr
Manganese:	6.80E-02	lb/1000 gal =	2.77E-01	ton/yr	1.11E-04	ton/yr
Nickel:	1.10E-02	lb/1000 gal =	4.48E-02	ton/yr	1.79E-05	ton/yr
		Total HAPs =	1.65E+00	ton/yr	6.60E-04	ton/yr

*** * aggregate drying: drum-mix plant * ***

The following calculations determine the amount of HAP emissions created by aggregate drying before & after controls, based on 8,760 hours of use and USEPA's AP-42, 5th Edition, Section 11.1 - Hot Mix Asphalt Plants, Table 11.1-10 for a drum mix dryer which can be fired with either fuel oil or natural gas. The HAP emission factors represent the worst case emissions (fuel oil combustion).

Pollutant:
Ef lb/ton x 325 ton/hr x 8760 hr/yr
Hazardous Air Pollutants (HAPs): 2000 lb/ton

			Potential To Emit		Limited Emissions	
Benzene:	3.90E-04	lb/ton =	0.56	ton/yr	0.56	ton/yr
Ethylbenzene:	2.40E-04	lb/ton =	0.34	ton/yr	0.34	ton/yr
Formaldehyde:	3.10E-03	lb/ton =	4.41	ton/yr	4.41	ton/yr
Hexane:	9.20E-04	lb/ton =	1.31	ton/yr	1.31	ton/yr
2,2,4 Trimethylpentane:	4.00E-05	lb/ton =	0.06	ton/yr	0.06	ton/yr
Methyl chloroform:	4.8E-05	lb/ton =	0.07	ton/yr	0.07	ton/yr
Toluene:	2.90E-03	lb/ton =	4.13	ton/yr	4.13	ton/yr
Total Polycyclic Organic Matter (POM):	8.800E-04	lb/ton =	1.25	ton/yr	1.25	ton/yr
Xylene:	2.00E-04	lb/ton =	0.28	ton/yr	0.28	ton/yr
		Total HAPs =	12.41	ton/yr	12.41	ton/yr

*** * summary of source HAP emissions potential to emit * ***

Hazardous Air Pollutants (HAPs):

Arsenic:	**0.448**	ton/yr
Benzene:	**0.555**	ton/yr
Beryllium:	**0.002**	ton/yr
Cadmium:	**0.038**	ton/yr
Chromium:	**0.081**	ton/yr
Cobalt:	**0.001**	ton/yr
Ethylbenzene:	**0.342**	ton/yr
Formaldehyde:	**4.413**	ton/yr
Hexane:	**1.310**	ton/yr
Lead:	**0.761**	ton/yr
2,2,4 Trimethylpentane:	**0.057**	ton/yr
Manganese:	**0.277**	ton/yr
Mercury:	**0.002**	ton/yr
Methyl chloroform:	**0.068**	ton/yr
Nickel:	**0.045**	ton/yr
Selenium:	**0.008**	ton/yr
Toluene:	**4.128**	ton/yr
Total POM:	**1.253**	ton/yr
Xylene:	**0.285**	ton/yr
Total:	**14.072**	**ton/yr**

*** * summary of source HAP limited emissions * ***

Hazardous Air Pollutants (HAPs):

Arsenic:	**0.000**	ton/yr
Benzene:	**0.555**	ton/yr
Beryllium:	**0.000**	ton/yr
Cadmium:	**0.000**	ton/yr
Chromium:	**0.000**	ton/yr
Cobalt:	**0.000**	ton/yr
Ethylbenzene:	**0.342**	ton/yr
Formaldehyde:	**4.413**	ton/yr
Hexane:	**1.310**	ton/yr
Lead:	**0.000**	ton/yr
2,2,4 Trimethylpentane:	**0.057**	ton/yr
Manganese:	**0.000**	ton/yr
Mercury:	**0.000**	ton/yr
Methyl chloroform:	**0.068**	ton/yr
Nickel:	**0.000**	ton/yr
Selenium:	**0.000**	ton/yr
Toluene:	**4.128**	ton/yr
Total POM:	**1.253**	ton/yr
Xylene:	**0.285**	ton/yr
Total:	**12.411**	**ton/yr**

*** * miscellaneous * ***

326 IAC 7 Compliance Calculations:

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

0.5 lb/MMBtu x 139,000 Btu/gal= 69.5 lb/1000gal

69.5 lb/1000gal / 142 lb/1000 gal = 0.5 %

Sulfur content must be less than or equal to 0.5% to comply with 326 IAC 7.

The following calculations determine the maximum sulfur content of re-refined waste oil allowable by 326 IAC 7:

1.6 lb/MMBtu x 129,142 Btu/gal= 206.6272 lb/1000gal

206.6272 lb/1000gal / 142 lb/1000 gal = 1.5 %

Sulfur content must be less than or equal to 1.5% to comply with 326 IAC 7.

326 IAC 6-3-2 Compliance Calculations:

The following calculations determine compliance with 326 IAC 6-3-2 for process weight rates in excess of 30 tons per hour:

limit = 55 * (325 ^ 0.11) - 40 = 63.91 lb/hr or
279.94 ton/yr

Since the emission limit pursuant to Subpart I of 0.04 grains per dry standard cubic foot are more stringent than this limit, the limit pursuant to 326 IAC 6-3-2 does not apply.

PM-10 Emission Limit for Aggregate Dryer:

(99.9 tons PM-10/yr - 16.11 tons PM-10/yr from other souces)
=
83.79 tons PM-10/yr = 19.13 lbs/hr

PM-10 emissions from the aggregate dryer are controlled to 0.85 lbs/hr < 19.13 lbs/hr (Will comply)

Based on a maximum asphalt mix throughput of 325 tons/hr, this emission limit is equivalent to 0.059 lb PM10 per ton of asphalt mix.

PM Emission Limit for Aggregate Dryer:

(249.0 tons PM/yr - 54.09 tons PM/yr from other souces)
=
194.91 tons PM/yr = 44.50 lbs/hr

PM emissions from the aggregate dryer are controlled to 3.66 lbs/hr < 44.50 lbs/hr (Will comply)

Based on a maximum asphalt mix throughput of 325 tons/hr, this emission limit is equivalent to 0.137 lb PM per ton of asphalt mix.

Compliance with this limit shall render the requirements of 326 IAC 2-2 (PSD) not applicable.

Compliance with NSPS (326 IAC 12; 40 CFR 60.90 to 60.93, Subpart I)

The following calculations determine compliance with NSPS, which limits stack emissions from asphalt plants to 0.04 gr/dscf.

Aggregate Dryer Baghouse:

$$\frac{16.01 \text{ ton/yr} * 2000 \text{ lb/ton} * 7000 \text{ gr/lb}}{525{,}600 \text{ min/yr} * 47{,}014 \text{ dscf/min}} = 0.009 \text{ gr/dscf}$$ (will comply)

Note:

SCFM =
= 64,000 acfm * (460 + 68)*(1-0.0261) / (460 + 240)
47,014 scfm

Assumes exhaust gas temperature of 240F and exhaust gas flow of 64,000 acfm.

Indiana Department of Environmental Management
Office of Air Quality

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

Source Background and Description

Source Name:	**J.H. Rudolph & Company, Inc.**
Source Location:	**12050 Optical Road, English, Indiana 47118**
County:	**Perry**
SIC Code:	**2951**
Operation Permit No.:	**F123-19457-00025**
Permit Reviewer:	**Linda Quigley/EVP**

On November 11, 2004, the Office of Air Quality (OAQ) had a notice published in the Perry County News in Tell City, Indiana, stating that J.H. Rudolph & Company, Inc. had applied for a Federally Enforceable State Operating Permit (FESOP) to operate a stationary drum mix asphalt plant. The notice also stated that OAQ proposed to issue a FESOP for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On December 8, 2004, J.H. Rudolph & Company, Inc. submitted comments on the proposed FESOP. The summary of the comments and corresponding responses are as follows (bolded language has been added and the language with a line through it has been deleted):

Comment 1

J.H. Rudolph & Company, Inc. requests that the appropriate conditions be added to the permit relating to the use of cutback or emulsified asphalt and the addition of one (1) 10,000 gallon emulsified asphalt storage tank and one (1) 15,000 gallon split compartment prime emulsified asphalt storage tank.

Response 1

Section D.3 has been added to incorporate the use of cutback or emulsified asphalt. The following changes were made as a result of this comment:

~~D.1.11 Volatile Organic Compounds (VOC) [326 IAC 8-5-2][326 IAC 2-8-4]~~

~~Any change or modification that results in the use of cutback or emulsified asphalt must have prior approval from the Office of Air Quality.~~

Subsequent D.1 Conditions and references have been renumbered.

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

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

(a) One (1) hot asphalt drum mixer capable of processing 325 tons per hour of raw material, equipped with one (1) 120 million British thermal units (MMBtu) per hour re-refined waste fuel fired burner, using natural gas, No. 2 distillate fuel oil, and No. 4 fuel oil as backup fuels, controlling particulate emissions with one (1) jetpulse baghouse, exhausting at one (1) stack, identified as EP1;

(b) One (1) 20,000 gallon liquid asphalt storage tank, to be installed in 2004;

(c) One (1) 25,000 gallon liquid asphalt storage tank, to be installed in 2004;

(d) One (1) 18,000 gallon liquid asphalt storage tank, to be installed in 2004;

(e) One (1) 15,500 gallon No. 2 distillate fuel oil storage tank, to be installed in 2004;

(f) One (1) 15,500 gallon waste oil storage tank, to be installed in 2004;

(g) One (1) 10,000 gallon emulsified asphalt storage tank, to be installed in 2004;

(h) One (1) 15,000 gallon split compartment prime asphalt storage tank, to be installed in 2004; and

(i) cold-mix (stockpile mix) asphalt storage piles.

SECTION D.2 FACILITY OPERATION CONDITIONS

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

(b) One (1) 20,000 gallon liquid asphalt storage tank, to be installed in 2004;

(c) One (1) 25,000 gallon liquid asphalt storage tank, to be installed in 2004;

(d) One (1) 18,000 gallon liquid asphalt storage tank, to be installed in 2004;

(e) One (1) 15,500 gallon No. 2 distillate fuel oil storage tank, to be installed in 2004;

(f) One (1) 15,500 gallon waste oil storage tank, to be installed in 2004;

(g) One (1) 10,000 gallon emulsified asphalt storage tank, to be installed in 2004;

(h) One (1) 15,000 gallon split compartment prime asphalt storage tank, to be installed in 2004.

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

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

D.2.1 Volatile Organic Compounds (VOCs) [326 IAC 12] [40 CFR 60.110b, Subpart Kb]

Pursuant to 40 CFR Part 60.110b, Subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels), the one (1) 20,000 gallon liquid asphalt storage tank, the one (1) 25,000 gallon liquid asphalt storage tank, the one (1) 18,000 gallon liquid asphalt storage tank, the one (1) 15,500 gallon No. 2 fuel oil storage tank, ~~and~~ the one (1) 15,500 gallon waste oil storage tank, **the one (1) 10,000 gallon emulsified asphalt storage tank, and the one (1) 15,000 gallon split compartment prime asphalt storage tank**, each with a vapor pressure of less than 15.0 kPa, are subject to 40 CFR Part 60.116b, paragraphs (a) and (b) which require record keeping.

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

D.2.2 Record Keeping Requirements

(a) To document compliance with Condition D.2.1, the Permittee shall maintain permanent records at the source in accordance with (1) through (3) below:

(1) The dimension of each storage vessel;

(2) An analysis showing the capacity of each storage vessel; and

(3) The true vapor pressure of each VOC stored, indicating that the maximum true vapor pressure of VOC is less than 15.0 kPa for the one (1) 20,000 gallon liquid asphalt storage tank, the one (1) 25,000 gallon liquid asphalt storage tank, the one (1) 18,000 gallon liquid asphalt storage tank, the one (1) 15,500 gallon No. 2 fuel oil storage tank, ~~and~~ the one (1) 15,500 gallon waste oil storage tank, **the one (1) 10,000 gallon emulsified asphalt storage tank, and the one (1) 15,000 gallon split compartment prime emulsified asphalt storage tank**.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.3 FACILITY OPERATION CONDITIONS

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

(i) cold-mix (stockpile mix) asphalt storage piles.

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

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

D.3.1 Volatile Organic Compound (VOC) [326 IAC 8-5-2][326 IAC 2-8-4][326 IAC 2-2]

(a) Pursuant to 326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving), the use of cutback asphalt or asphalt emulsion shall not contain more than seven percent (7%) oil distillate by volume of emulsion for any paving application except the following purposes:

(1) penetrating prime coating

(2) stockpile storage

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

(b) The VOC solvent usage as cut back diluent in the liquid binder used in cold mix asphalt production shall be limited such that VOC emissions shall not exceed 82.80 tons per twelve (12) consecutive months. This shall be achieved by limiting the total VOC solvent usage of any one selected binder to not exceed the stated limit above for that binder during the last twelve (12) months. When more than one binder is used, the formula in (c)(4) must be applied so that the total VOC emitted does not exceed 82.80 tons per twelve (12) consecutive month period, based on the following liquid binder definitions:

(1) <u>Cut back asphalt rapid cure</u>, containing a maximum of 25.3% of the liquid binder by weight of VOC solvent and 95% by weight of VOC solvent evaporating.

(2) <u>Cut back asphalt medium cure</u>, containing a maximum of 28.6% of the liquid binder by weight of VOC solvent and 70% by weight of VOC solvent evaporating.

(3) <u>Cut back asphalt slow cure</u>, containing a maximum of 20% of the liquid binder by weight of VOC solvent and 25% by weight of VOC solvent evaporating.

(c) The liquid binder used in cold mix asphalt production shall be limited as follows:

(1) Cutback asphalt rapid cure liquid binder usage shall not exceed 87.16 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.

(2) Cutback asphalt medium cure liquid binder usage shall not exceed 118.29 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.

(3) Cutback asphalt slow cure liquid binder usage shall not exceed 331.20 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.

(4) The VOC solvent allotments in subpart (c)(1) through (c)(3) of this condition shall be adjusted when more than one type of binder is used per twelve (12) month consecutive period. In order to determine the tons of VOC emitted per each type of binder, use the following formula and divide the tons of VOC solvent used for each type of binder by the corresponding adjustment ratio listed in the table that follows.

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

Type of binder	tons VOC solvent	adjustment ratio	tons VOC emitted
cutback asphalt rapid cure		1	
cutback asphalt medium cure		1.36	
cutback asphalt slow cure		3.8	

The equivalent total tons of VOC of the combined liquid binders shall be less than 82.80 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Therefore, the requirements of 326 IAC 2-7 (Part 70) and 327 IAC 2-2 (PSD) do not apply.

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

D.3.2 Record Keeping Requirements

To document compliance with Condition D.3.1(b), the Permittee shall maintain records in accordance with (a) through (d) below. Records maintained for (a) through (d) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.3.1(b).

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

(b) Cutback asphalt binder usage per month since the last compliance determination period;

(c) VOC solvent content by weight of the cutback asphalt binder used each month; and

(d) Amount of VOC solvent used in the production of cold mix asphalt, and the amount of VOC emitted each month.

All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.3 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.3.1(b) 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).

Emission calculations have been revised as seen in the Addendum to Appendix A, Emissions Calculations. Appropriate reporting forms have been included in the permit.

The OAQ prefers that the Technical Support Document reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision. The following changes reflect changes to the Technical Support Document:

Potential to Emit After Issuance

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

	Potential To Emit (tons/year)						
Process/emission unit	PM	PM-10	SO_2	VOC	CO	NO_x	HAPs(1)
Aggregate Drying	194.91(4)	83.79 (3)	92.29	16.13	43.19	97.66	12.41
Conveying and Handling(2)	3.64	1.72	--	--	--	--	--
Paved and Unpaved Roads(2)	45.96	10.28	--	--	--	--	--
Storage Piles(2)	2.22	0.78	--	--	--	--	--
Cold Mix asphalt storage piles(5)	**--**	**--**	**--**	**82.80**	**--**	**--**	**--**
Insignificant Activities	2.71	3.33	6.71	0.07	0.77	1.34	--
Total Emissions	249.00	99.90	99.00	~~16.20~~ **99.00**	43.96	99.00	12.41

(1) Largest single HAP is Formaldehyde with a PTE of 4.41.
(2) Potential to emit after controls.
(3) Maximum allowable PM10 emissions in order to qualify for 326 IAC 2-8 (FESOP).
(4) Maximum allowable PM emissions in order to render 326 IAC 2-2 (PSD) not applicable.
(5) Maximum allowable VOC emissions in order to qualify for 326 IAC 2-8 (FESOP).

Upon futher review, IDEM, OAQ has decided to make the following changes: (Bolded language has been added and the language with a line through it has been deleted).

The new emission units will be installed in 2005 rather than 2004, therefore all references to equipment installation dates have been changed to 2005.

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

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

(a) One (1) hot asphalt drum mixer capable of processing 325 tons per hour of raw material, equipped with one (1) 120 million British thermal units (MMBtu) per hour re-refined waste fuel fired burner, using natural gas, No. 2 distillate fuel oil, and No. 4 fuel oil as backup fuels, controlling particulate emissions with one (1) jetpulse baghouse, exhausting at one (1) stack, identified as EP1;

(b) One (1) 20,000 gallon liquid asphalt storage tank, to be installed in ~~2004~~ **2005**;

(c) One (1) 25,000 gallon liquid asphalt storage tank, to be installed in ~~2004~~ **2005**;

(d) One (1) 18,000 gallon liquid asphalt storage tank, to be installed in ~~2004~~ **2005**;

(e) One (1) 15,500 gallon No. 2 distillate fuel oil storage tank, to be installed in ~~2004~~ **2005**;

(f) One (1) 15,500 gallon waste oil storage tank, to be installed in ~~2004~~ **2005**;

(g) One (1) 10,000 gallon emulsified asphalt storage tank, to be installed in ~~2004~~ **2005**;

(h) One (1) 15,000 gallon split compartment prime asphalt storage tank, to be installed in ~~2004~~ **2005**; and

(i) cold-mix (stockpile mix) asphalt storage piles.

SECTION D.2 FACILITY OPERATION CONDITIONS

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

(b) One (1) 20,000 gallon liquid asphalt storage tank, to be installed in ~~2004~~ **2005**;

(c) One (1) 25,000 gallon liquid asphalt storage tank, to be installed in ~~2004~~ **2005**;

(d) One (1) 18,000 gallon liquid asphalt storage tank, to be installed in ~~2004~~ **2005**;

(e) One (1) 15,500 gallon No. 2 distillate fuel oil storage tank, to be installed in ~~2004~~ **2005**;

(f) One (1) 15,500 gallon waste oil storage tank, to be installed in ~~2004~~ **2005**;

(g) One (1) 10,000 gallon emulsified asphalt storage tank, to be installed in ~~2004~~ **2005**;

(h) One (1) 15,000 gallon split compartment prime asphalt storage tank, to be installed in ~~2004~~ **2005**.

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

Company Name: J.H. Rudolph & Company, Inc.
Plant Location: 12050 Optical Road, English, IN 47118
County: Perry
Permit Reviewer: Linda Quigley/EVP

**** aggregate dryer burner****

The following calculations determine the amount of emissions created by natural gas combustion, from the aggregate dryer burner, based on 8,760 hours of operation and US EPA's AP-42, 5th Edition, Section 1.4 - Natural Gas Combustion, Tables 1.4-1 and 1.4-2.

Criteria Pollutant: 120 MMBtu/hr * 8,760 hr/yr * Ef (lb/MMcf) = (ton/yr)
1000 Btu/cf * 2,000 lb/ton

P M:	1.9	lb/MMcf =	**1.00**	**ton/yr**
P M-10:	7.6	lb/MMcf =	**3.99**	**ton/yr**
S O 2:	0.6	lb/MMcf =	**0.32**	**ton/yr**
N O x:	190.0	lb/MMcf =	**99.86**	**ton/yr**
V O C:	5.5	lb/MMcf =	**2.89**	**ton/yr**
C O:	84.0	lb/MMcf =	**44.15**	**ton/yr**

The following calculations determine the amount of emissions created by the combustion of re-refined waste oil
@ 0.70 % sulfur, and
@ 0.65 % ash, from the aggregate dryer burner, based on 8,760 hours of use and
US EPA's AP-42, 5th Edition, Section 1.11 - Waste Oil Combustion, Tables 1.11-1, 1.11-2, , 1.11-3, and 1.11-4.

Criteria Pollutant: 120 MMBtu/hr * 8,760 hr/yr * Ef (lb/1,000 gal) = (ton/yr)
141,000 Btu/gal * 2,000 lb/ton

P M:	41.6	lb/1000 gal =	**155.07**	**ton/yr**
P M-10:	51.0	lb/1000 gal =	**190.11**	**ton/yr**
S O 2:	102.9	lb/1000 gal =	**383.58**	**ton/yr**
N O x:	19.0	lb/1000 gal =	**70.83**	**ton/yr**
V O C:	1.00	lb/1000 gal =	**3.73**	**ton/yr**
C O:	5.0	lb/1000 gal =	**18.64**	**ton/yr**

The following calculations determine the amount of emissions created by the combustion of No. 2 distillate fuel oil
@ 0.50 % sulfur, from the aggregate dryer burner, based on 8,760 hours of use and
US EPA's AP-42, 5th Edition, Section 1.3 - Fuel Oil Combustion, Tables 1.3-1, 1.3-2, and 1.3-5.

Criteria Pollutant: 120 MMBtu/hr * 8,760 hr/yr * Ef (lb/1,000 gal) = (ton/yr)
138,500 Btu/gal * 2,000 lb/ton

P M:	2.0	lb/1000 gal =	**7.59**	**ton/yr**
P M-10:	1.0	lb/1000 gal =	**3.79**	**ton/yr**
S O 2:	71.0	lb/1000 gal =	**269.44**	**ton/yr**
N O x:	20.0	lb/1000 gal =	**75.90**	**ton/yr**
V O C:	0.20	lb/1000 gal =	**0.76**	**ton/yr**
C O:	5.0	lb/1000 gal =	**18.97**	**ton/yr**

The following calculations determine the amount of emissions created by the combustion of #4 distillate fuel oil
@ 0.50 % sulfur, from the aggregate dryer burner, based on 8,760 hours of use and
US EPA's AP-42, 5th Edition, Section 1.3 - Fuel Oil Combustion, Tables 1.3-1, 1.3-3, and 1.3-7.

Criteria Pollutant: 120 MMBtu/hr * 8,760 hr/yr * Ef (lb/1,000 gal) = (ton/yr)
141,000 Btu/gal * 2,000 lb/ton

P M:	7.0	lb/1000 gal =	**26.09**	**ton/yr**
P M-10:	3.9	lb/1000 gal =	**14.35**	**ton/yr**
S O 2:	75.0	lb/1000 gal =	**279.57**	**ton/yr**
N O x:	20.0	lb/1000 gal =	**74.55**	**ton/yr**
V O C:	0.34	lb/1000 gal =	**1.27**	**ton/yr**
C O:	5.0	lb/1000 gal =	**18.64**	**ton/yr**

The maximum potential emissions from the aggregate dryer burner due to fuel combustion are the following:

Criteria Pollutant:			**Worst Case Fuel**
P M:	**155.07**	**ton/yr**	Re-refined Waste Oil
P M-10:	**190.11**	**ton/yr**	Re-refined Waste Oil
S O 2:	**383.58**	**ton/yr**	Re-refined Waste Oil
N O x:	**99.86**	**ton/yr**	Natural Gas
V O C:	**3.73**	**ton/yr**	Re-refined Waste Oil
C O:	**44.15**	**ton/yr**	Natural Gas

****hot oil heater****

The following calculations determine the amount of emissions created by natural gas combustion, from the hot oil heater based on 8,760 hours of operation and US EPA's AP-42, 5th Edition, Section 1.4 - Natural Gas Combustion, Tables 1.4-1, 1.4-2, and 1.4-3.

Criteria Pollutant: 2.1 MMBtu/hr * 8,760 hr/yr / 1,000 Btu/cf * 2,000 lb/ton * Ef (lb/MMcf) = (ton/yr)

P M:	1.9	lb/MMcf =	**0.02 ton/yr**
P M-10:	7.6	lb/MMcf =	**0.07 ton/yr**
S O 2:	0.6	lb/MMcf =	**0.01 ton/yr**
N O x:	100.0	lb/MMcf =	**0.92 ton/yr**
V O C:	5.5	lb/MMcf =	**0.05 ton/yr**
C O:	84.0	lb/MMcf =	**0.77 ton/yr**

The following calculations determine the amount of emissions created by the combustion of #2 distillate fuel oil
@ 0.5 % sulfur, based on 8,760 hours of use and US EPA's AP-42,
5th Edition, Section 1.3 - Fuel Oil Combustion, Tables 1.3-1, 1.3-2, and 1.3-3.

Criteria Pollutant: 2.1 MMBtu/hr * 8,760 hr/yr / 138,500 Btu/gal * 2,000 lb/ton * Ef (lb/1,000 gal) = (ton/yr)

P M:	2.0	lb/1000 gal =	**0.13 ton/yr**
P M-10:	1.0	lb/1000 gal =	**0.07 ton/yr**
S O 2:	71.0	lb/1000 gal =	**4.72 ton/yr**
N O x:	20.0	lb/1000 gal =	**1.33 ton/yr**
V O C:	0.20	lb/1000 gal =	**0.01 ton/yr**
C O:	5.0	lb/1000 gal =	**0.33 ton/yr**

The following calculations determine the amount of emissions created by the combustion of #4 distillate fuel oil
@ 0.50 % sulfur, based on 8,760 hours of use and
US EPA's AP-42, 5th Edition, Section 1.3 - Fuel Oil Combustion, Tables 1.3-1, 1.3-3, and 1.3-7.

Criteria Pollutant: 2.1 MMBtu/hr * 8,760 hr/yr / 141,000 Btu/gal * 2,000 lb/ton * Ef (lb/1,000 gal) = (ton/yr)

P M:	7.0	lb/1000 gal =	**0.46 ton/yr**
P M-10:	3.9	lb/1000 gal =	**0.25 ton/yr**
S O 2:	75.0	lb/1000 gal =	**4.89 ton/yr**
N O x:	20.0	lb/1000 gal =	**1.30 ton/yr**
V O C:	0.34	lb/1000 gal =	**0.02 ton/yr**
C O:	5.0	lb/1000 gal =	**0.33 ton/yr**

The following calculations determine the amount of emissions created by the combustion of re-refined waste oil
@ 0.70 % sulfur, and
@ 0.65 % ash, from the hot oil heater, based on 8,760 hours of use and
US EPA's AP-42, 5th Edition, Section 1.11 - Waste Oil Combustion, Tables 1.11-1, 1.11-2, , 1.11-3, and 1.11-4.

Criteria Pollutant: 2.1 MMBtu/hr * 8,760 hr/yr / 141,000 Btu/gal * 2,000 lb/ton * Ef (lb/1,000 gal) = (ton/yr)

P M:	41.6	lb/1000 gal =	**2.71 ton/yr**
P M-10:	51.0	lb/1000 gal =	**3.33 ton/yr**
S O 2:	102.9	lb/1000 gal =	**6.71 ton/yr**
N O x:	19.0	lb/1000 gal =	**1.24 ton/yr**
V O C:	1.00	lb/1000 gal =	**0.07 ton/yr**
C O:	5.0	lb/1000 gal =	**0.33 ton/yr**

The maximum potential emissions from the hot oil heater due to fuel combustion are the following:

Criteria Pollutant:		**Worst Case Fuel**
P M:	**2.71 ton/yr**	Waste Oil
P M-10:	**3.33 ton/yr**	Waste Oil
S O 2:	**6.71 ton/yr**	Waste Oil
N O x:	**1.33 ton/yr**	No. 2 Fuel Oil
V O C:	**0.07 ton/yr**	Waste Oil
C O:	**0.77 ton/yr**	Natural Gas

****Insignificant Combustion Sources****

Insignificant combustion units at this source include one (1) natural gas fired 0.0228 MMBtu/hr inert gas generator.

The following calculations determine the amount of emissions created by natural gas combustion, based on 8,760 hours of operation and US EPA's AP-42, 5th Edition, Section 1.4 - Natural Gas Combustion, Tables 1.4-1, 1.4-2, and 1.4-3.

Criteria Pollutant: $\frac{0.0228 \text{ MMBtu/hr} * 8{,}760 \text{ hr/yr}}{1{,}000 \text{ Btu/cf} * 2{,}000 \text{ lb/ton}}$ * Ef (lb/MMcf) = (ton/yr)

P M:	1.9 lb/MMcf =	**1.90E-04**	**ton/yr**
P M-10:	7.6 lb/MMcf =	**7.59E-04**	**ton/yr**
S O 2:	0.6 lb/MMcf =	**5.99E-05**	**ton/yr**
N O x:	94.0 lb/MMcf =	**9.39E-03**	**ton/yr**
V O C:	5.5 lb/MMcf =	**5.49E-04**	**ton/yr**
C O:	84.0 lb/MMcf =	**8.39E-03**	**ton/yr**

*** * aggregate drying: drum-mix plant * ***

The following calculations determine the amount of worst case emissions created by aggregate drying before controls, based on 8,760 hours of use and USEPA's AP-42, 5th Edition, Section 11.1 - Hot Mix Asphalt Plants, Tables 11.1-5 and 11.1-10 for a drum mix dryer which has the capability of combusting either fuel oil or natural gas:

Pollutant: Ef lb/ton x $\frac{325 \text{ ton/hr}}{2{,}000 \text{ lb/ton}}$ x 8,760 hr/yr

Criteria Pollutant:

P M:	28	lb/ton =	**39,858.00**	**ton/yr**
P M-10:	6.4	lb/ton =	**9,110.40**	**ton/yr**
VOC:	0.008718	lb/ton =	**12.41**	**ton/yr**

The VOC emission factor for aggregate drying includes HAP emissions which are assumed to be VOC.

*** * conveying / handling * ***

The following calculations determine the amount of emissions created by material handling, based on 8.760 hours of use and AP-42, Section 13.2.4, Equation 1. The emission factor for calculating PM emissions is calculated as follows:

PM-10 Emissions:

E = k*(0.0032)*(((U/5)^1.3)/((M/2)^1.4))

=	2.42E-03	lb PM-10/ton
	5.12E-03	lb PM/ton
where k =	0.35	(particle size multiplier for <10um)
	0.74	(particle size multiplier for <30um)
U =	12	mph mean wind speed
M =	2.6	material moisture content (%)

$\frac{325 \text{ ton/hr} * 8{,}760 \text{ hrs/yr}}{2{,}000 \text{ lb/ton}}$ * Ef (lb/ton of material) = (ton/yr)

Total PM 10 Emissions:	**3.45**	**tons/yr**
Total PM Emissions:	**7.29**	**tons/yr**

*** * unpaved roads * ***

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (12/2003).

I. Loader

43800 trip/year x
0.15 mile/trip x
2 (round trip) x = 13140 miles per year

Ef = k*(s/12)^a*(W/3)^b
= 1.71 lb PM-10/mile
= 6.70 lb PM/mile

where k =	1.5	(particle size multiplier for PM-10)
k=	4.9	(particle size multiplier for PM)
s=	4.8	mean % silt content of unpaved roads
a=	0.9	Constant for PM-10
a=	0.7	Constant for PM
b=	0.45	Constant for PM and PM-10
W=	25	tons average vehicle weight

PM-10: 1.71 lb/mi x 13140 mi/yr = / 2000 lb/ton = **11.22 tons/yr**

PM: 6.70 lb/mi x 13140 mi/yr = / 2000 lb/ton = **44.01 tons/yr**

*** * paved roads * ***

The following calculations determine the amount of emissions created by vehicle traffic on paved roads, based on 8,760 hours of use and USEPA's AP-42, 5th Edition, Section 13.2.1.

70080 Tri Axle Dump Truck; twenty (20) round trips per hour * 0.2 miles/trip * 8,760 hours per year.

Ef = k*(sL/2)^0.65*(W/3)^1.5 - C
= 0.27 lb PM-10/mile
= 1.37 lb PM/mile

where k =	0.016	(particle size multiplier for PM-10)	(k=0.082 for PM-30 or TSP)
sL =	0.6	road surface silt loading (g/m^2)	
W =	33.0	tons average weight of all vehicles traveling the road	
C =	0.00047	emission factor for 1980's vehicle exhaust, brake wear and tire wear for PM and PM10	

PM-10: 0.27 lb/mi x 70080 mi/yr = / 2000 lb/ton = **9.34 tons/yr**

PM: 1.37 lb/mi x 70080 mi/yr = / 2000 lb/ton = **47.91 tons/yr**

Total PM Emissions From Paved Roads = 91.92 tons/yr

Total PM-10 Emissions From Paved Roads = 20.55 tons/yr

*** * storage * ***

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8,760 hours of use and USEPA's AP-42 (Pre 1983 Edition), Section 11.2.3.

Material	Silt Content	Pile Size	Storage Capacity	P M Emissions	P M-10 Emissions
	(wt %)	(acres)	(tons)	tons/yr	tons/yr
Stone/Gravel	7.0	1.00	60,000	1.48	0.52
Sand	7.0	1.00	15,000	1.48	0.52
Recycle Asphalt	7.0	1.00	30,000	1.48	0.52
Total				**4.44**	**1.55**

Methodology: PM Emissions = 1.7*(wt% silt content/1.5)*(365-p)/235*(f/15)*pile size/2000*365
Where:

p =	125	days of rain greater than or equal to 0.01 inches
f =	15	% of wind greater than or equal to 12 mph

PM-10 Emissions = 35% of PM emissions

*** *cold mix VOC storage emissions * ***

The following calculations determine the amount of VOC emissions created by the application of stockpile mix containing cutback asphalt, based on 8,760 hours of use.

VOC Emission Factor = 0.0022736 weight percent flash-off of cold mix
Potential Throughput (tons/yr) = 2,847,000 tons/yr stockpile mix

Potential VOC Emissions (tons/yr) = Potential Throughput (tons/yr) * wt percent flash-off

Potential VOC Emissions = 6,472.94 tons/yr

* Weight percent flash-off is based on 7.0 percent by weight of cutback asphalt in stockpile mix.

*** * summary of source emissions before controls * ***

Criteria Pollutants:

P M:	**40,119.43**	**ton/yr**	
P M-10:	**9,329.39**	**ton/yr**	
S O 2:	**390.29**	**ton/yr**	
N O x:	**101.20**	**ton/yr**	
V O C:	**6,489.14**	**ton/yr**	(VOCs include HAPs from aggregate drying operation)
C O:	**44.93**	**ton/yr**	

*** * source emissions after controls * ***

In order to qualify for the FESOP program, this facility must limit PM10, SO2, VOC and NOx to 99.9 tons per year. Consequently, SO2 emissions from the aggregate dryer are being limited to 92.29 tons per year (99.0 ton/yr - 6.71 ton/yr from the other combustion sources). NOx emissions from the aggregate dryer are being limited to 97.66 tons per year (99.0 ton/yr - 1.34 ton/yr from the other combustion sources).

* Emissions of PM and PM-10 from aggregate drying operations are controlled with a 99.960 % control efficiency.

The following calculations determine the amount of emissions created by natural gas combustion based on a maximum fuel usage of 1,028.00 MMcf

Natural Gas: 1,028.00 MMcf/yr * Ef (lb/MMcf) = (ton/yr)
2,000 lb/ton

P M:	1.9	lb/MMcf =	**3.91E-04**	**ton/yr ***
P M-10:	7.6	lb/MMcf =	**1.56E-03**	**ton/yr ***
S O 2:	0.6	lb/MMcf =	**0.31**	**ton/yr**
N O x:	190.0	lb/MMcf =	**97.66**	**ton/yr**
V O C:	5.5	lb/MMcf =	**2.83**	**ton/yr**
C O:	84.0	lb/MMcf =	**43.18**	**ton/yr**

The following calculations determine the amount of emissions created by No. 2 fuel oil @ 0.50 % sulfur based on a fuel usage limitation of 2,599,718 gal/yr:

No. 2 Distillate Oil: 2,599,718 gal/yr * Ef (lb/1,000 gal) = (ton/yr)
2,000 lb/ton

P M:	2.0	lb/1000 gal =	**1.04E-03**	**ton/yr ***
P M-10:	1.0	lb/1000 gal =	**5.20E-04**	**ton/yr ***
S O 2:	71.0	lb/1000 gal =	**92.29**	**ton/yr**
N O x:	20.0	lb/1000 gal =	**26.00**	**ton/yr**
V O C:	0.2	lb/1000 gal =	**0.26**	**ton/yr**
C O:	5.0	lb/1000 gal =	**6.50**	**ton/yr**

The following calculations determine the amount of emissions created by No. 4 distillate fuel oil @ 0.50 % sulfur based on a fuel usage limitation of 2,461,067 gal/yr:

No. 4 Distillate (2,461,067 gal/yr / 2000 lb/ton * Ef (lb/1000 gal) = (ton/yr)

P M:	7.0	lb/1000 gal =	**8.61E+00**	**ton/yr ***
P M-10:	3.9	lb/1000 gal =	**4.74E+00**	**ton/yr ***
S O 2:	75.0	lb/1000 gal =	**92.29**	**ton/yr**
N O x:	20.0	lb/1000 gal =	**24.61**	**ton/yr**
V O C:	0.34	lb/1000 gal =	**0.42**	**ton/yr**
C O:	5.0	lb/1000 gal =	**6.15**	**ton/yr**

The following calculations determine the amount of emissions created by re-refined waste oil @ 0.50 % sulfur based on a fuel usage limitation of 1,793,780 gal/yr:

Re-refined Waste Oil: 1,793,780 gal/yr / 2,000 lb/ton * Ef (lb/1,000 gal) = (ton/yr)

P M:	41.6	lb/1000 gal =	**1.49E-02**	**ton/yr ***
P M-10:	51.0	lb/1000 gal =	**1.83E-02**	**ton/yr ***
S O 2:	102.9	lb/1000 gal =	**92.29**	**ton/yr**
N O x:	19.0	lb/1000 gal =	**17.04**	**ton/yr**
V O C:	1.0	lb/1000 gal =	**0.90**	**ton/yr**
C O:	5.0	lb/1000 gal =	**4.48**	**ton/yr**

Criteria Pollutant:			**Worst Case Fuel**
P M:	**1.49E-02**	**ton/yr ***	Re-refined Waste Oil
P M-10:	**1.83E-02**	**ton/yr ***	Re-refined Waste Oil
S O 2:	**92.29**	**ton/yr**	Re-refined Waste Oil/No. 2 Fuel Oil
N O x:	**97.66**	**ton/yr**	Natural Gas
V O C:	**2.83**	**ton/yr**	Natural Gas
C O:	**43.18**	**ton/yr**	Natural Gas

Primary Fuel Usage Limitations

Fuel Oil: Re-refined waste oil

92.29 tons SO2/year limited / 383.58 tons SO2/year potential * 7455.32 Kgals/year potential = 1793.78 Kgals/year limited

Secondary Fuel Usage Limitations

Fuel Oil: No. 2 distillate fuel oil

92.29 tons SO2/year limited / 269.44 tons SO2/year potential * 7589.89 Kgals/year potential = 2599.72 Kgals/year limited

Fuel Oil: #4 distillate fuel oil

92.29 tons SO2/year limited / 279.57 tons SO2/year potential * 7455.32 Kgals/year potential = 2461.07 Kgals/year limited

Natural Gas:

97.66 tons NOx/year limited / 99.86 tons NOx/year potential * 1051.20 MMCF/year potential = 1028.00 MMCF/year limited

Secondary Fuel equivalence for re-refined waste oil is determined from the limiting pollutant, SO2, as follows:

0.6 lb/MMcf = 5.83 gallons per million cubic feet (MMcf) natural gas (i.e., every 1 MMcf natural gas burned is equivalent to 5.83 gallons of oil burned, based on SO2 emissions)
102.90 lb/1000 gal

Secondary fuel equivalence limit for #2 distillate fuel oil based on SO2 emissions from re-refined waste oil

269.44 #2 F.O. potential emissions (ton/yr) / 383.58 W.O. potential emissions (ton/yr)
7589.89 #2 F.O. potential usage (kgal/yr) / 7455.32 W.O. potential usage (kgal/yr)

= 0.6900 Kgal W.O. burned / Kgal #2 F.O. burned

Secondary fuel equivalence limit for #4 distillate fuel oil based on SO2 emissions from re-refined waste oil

279.57 #4 F.O. potential emissions (ton/yr) / 383.58 W.O. potential emissions (ton/yr)
7455.32 #4 F.O. potential usage (kgal/yr) 7455.32 W.O. potential usage (kgal/yr)

= 0.7289 Kgal W.O. burned / Kgal #4 F.O. burned

Secondary fuel equivalence limit for natural gas based on NOx emissions from re-refined waste oil

17.04 W.O. potential emissions (ton/yr) / 99.86 n.g. potential emissions (ton/yr)
7455.32 W.O. potential usage (kgal/yr) 1051.20 n.g. potential usage (MMCF/yr)

= 0.0241 MMCF n.g. burned / kgal W.O. burned

Secondary fuel equivalence limit for natural gas based on NOx emissions from No. 2 fuel oil

75.90 No. 2 oil potential emissions (ton/yr) / 99.86 n.g. potential emissions (ton/yr)
7589.89 No. 2 oil potential usage (kgal/yr) 1051.20 n.g. potential usage (MMCF/yr)

= 0.1053 MMCF n.g. burned / kgal #2 F.O. burned

Secondary fuel equivalence limit for natural gas based on NOx emissions from No. 4 fuel oil

74.55 No. 4 oil potential emissions (ton/yr) / 99.86 n.g. potential emissions (ton/yr)
7455.32 No. 4 oil potential usage (kgal/yr) 1051.20 n.g. potential usage (MMCF/yr)

= 0.1053 MMCF n.g. burned / kgal #4 F.O. burned

*** *cold mix VOC storage limitations * ***

The following calculations determine the amount of VOC emissions created by the application of liquid binder for cold mix stockpiles, based on the source's use of cut back asphalt with solvent as the liquid binder type. Cut back asphalt with solvent is defined with the following properties:

Cut back asphalt rapid cure:
Maximum weight % of VOC solvent in binder 25.3%
Weight % VOC solvent in binder that evaporates: 95.0%
Volume % of diluent allowed = 7% (per 326 IAC 8-5-2)

Cut back asphalt medium cure:
Maximum weight % of VOC solvent in binder 28.6%
Weight % VOC solvent in binder that evaporates: 70.0%
Volume % of diluent allowed = 7% (per 326 IAC 8-5-2)

Cut back asphalt slow cure:
Maximum weight % of VOC solvent in binder 20.0%
Weight % VOC solvent in binder that evaporates: 25.0%
Volume % of diluent allowed = 7% (per 326 IAC 8-5-2)

In order to qualify for the FESOP program, this source must limit VOC emissions to less than 100 tons per year. Deducting the VOC emitted from other activities, VOC solvent usage as diluent in the liquid binder used in the production of cold mix asphalt from the plant shall be limited to less than 82.80 tons of VOC emitted per twelve (12) consecutive month period.

This is equivalent to limiting the usage of cut back asphalt with solvent liquid binder to less than the following:

87.16 tons of VOC solvent per 12 consecutive month period for rapid cure cut back asphalt.
118.29 tons of VOC solvent per 12 consecutive month period for medium cure cut back asphalt.
331.20 tons of VOC solvent per 12 consecutive month period for slow cure cut back asphalt.

*** * source emissions after controls * ***

	hot oil heater:		nonfugitive				
P M:	2.71	ton/yr x	100.00%	emitted after controls =	**2.71**	**ton/yr**
P M-10:	7.60	ton/yr x	100.00%	emitted after controls =	**7.60**	**ton/yr**
	aggregate drying:		nonfugitive				
P M:	40,013.07	ton/yr x	0.04%	emitted after controls =	**16.01**	**ton/yr**
P M-10:	9,300.51	ton/yr x	0.04%	emitted after controls =	**3.72**	**ton/yr**
VOC:	12.41	ton/yr x	100.00%	emitted after controls =	**12.41**	**ton/yr**
	conveying/handling:		fugitive				
P M:	7.29	ton/yr x	50%	emitted after controls =	**3.64**	**ton/yr**
P M-10:	3.45	ton/yr x	50%	emitted after controls =	**1.72**	**ton/yr**
	inert gas generator:		fugitive				
P M:	1.90E-04	ton/yr x	100.00%	emitted after controls =	**1.90E-04**	**ton/yr**
P M-10:	7.59E-04	ton/yr x	100.00%	emitted after controls =	**7.59E-04**	**ton/yr**
	unpaved roads:		fugitive				
P M:	91.92	ton/yr x	50%	emitted after controls =	**45.96**	**ton/yr**
P M-10:	20.55	ton/yr x	50%	emitted after controls =	**10.28**	**ton/yr**
	storage piles:		fugitive				
P M:	4.44	ton/yr x	50%	emitted after controls =	**2.22**	**ton/yr**
P M-10:	1.55	ton/yr x	50%	emitted after controls =	**0.78**	**ton/yr**
	Cold mix storage:		fugitive				
VOC	6472.94	ton/yr x	1.28%	emitted after controls =	**82.80**	**ton/yr**

*** * summary of source emissions after controls * ***

Criteria Pollutant:

	Non-Fugitive		Fugitive		Total	
PM:	**18.72**	**ton/yr**	**51.82**	**ton/yr**	**70.54**	**ton/yr**
PM-10:	**11.32**	**ton/yr**	**12.78**	**ton/yr**	**24.10**	**ton/yr**
S O 2:	**99.00**	**ton/yr**	**0.00**	**ton/yr**	**99.00**	**ton/yr**
N O x:	**99.00**	**ton/yr**	**0.00**	**ton/yr**	**99.00**	**ton/yr**
V O C:	**16.20**	**ton/yr**	**82.80**	**ton/yr**	**99.00**	**ton/yr**
C O:	**43.96**	**ton/yr**	**0.00**	**ton/yr**	**43.96**	**ton/yr**

Hazardous Air Pollutants (HAPs)

**** aggregate dryer burner****

The following calculations determine the amount of HAP emissions created by the combustion of distillate fuel oil before & after controls @ 0.50 % sulfur, from the aggregate dryer burner, based on 8,760 hours of use and US EPA's AP-42, 5th Edition, Section 1.3 - Fuel Oil Combustion, Table 1.3-10.

Hazardous Air Pollutants (HAPs):

120 MMBtu/hr * 8760 hr/yr / 2,000 lb/ton * Ef (lb/10^12 Btu) = (ton/yr)

			Potential To Emit		Limited Emissions	
Arsenic:	4	lb/10^12 Btu =	2.10E-03	ton/yr	8.41E-07	ton/yr
Beryllium:	3	lb/10^12 Btu =	1.58E-03	ton/yr	6.31E-07	ton/yr
Cadmium:	3	lb/10^12 Btu =	1.58E-03	ton/yr	6.31E-07	ton/yr
Chromium:	3	lb/10^12 Btu =	1.58E-03	ton/yr	6.31E-07	ton/yr
Lead:	9	lb/10^12 Btu =	4.73E-03	ton/yr	1.89E-06	ton/yr
Manganese:	6	lb/10^12 Btu =	3.15E-03	ton/yr	1.26E-06	ton/yr
Mercury:	3	lb/10^12 Btu =	1.58E-03	ton/yr	6.31E-07	ton/yr
Nickel:	3	lb/10^12 Btu =	1.58E-03	ton/yr	6.31E-07	ton/yr
Selenium:	15	lb/10^12 Btu =	7.88E-03	ton/yr	3.15E-06	ton/yr
		Total HAPs =	2.58E-02	ton/yr	1.03E-05	ton/yr

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The following calculations determine the amount of HAP emissions created by the combustion of waste oil before & after controls @ 0.70 % sulfur, from the aggregate dryer burner, based on 8,760 hours of use and US EPA's AP-42, 5th Edition, Section 1.3 - Fuel Oil Combustion, Table 1.11-5.

Hazardous Air Pollutants (HAPs):

120 MMBtu/hr * 8,760 hr/yr * Ef (lb/1,000 gal) = (ton/yr)
129,142 Btu/gal * 2,000 lb/ton

			Potential To Emit		Limited Emissions	
Arsenic:	1.10E-01	lb/1000 gal =	4.48E-01	ton/yr	1.79E-04	ton/yr
Cadmium:	9.30E-03	lb/1000 gal =	3.79E-02	ton/yr	1.51E-05	ton/yr
Chromium:	2.00E-02	lb/1000 gal =	8.14E-02	ton/yr	3.26E-05	ton/yr
Cobalt:	2.10E-04	lb/1000 gal =	8.55E-04	ton/yr	3.42E-07	ton/yr
Lead:	1.87E-01	lb/1000 gal =	7.61E-01	ton/yr	3.04E-04	ton/yr
Manganese:	6.80E-02	lb/1000 gal =	2.77E-01	ton/yr	1.11E-04	ton/yr
Nickel:	1.10E-02	lb/1000 gal =	4.48E-02	ton/yr	1.79E-05	ton/yr
		Total HAPs =	1.65E+00	ton/yr	6.60E-04	ton/yr

*** * aggregate drying: drum-mix plant * ***

The following calculations determine the amount of HAP emissions created by aggregate drying before & after controls, based on 8,760 hours of use and USEPA's AP-42, 5th Edition, Section 11.1 - Hot Mix Asphalt Plants, Table 11.1-10 for a drum mix dryer which can be fired with either fuel oil or natural gas. The HAP emission factors represent the worst case emissions (fuel oil combustion).

Pollutant:
Ef lb/ton x 325 ton/hr x 8760 hr/yr
Hazardous Air Pollutants (HAPs): 2000 lb/ton

			Potential To Emit		Limited Emissions	
Benzene:	3.90E-04	lb/ton =	0.56	ton/yr	0.56	ton/yr
Ethylbenzene:	2.40E-04	lb/ton =	0.34	ton/yr	0.34	ton/yr
Formaldehyde:	3.10E-03	lb/ton =	4.41	ton/yr	4.41	ton/yr
Hexane:	9.20E-04	lb/ton =	1.31	ton/yr	1.31	ton/yr
2,2,4 Trimethylpentane:	4.00E-05	lb/ton =	0.06	ton/yr	0.06	ton/yr
Methyl chloroform:	4.8E-05	lb/ton =	0.07	ton/yr	0.07	ton/yr
Toluene:	2.90E-03	lb/ton =	4.13	ton/yr	4.13	ton/yr
Total Polycyclic Organic Matter (POM):	8.800E-04	lb/ton =	1.25	ton/yr	1.25	ton/yr
Xylene:	2.00E-04	lb/ton =	0.28	ton/yr	0.28	ton/yr
		Total HAPs =	12.41	ton/yr	12.41	ton/yr

*** * summary of source HAP emissions potential to emit * ***

Hazardous Air Pollutants (HAPs):

Arsenic:	**0.448**	ton/yr
Benzene:	**0.555**	ton/yr
Beryllium:	**0.002**	ton/yr
Cadmium:	**0.038**	ton/yr
Chromium:	**0.081**	ton/yr
Cobalt:	**0.001**	ton/yr
Ethylbenzene:	**0.342**	ton/yr
Formaldehyde:	**4.413**	ton/yr
Hexane:	**1.310**	ton/yr
Lead:	**0.761**	ton/yr
2,2,4 Trimethylpentane:	**0.057**	ton/yr
Manganese:	**0.277**	ton/yr
Mercury:	**0.002**	ton/yr
Methyl chloroform:	**0.068**	ton/yr
Nickel:	**0.045**	ton/yr
Selenium:	**0.008**	ton/yr
Toluene:	**4.128**	ton/yr
Total POM:	**1.253**	ton/yr
Xylene:	**0.285**	ton/yr
Total:	**14.072**	**ton/yr**

*** * summary of source HAP limited emissions * ***

Hazardous Air Pollutants (HAPs):

Arsenic:	**0.000**	ton/yr
Benzene:	**0.555**	ton/yr
Beryllium:	**0.000**	ton/yr
Cadmium:	**0.000**	ton/yr
Chromium:	**0.000**	ton/yr
Cobalt:	**0.000**	ton/yr
Ethylbenzene:	**0.342**	ton/yr
Formaldehyde:	**4.413**	ton/yr
Hexane:	**1.310**	ton/yr
Lead:	**0.000**	ton/yr
2,2,4 Trimethylpentane:	**0.057**	ton/yr
Manganese:	**0.000**	ton/yr
Mercury:	**0.000**	ton/yr
Methyl chloroform:	**0.068**	ton/yr
Nickel:	**0.000**	ton/yr
Selenium:	**0.000**	ton/yr
Toluene:	**4.128**	ton/yr
Total POM:	**1.253**	ton/yr
Xylene:	**0.285**	ton/yr
Total:	**12.411**	**ton/yr**

*** * miscellaneous * ***

326 IAC 7 Compliance Calculations:

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

0.5 lb/MMBtu x 139,000 Btu/gal= 69.5 lb/1000gal

69.5 lb/1000gal / 142 lb/1000 gal = 0.5 %

Sulfur content must be less than or equal to 0.5% to comply with 326 IAC 7.

The following calculations determine the maximum sulfur content of re-refined waste oil allowable by 326 IAC 7:

1.6 lb/MMBtu x 129,142 Btu/gal= 206.6272 lb/1000gal

206.6272 lb/1000gal / 142 lb/1000 gal = 1.5 %

Sulfur content must be less than or equal to 1.5% to comply with 326 IAC 7.

326 IAC 6-3-2 Compliance Calculations:

The following calculations determine compliance with 326 IAC 6-3-2 for process weight rates in excess of 30 tons per hour:

limit = 55 * (325 ^ 0.11) - 40 = 63.91 lb/hr or
279.94 ton/yr

Since the emission limit pursuant to Subpart I of 0.04 grains per dry standard cubic foot are more stringent than this limit, the limit pursuant to 326 IAC 6-3-2 does not apply.

PM-10 Emission Limit for Aggregate Dryer:

(99.9 tons PM-10/yr - 16.11 tons PM-10/yr from other souces)
=
83.79 tons PM-10/yr = 19.13 lbs/hr

PM-10 emissions from the aggregate dryer are controlled to 0.85 lbs/hr < 19.13 lbs/hr (Will comply)

Based on a maximum asphalt mix throughput of 325 tons/hr, this emission limit is equivalent to 0.059 lb PM10 per ton of asphalt mix.

PM Emission Limit for Aggregate Dryer:

(249.0 tons PM/yr - 54.09 tons PM/yr from other souces)
=
194.91 tons PM/yr = 44.50 lbs/hr

PM emissions from the aggregate dryer are controlled to 3.66 lbs/hr < 44.50 lbs/hr (Will comply)

Based on a maximum asphalt mix throughput of 325 tons/hr, this emission limit is equivalent to 0.137 lb PM per ton of asphalt mix.

Compliance with this limit shall render the requirements of 326 IAC 2-2 (PSD) not applicable.

Compliance with NSPS (326 IAC 12; 40 CFR 60.90 to 60.93, Subpart I)

The following calculations determine compliance with NSPS, which limits stack emissions from asphalt plants to 0.04 gr/dscf.

Aggregate Dryer Baghouse:

$$\frac{16.01 \text{ ton/yr} * 2000 \text{ lb/ton} * 7000 \text{ gr/lb}}{525{,}600 \text{ min/yr} * 47{,}014 \text{ dscf/min}} = 0.009 \text{ gr/dscf} \quad \text{(will comply)}$$

Note:

SCFM =
= 64,000 acfm * (460 + 68)*(1-0.0261) / (460 + 240)
47,014 scfm

Assumes exhaust gas temperature of 240F and exhaust gas flow of 64,000 acfm.