INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

TO: Interested Parties / Applicant

DATE: April 25, 2007

RE: Brooks Construction Company, Inc. / 003-23353-00351

FROM: Nisha Sizemore
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 03/23/06

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FEDERALLY ENFORCEABLE STATE OPERATING PERMIT RENEWAL
OFFICE OF AIR QUALITY

Brooks Construction Company, Inc.
3930 Hardrock Road
Ft. Wayne, Indiana 46819

(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 provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or 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.

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.

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

Operation Permit No.: F003-23353-00351	
Original signed by: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: April 25, 2007 Expiration Date: April 25, 2012

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 hot mix asphalt plant.

Source Address:	3930 Hardrock Road, Ft. Wayne, IN 46819
Mailing Address:	6525 Ardmore Avenue, Ft. Wayne, IN 46809
General Source Phone Number:	(260) 478-1990
SIC Code:	2951
County Location:	Allen
Source Location Status:	Nonattainment for 8-Hour Ozone Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset 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) The drum-mix portion of this source, consisting of the following:

(1) one (1) aggregate drum-mix dryer (ID #2), installed in 1992, with a maximum capacity of 400 tons per hour, equipped with one (1) natural gas fired, or landfill gas (LFG)/natural gas co-fired, aggregate dryer burner (ID #3), with a maximum rated capacity of 96.8 million British thermal units (MMBtu) per hour, using Nos. 2, 4, 5 and 6 fuel oils and Waste-Reclaimed oil as back-up fuel, with one (1) inertial knockout box and one (1) baghouse in series for particulate matter control, exhausting at one (1) stack identified as SV1-D;

(2) one (1) drag slat hot mix conveyor; three (3) feed conveyors; and one (1) screen; and

(3) cold-mix (stockpile mix) asphalt manufacturing operations and storage piles.

(b) The batch-mix portion of this source, consisting of the following:

(1) one (1) aggregate rotary dryer (ID #4), installed in 1989, with a maximum capacity of 220 tons per hour, equipped with one (1) natural gas fired aggregate dryer burner (ID #5), with a maximum rated capacity of 84.0 million British thermal units (MMBtu) per hour, using No. 2 oil as back-up fuel, with one (1) cyclone and one (1) baghouse in series for particulate matter control, exhausting at one (1) stack identified as SV1-B; and

(2) Asphalt batch tower, consisting of the following:

(A) one (1) hot elevator;

(B) one (1) screen;

(C) four (4) hot bins, each with a maximum holding capacity of 40 tons;

(D) one (1) aggregate hopper, with a maximum holding capacity of 6,000 pounds (lb);

(E) one (1) asphalt hopper, with a maximum holding capacity of 600 lb;

(F) one (1) pugmill, with a maximum holding capacity of 6,000 lb; and

(G) one (1) skip hoist with a maximum holding capacity of 6,000 lb.

(c) General material conveying and handling operations, including:

(1) cold feed system consisting of ten (10) bins with a total maximum holding capacity of 200 tons;

(2) storage silos consisting of five (5) bins with a total maximum storage capacity of 900 tons;

(3) two (2) recycled asphalt pavement (RAP) feed bins, each with a maximum holding capacity of 30 tons;

(4) one (1) RAP storage pile with a maximum storage capacity of 40,000 tons; and

(5) aggregate storage piles, with a total maximum storage capacity of 101,500 tons.

Under 40 CFR 60, Subpart I, this hot mix asphalt plant is considered an affected facility.

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) MMBtu per hour:

(1) one (1) direct-fired hot oil heater, installed in July 1982, with a heat input rating of 1.4 MMBtu per hour, exhausting at stacks SV2. This insignificant activity uses No. 2 oil as a back-up fuel.
(2) one (1) direct-fired hot oil heater, installed in April 1991, with a heat input rating of 1.4 MMBtu per hour, exhausting at stacks SV3. This insignificant activity uses No. 2 oil as a back-up fuel; and
(2) one (1) direct-fired hot oil heater, approved for construction in 2007, with a heat input rating of 2.0 MMBtu per hour, exhausting fugitively. This insignificant activity uses No. 2 oil as a back-up fuel.

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

(c) paved and unpaved roads and parking lots with public access [326 IAC 6-4][326 IAC 6-5];

(d) one (1) QA lab and one (1) State lab as defined in 326 IAC 2-7-1(21)(D);

(e) other categories with emissions below insignificant thresholds:

(1) storage tanks emitting less than one (1) ton per year of a single HAP and less than fifteen (15) lb per day of VOC including:

(A) one (1) liquid asphalt storage tank (ID #20A), constructed in January 1985, with a maximum storage capacity of 340,000 gallons, exhausting at one (1) stack, identified as SV4;

(B) one (1) liquid asphalt storage tank (ID #20B), constructed in 1969, with a maximum storage capacity of 15,000 gallons, exhausting at one (1) stack, identified as SV5;

(C) one (1) liquid asphalt storage tank (ID #20C), constructed in July 1992 each with a maximum storage capacity of 20,000 gallons, exhausting at one (1) stack, identified as SV6;

(D) one (1) liquid asphalt storage tank (ID #20D), constructed in 1997 with a maximum storage capacity of 20,000 gallons, exhausting at one (1) stack, identified as SV7;

(E) four (4) liquid asphalt storage tank (ID #20E, 20F, 20G, 20H), constructed in 2006, each with a maximum storage capacity of 30,000 gallons;

(F) one (1) liquid asphalt storage tank (ID #20I), constructed in 2006 with a maximum storage capacity of 325,000 gallons; and

(G) two (2) burner fuel storage tank (ID #20J and 20K), constructed in 2006 each with a maximum storage capacity of 30,000 gallons.

(2) cutting, grinding and welding operations located in the shop [326 IAC 6-3-2].

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) to renew a federally Enforceable State Operating Permit (FESOP).

SECTION B GENERAL CONDITIONS

B.1 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.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

(a) This permit, F003-23353-00351, 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 of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal 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.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

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 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.6 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.7 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 an "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.8 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.9 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.10 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. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

(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, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.11 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 maintain and implement Preventive Maintenance Plans (PMPs) 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.

(b) 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 PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) 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.12 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 describe 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, 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 Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-0178 (ask for Compliance Section)
Facsimile Number: 317-233-6865

(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
Indianapolis, Indiana 46204-2251

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 an "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) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, 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.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to F003-23353-00351 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

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

B.14 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.15 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 Provisions), 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
Indianapolis, Indiana 46204-2251

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 not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by an "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.16 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 Federally Enforceable State Operating Permit 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 an "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.17 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 an "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
Indianapolis, Indiana 46204-2251

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

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

(2) 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) 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 being needed to process the application.

B.18 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
Indianapolis, Indiana 46204-2251

Any such application shall be certified by an "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.19 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d) without a 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 limitations provided in 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
Indianapolis, Indiana 46204-2251

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, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b) through (d). The Permittee shall make such records available, upon reasonable request, for 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 emissions increases and decreases at 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.20 Source Modification 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.21 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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.22 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
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require the certification by an "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.23 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 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission 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 [326 IAC 6-3-2]

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. This limitation shall also render the requirements of 326 IAC 2-3 (Emission Offset) not applicable;

(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) The 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. This limitation shall make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

(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]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 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 March 11, 1996. The plan is included as Attachment A.

C.8 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.9 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
Indianapolis, Indiana 46204-2251

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 an "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.

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

C.10 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
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by an "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 an "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.11 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.12 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
Indianapolis, Indiana 46204-2251

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

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

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

C.13 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.14 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.

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

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

C.15 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

(a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

within ninety (90) days after the date of issuance of this permit.

The ERP does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) If the ERP is disapproved by IDEM, OAQ, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP.

(d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.

(e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.

(f) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level.
[326 IAC 1-5-3]

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 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

(a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records;

(3) inspection of the control device, associated capture system, and the process.

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

(e) The Permittee shall maintain the following records:

(1) monitoring data;

(2) monitor performance data, if applicable; and

(3) corrective actions taken.

C.18 Actions Related to Noncompliance Demonstrated by a Stack Test

(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 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 an "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 Permittee 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 an "authorized individual" as defined by 326 IAC 2-1.1-1(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 Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

(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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(e) Reporting periods are 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.

Stratospheric Ozone Protection

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) The drum-mix portion of this source, consisting of the following:
- (1) one (1) aggregate drum-mix dryer (ID #2), installed in 1992, with a maximum capacity of 400 tons per hour, equipped with one (1) natural gas fired, or landfill gas (LFG)/natural gas co-fired, aggregate dryer burner (ID #3), with a maximum rated capacity of 96.8 million British thermal units (MMBtu) per hour, using Nos. 2, 4, 5 and 6 fuel oils and Waste-Reclaimed oil as back-up fuel, with one (1) inertial knockout box and one (1) baghouse in series for particulate matter control, exhausting at one (1) stack identified as SV1-D;
- (2) one (1) drag slat hot mix conveyor; three (3) feed conveyors; and one (1) screen; and
- (3) cold-mix (emulsified) asphalt storage piles.

(b) The batch-mix portion of this source, consisting of the following:
- (1) one (1) aggregate rotary dryer (ID #4), installed in 1989, with a maximum capacity of 220 tons per hour, equipped with one (1) natural gas fired aggregate dryer burner (ID #5), with a maximum rated capacity of 84.0 million British thermal units (MMBtu) per hour, using No. 2 oil as back-up fuel, with one (1) cyclone and one (1) baghouse in series for particulate matter control, exhausting at one (1) stack identified as SV1-B; and
- (2) Asphalt batch tower, consisting of the following:
  - (A) one (1) hot elevator;
  - (B) one (1) screen;
  - (C) four (4) hot bins, each with a maximum holding capacity of 40 tons;
  - (D) one (1) aggregate hopper, with a maximum holding capacity of 6,000 pounds (lb);
  - (E) one (1) asphalt hopper, with a maximum holding capacity of 600 lb;
  - (F) one (1) pugmill, with a maximum holding capacity of 6,000 lb; and
  - (G) one (1) skip hoist with a maximum holding capacity of 6,000 lb.

(c) General material conveying and handling operations, including:
- (1) cold feed system consisting of eight (8) bins with a total maximum holding capacity of 200 tons;
- (2) storage silos consisting of five (5) bins with a total maximum storage capacity of 900 tons;
- (3) one (1) recycled asphalt pavement (RAP) feed bin with a maximum holding capacity of 30 tons;
- (4) one (1) RAP storage pile with a maximum storage capacity of 18,750 tons; and
- (5) aggregate storage piles, with a total maximum storage capacity of 101,500 tons.

Under 40 CFR 60, Subpart I, this hot mix asphalt plant is considered an affected facility.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-7-5(1)]

D.1.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

Pursuant to 40 CFR 60, Subpart I, the Permittee shall comply with the provisions of 40 CFR 60 Subpart A - General Provisions, which are incorporated by reference as 326 IAC 12-1, in accordance with the schedule in 40 CFR 60, Subpart A.

D.1.2 NSPS, Requirements [40 CFR Part 60, Subpart I] [326 IAC 12-1]

Pursuant to CFR Part 60, Subpart I, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart I, which are incorporated by reference as 326 IAC 12-1 as specified as follows:

§ 60.90 Applicability and designation of affected facility.

(a) The affected facility to which the provisions of this subpart apply is each hot mix asphalt facility. For the purpose of this subpart, a hot mix asphalt facility is comprised only of any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler, systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems.

(b) Any facility under paragraph (a) of this section that commences construction or modification after June 11, 1973, is subject to the requirements of this subpart.

§ 60.91 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) *Hot mix asphalt facility* means any facility, as described in §60.90, used to manufacture hot mix asphalt by heating and drying aggregate and mixing with asphalt cements.

§ 60.92 Standard for particulate matter.

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall discharge or cause the discharge into the atmosphere from any affected facility any gases which:

(1) Contain particulate matter in excess of 90 mg/dscm (0.04 gr/dscf).

(2) Exhibit 20 percent opacity, or greater.

§ 60.93 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).

(b) The owner or operator shall determine compliance with the particulate matter standards in §60.92 as follows:

(1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf).

(2) Method 9 and the procedures in §60.11 shall be used to determine opacity.

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

D.1.3 PSD Minor Limit [326 IAC 2-2]

(a) Particulate matter emissions from the drum mixer and dryer shall not exceed 0.193 pounds of PM per ton of hot mix asphalt produced.

(b) The amount of hot mix asphalt produced in the drum mixer and dryer shall not exceed 1,000,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(c) Particulate matter emissions from the batch mixer and dryer shall not exceed 0.193 pounds of PM per ton of hot mix asphalt produced.

(d) The amount of hot mix asphalt produced in the batch mixer and dryer shall not exceed 143,975 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the above limits will limit total source wide PM emissions to less than 250 tons per year. Therefore, compliance with this limit will render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.4 Particulate Matter (PM_{10}) [326 IAC 2-8-4] [326 IAC 2-2]

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

(a) PM_{10} emissions from the drum mixer and dryer shall be limited to 0.098 pounds per ton of hot mix asphalt produced.

(b) The amount of hot mix asphalt produced in the drum mixer and dryer shall not exceed 1,000,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(c) PM_{10} emissions from the batch mixer and dryer shall be limited to 0.098 pounds per ton of hot mix asphalt produced.

(d) The amount of hot mix asphalt produced in the batch mixer and dryer shall not exceed 143,975 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the above limits will limit the total source wide potential to emit PM_{10} to less than 100 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD) are not applicable.

D.1.5 Carbon monoxide (CO) [326 IAC 2-8] [326 IAC 2-2]

(a) CO emissions from the drum mix dryer shall not exceed 0.13 pound of CO per ton of hot mix asphalt produced.

(b) The amount of hot mix asphalt produced in the drum mixer and dryer shall not exceed 1,000,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(c) CO emissions from the batch mix dryer shall not exceed 0.4 pound of CO per ton of hot mix asphalt produced.

(d) The amount of hot mix asphalt produced in the batch mixer and dryer shall not exceed 143,975 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the above limits will limit the source wide emissions of CO to less than 100 tons per year. Therefore, the requirements of 326 IAC 2-7 (Part 70), and 326 IAC 2-2 (PSD) are not applicable.

D.1.6 Nitrogen Oxides (NO_x) [326 IAC 2-8] [326 IAC 2-2] [326 IAC 2-3]

(a) NO_x emissions from the batch mix dryer shall not exceed 0.12 pound of NO_x per ton of hot

mix asphalt produced.

(b) The amount of hot mix asphalt produced in the batch mixer and dryer shall not exceed 143,975 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the above limits, in addition to the limit in condition D.1.9, will limit the source wide emissions of NO_x to less than 100 tons per year. Therefore, the requirements of 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD), and 326 IAC 2-3 (Emission Offset) are not applicable

D.1.7 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]

(a) VOC emissions from the drum mix dryer shall not exceed 0.032 pound of VOC per ton of hot mix asphalt produced.

(b) VOC emissions from the silo filling process shall not exceed 0.0122 pound of VOC per tons of hot mix asphalt produced in both the drum and batch mix operations combined.

(c) The amount of hot mix asphalt produced in the drum mixer and dryer shall not exceed 1,000,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) The amount of hot mix asphalt produced in the batch mixer and dryer shall not exceed 143,975 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the above limits will limit the VOC emissions from the drum batch mixer and dryer and silo filling operations each to less than 25 tons per year. Therefore, the requirements of 326 IAC 8-1-6 (BACT) are not applicable to these facilities.

D.1.8 Sulfur Dioxide (SO_2) [326 IAC 7-1.1] [326 IAC 7-2-1]

Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), sulfur dioxide emissions from the 96.8 MMBtu per hour burner (#3) for the drum mix aggregate dryer and 84.0 MMBtu per hour burner (#5) for the batch mix aggregate dryer shall be limited to 0.5 pound per MMBtu heat input when using distillate oils and 1.6 pounds per MMBtu when using residual oils. This is equivalent to a maximum allowable sulfur content of (0.5%) for No. 2 distillate fuel oil, (1.6%) for No. 4 fuel oil, (1.5%) for No. 5 fuel oil, (1.6%) for No. 6 fuel oil and (1.5%) for waste oil.

Pursuant to 326 IAC 7-1.1-2, this sulfur dioxide limit applies at all times including periods of startup, shutdown, and malfunction. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average, with compliance determined at the end of each month.

D.1.9 Fuel Usage and Equivalents, SO_2 and NO_x, HCl [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-3]

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

(a) The sulfur content of the No. 2 fuel oil used in the 96.8 MMBtu per hour burner for the drum mix aggregate dryer and the 84.0 MMBtu per hour burner for the batch mix aggregate dryer shall not exceed 0.5 % by weight. The sulfur content of the No. 4, No. 5 and No. 6 fuel oils and waste oil used in the 96.8 MMBtu per hour burner for the drum mix aggregate dryer shall each not exceed 1.0 % by weight.

(b) The chlorine content of the waste oil used in the 96.8 MMBtu per hour burner for the aggregate dryer shall not exceed 0.4 percent.

(c) The input of waste oil with a sulfur content of 1.0 % and a maximum chlorine content of 0.4% in the 96.8 MMBtu per hour burner for the aggregate dryer shall not exceed 750,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. Therefore, HCl emissions are limited to 9.90 tons per year and source-wide SO_2 emissions are limited to less than 100 tons per year.

(d) The input of No. 2 distillate fuel oil with a maximum fuel oil sulfur content of 0.5% and No. 2 distillate fuel oil equivalents to the two (2) aggregate dryer burners (ID#3 and ID#5) combined shall be limited to less than 2,574,477 U.S. gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

(e) For purposes of determining compliance based on SO_2 emissions, the following shall apply:

(1) each one (1) million cubic feet (MMcf) of natural gas burned shall be equivalent to 8.6 gallons of No. 2 oil, based on SO_2 emissions, such that the total gallons of No. 2 distillate fuel oil and No. 2 oil equivalent input does not exceed the limit specified.

(2) each one (1) million cubic feet (MMcf) of landfill gas burned shall be equivalent to 89.2 gallons of No. 2 oil, based on SO_2 emissions, such that the total gallons of No. 2 distillate fuel oil and No. 2 oil equivalent input does not exceed the limit specified.

(3) every 1,000 gallon of No. 4 fuel oil burned shall be equivalent to 2,158 gallons of No. 2 fuel oil, based on SO_2 emissions, such that the total gallons of No. 2 distillate fuel oil and No. 2 oil equivalent input does not exceed the limit specified.

(4) every 1,000 gallon of No. 5 fuel oil burned shall be equivalent to 2,259 gallons of No. 2 oil, based on SO_2 emissions, such that the total gallons of No. 2 distillate fuel oil and No. 2 oil equivalent input does not exceed the limit specified.

(5) every 1,000 gallon of No. 6 fuel oil burned shall be equivalent to 2,259 gallons of No. 2 fuel oil, based on SO_2 emissions, such that the total gallons of No. 2 distillate fuel oil and No. 2 oil equivalent input does not exceed the limit specified.

(6) every 1,000 gallon of waste-reclaimed fuel oil burned shall be equivalent to 2,115 gallons of No. 2 fuel oil, based on SO_2 emissions, such that the total gallons of No. 2 distillate fuel oil and No. 2 oil equivalent input does not exceed the limit specified.

Compliance with the above limits, in addition to the limit in Condition D.1.6, shall limit source-wide SO_2 and NO_x emissions to less than 100 tons per year and shall render the requirements of 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

D.1.10 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements

D.1.11 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

(a) No later than five (5) years from May 16, 2005, in order to demonstrate compliance with Conditions D.1.3 and D.1.4 the Permittee shall perform PM and PM_{10} testing for the aggregate batch dryer/mixer utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM_{10} includes filterable and condensable PM_{10}. Testing shall be conducted in accordance with Section C - Performance Testing.

(b) No later than five (5) years from September 30, 2004, in order to demonstrate compliance with Conditions D.1.3 and D.1.4 the Permittee shall perform PM and PM_{10} testing for the aggregate drum dryer/mixer utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM_{10} includes filterable and condensable particulate matter. Testing shall be conducted in accordance with Section C - Performance Testing.

D.1.12 Sulfur Dioxide Emissions and Sulfur Content

Compliance shall be determined utilizing one of the following options.

(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million British thermal unit heat input when operating on No. 2 distillate oil, and one and six-tenths (1.6) pounds per million British thermal unit heat input when operating on No. 4 fuel oil, No. 5 fuel oil, No. 6 fuel oil, or 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 two (2) aggregate dryer burners using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

(c) In order to demonstrate compliance with Conditions D.1.8 and D.1.9 the Permittee shall demonstrate that weight percent sulfur dioxide in the fuels used does not exceed one half of a percent (0.5%) by weight when operating on No. 2 distillate fuel oil, and one percent (1.0%) when operating on No. 4 fuel oil, No. 5 fuel oil, No. 6 fuel oil or waste oil using the methods described in (a) of this condition.

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.1.13 Particulate Matter (PM and PM_{10})

In order to comply with Conditions D.1.3 and D.1.4 the baghouses for particulate control shall be in operation and control emissions from the drum mix aggregate dryer/mixer and batch mix aggregate dryer/mixer at all times that the aggregate dryer/mixers are in operation.

D.1.14 Visible Emissions Notations

(a) Daily visible emission notations of the aggregate drum mixer and burner baghouse stack exhaust SV1-D, the aggregate batch mixer and burner baghouse stack exhaust SV1-B, and the conveying, material transfer points, and screening shall be performed during normal daylight operations. 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) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.1.15 Parametric Monitoring

The Permittee shall record the pressure drop across each of the baghouses used in conjunction with the aggregate dryer/mixer, once per day when the process is in operation. When for any one reading, the pressure drop across either 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 - Response to Excursions or Exceedances. 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 - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

D.1.16 Broken or Failed Bag Detection

(a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has 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).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emission unit. 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).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

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

D.1.17 Record Keeping Requirements

(a) To document compliance with conditions D.1.8 and D.1.9, the Permittee shall maintain records in accordance with (1) through (7) below. Records maintained for (1) through (7) below shall be complete and sufficient to establish compliance with the SO_2 emission limits established in Conditions D.1.8 and D.1.9 and the HCl and NO_x emission limit established in Condition D.1.9.

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

(2) Actual waste oil usage per month since last compliance determination period and equivalent SO_2, NO_x, and HCl emissions;

(3) Actual No. 2 fuel oil usage and equivalents per month since last compliance determination period and equivalent SO_2 and NO_x emissions; and

(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.

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) To document compliance with conditions D.1.3, D.1.4, D.1.5, D.1.6, and D.1.7, the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) shall be taken monthly and shall be complete and sufficient to establish compliance with the annual throughput limits to the aggregate dryers established in conditions D.1.3, D.1.4, D.1.5, D.1.6, and D.1.7.

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

(2) Asphalt mix throughput to the drum mix aggregate dryer per month since the last compliance determination period; and

(3) Asphalt mix throughput to the batch mix aggregate dryer per month since the last compliance determination period.

(c) The Permittee shall maintain records sufficient to verify compliance with the procedures specified in Condition D.1.12. Records shall be maintained for a period of five (5) years and shall be made available upon request by IDEM, OAQ.

(d) To document compliance with Condition D.1.14, the Permittee shall maintain daily records of visible emission notations of the aggregate drum mixer and burner baghouse stack exhaust SV1-D, the aggregate batch mixer and burner baghouse stack exhaust SV1-B, and the conveying, material transfer points, and screening operation. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (i.e. the process did not operate that day).

(e) To document compliance with Condition D.1.15, the Permittee shall maintain daily records of the pressure drop across the baghouse controlling the mixing and/or drying operations. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (i.e. the process did not operate that day).

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

D.1.18 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.3, D.1.4, D.1.5, D.1.6, D.1.7, and D.1.9 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 an “authorized individual” as defined by 326 IAC 2-1.1-1(1).

SECTION D.2 FACILITY OPERATION CONDITIONS

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

(a) cold-mix (stockpile mix) asphalt manufacturing operations and storage piles.
(The information describing the process contained in this emissions unit 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 (VOC) [326 IAC 8-5-2] [326 IAC 2-2] [326 IAC 2-3]

(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:

a) Penetrating prime coating

b) Stockpile storage

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

(b) The VOC solvent used as diluent in the liquid binder used in cold mix asphalt production from the plant shall be limited such that no more than 65.61 tons of VOC emissions emitted per twelve (12) consecutive months. This shall be achieved by limiting the total VOC solvent of any one selected binder to not exceed the stated limit for that binder during the last twelve (12) months. When more than one binder is used, the formula below must be applied so that the total VOC emitted does not exceed 65.61 tons per twelve (12) consecutive month period.

Liquid binders used in the production of cold mix asphalt shall be defined as follows:

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

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

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

(4) Emulsified asphalt with solvent, containing a maximum of 15% of liquid binder by weight of VOC solvent and 46.4% by weight of the VOC solvent in the liquid blend evaporating. The percent oil distillate in emulsified asphalt with solvent liquid, as determined by ASTM, must be 7% or less of the total emulsion by volume

(5) Other asphalt with solvent binder, containing a maximum 25.9% of the liquid binder of VOC solvent and 2.5% by weight of the VOC solvent evaporating

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

(1) Cutback asphalt rapid cure liquid binder usage shall not exceed 69.06 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 93.72 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 262.43 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.

(4) Emulsified asphalt with solvent liquid binder usage shall not exceed 141.39 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.

(5) Other asphalt with solvent liquid binder shall not exceed 2,624.28 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.

(6) The VOC solvent allotments in subpart (c)(1) through (c)(5) of this condition shall be adjusted when more than one type of binder is used per twelve (12) month consecutive period rolled on a monthly basis. In order to determine the tons of VOC emitted per each type of binder, use the following formula and divide the tons of VOC solvent used for each type of binder by the corresponding adjustment ratio listed in the table that follows.

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

Type of binder	tons VOC solvent	adjustment ratio	tons VOC emitted
cutback asphalt rapid cure		1	
cutback asphalt medium cure		1.36	
cutback asphalt slow cure		3.8	
emulsified asphalt		2.04	
other asphalt		38	

The equivalent total tons of VOC of the combined liquid binders shall be less than 65.61 tons per twelve (12) consecutive month period rolled on a monthly basis.

Compliance with the above limits shall limit source-wide VOC emissions to less than 100 tons per year and shall render the requirements of 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

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

D.2.2 Record Keeping Requirements

To document compliance with Condition D.2.1(b) and (c), 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.2.1(b) and (c).

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

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

(c) VOC solvent content by weight of the 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.2.3 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.1(b) and (c) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Brooks Construction Company Inc.
Source Address: 3930 Hardrock Road, Ft. Wayne, IN 46819
Mailing Address: 6525 Ardmore Avenue, Ft. Wayne, IN 46809
FESOP No.: F003-23353-00351

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
100 North Senate Avenue
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT

Source Name: Brooks Construction Company Inc.
Source Address: 3930 Hardrock Road, Ft. Wayne, IN 46819
Mailing Address: 6525 Ardmore Avenue, Ft. Wayne, IN 46809
FESOP No.: F003-23353-00351

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 317-233-0178, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), 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: Brooks Construction Company Inc.
Source Address: 3930 Hardrock Road, Ft. Wayne, IN 46819
Mailing Address: 6525 Ardmore Avenue, Ft. Wayne, IN 46809
FESOP No.: F003-23353-00351
Facility: Drum mixer (#2) and dryer (#3)
Parameter: Hot Mix Asphalt Production
Limit: The amount of hot mix asphalt produced in the drum mixer and dryer shall not exceed 1,000,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month HMA Production (tons)	Previous 11 Months HMA Production (tons)	12 Month Total HMA Production (tons)
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: Brooks Construction Company Inc.
Source Address: 3930 Hardrock Road, Ft. Wayne, IN 46819
Mailing Address: 6525 Ardmore Avenue, Ft. Wayne, IN 46809
FESOP No.: F003-23353-00351
Facility: Batch mixer (#4) and dryer (#5)
Parameter: Hot Mix Asphalt Production
Limit: The amount of hot mix asphalt produced in the batch mixer and dryer shall not exceed 143,975 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month HMA Production (tons)	Previous 11 Months HMA Production (tons)	12 Month Total HMA Production (tons)
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: Brooks Construction Company Inc.
Source Address: 3930 Hardrock Road, Ft. Wayne, IN 46819
Mailing Address: 6525 Ardmore Avenue, Ft. Wayne, IN 46809
FESOP No.: F003-23353-00351
Facility: 96.8 MMBtu per hour burner for the drum dryer
and 84.0 MMBtu per hour burner for the batch dryer
Parameter: No. 2 distillate fuel oil usage limit SO_2 emissions
Limit: The input of No. 2 distillate fuel oil with a maximum fuel oil sulfur content of 0.5% and No. 2 distillate fuel oil equivalents to the two (2) aggregate dryer burners (ID#3 and ID#5) combined shall be limited to less than 2,574,477 U.S. gallons per twelve (12) consecutive month period with compliance determined at the end of each month, where each one (1) million cubic feet (MMcf) of natural gas burned shall be equivalent to 8.6 gallons of No. 2 oil, each one (1) million cubic feet (MMcf) of landfill gas burned shall be equivalent to 89.2 gallons of No. 2 oil, every 1,000 gallon of No. 4 fuel oil burned shall be equivalent to 2,158 gallons of No. 2 fuel oil, every 1,000 gallon of No. 5 fuel oil burned shall be equivalent to 2,259 gallons of No. 2 oil, every 1,000 gallon of No. 6 fuel oil burned shall be equivalent to 2,259 gallons of No. 2 oil, and every 1,000 gallon of waste-reclaimed fuel oil burned shall be equivalent to 2,115 gallons of No. 2 oil. This limit is equivalent to SO_2 and NO_x emissions of less than 100 tons per year.

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	No. 2 fuel oil and equivalents usage This Month (gallons)	No. 2 fuel oil and equivalents usage Previous 11 Months (gallons)	12 Month Total No. 2 fuel oil and equivalents 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: Brooks Construction Company Inc.
Source Address: 3930 Hardrock Road, Ft. Wayne, IN 46819
Mailing Address: 6525 Ardmore Avenue, Ft. Wayne, IN 46809
FESOP No.: F003-23353-00351
Facility: 96.8 MMBtu per hour burner for the drum dryer
Parameter: Waste oil usage limit to limit SO_2 and HCl emissions
Limit: The input of re-refined waste oil with a limited sulfur content of 1.0% and a maximum chlorine content of 0.4% in the 92.5 MMBtu per hour burner for the aggregate dryer shall not exceed 750,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR:_____

Month	Column 1	Column 2	Column 1 + Column 2
	Re-refined waste oil Usage This Month (gallons)	Re-refined waste oil Usage Previous 11 Months (gallons)	12 Month Total Re-refined waste oil 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: Brooks Construction Company Inc.
Source Address: 2059 State Road 8 West, Auburn, IN 46706
Mailing Address: 6525 Ardmore Avenue, Ft. Wayne, IN 46809
FESOP No.: F003-23353-00351
Facility: Cold-mix asphalt
Parameter: VOC
Limit:

(a) Cutback asphalt rapid cure liquid binder usage shall not exceed 69.06 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.

(b) Cutback asphalt medium cure liquid binder usage shall not exceed 93.72 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.

(c) Cutback asphalt slow cure liquid binder usage shall not exceed 262.43 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.

(d) Emulsified asphalt with solvent liquid binder usage shall not exceed 141.39 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.

(e) Other asphalt with solvent liquid binder shall not exceed 2,624.28 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.

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 Solvent usage This Month (tons)	Column 2 Solvent usage Previous 11 Months (tons)	Column 1 + Column 2 Solvent usage 12 Month Total (tons)
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.

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

Source Name: **Brooks Construction Company Inc**
Initial Source Address: **2059 State Road 8 West, Auburn, IN 46706**
Mailing Address: **6525 Ardmore Avenue, Ft. Wayne, IN 46809**
FESOP No.: **F003-23353-00351**
Facility: **Cold-mix asphalt storage piles**
Parameter: **VOC**
Limit:: **65.61 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				

☐ No deviation occurred in this quarter.
☐ Deviation/s occurred in this quarter.

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: Brooks Construction Company Inc.
Source Address: 3930 Hardrock Road, Ft. Wayne, IN 46819
Mailing Address: 6525 Ardmore Avenue, Ft. Wayne, IN 46809
FESOP No.: F003-23353-00351

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 ANo 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:	

Page 2 of 2

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

ASPHALT PLANT SITE FUGITIVE DUST CONTROL PLAN

(a) Fugitive particulate matter (dust) emissions from paved roads, unpaved roads, and parking lots shall be controlled by one or more of the following measures:

(1) Paved roads and parking lots:

(A) Cleaning by vacuum sweeping on an as needed basis (monthly at a minimum).
(B) Power brooming while wet either from rain or application of water.

(2) Unpaved roads and parking lots:

(A) Paving with asphalt.
(B) Treating with emulsified asphalt on an as needed basis.
(C) Treating with water on an as needed basis.
(D) Double chip and seal the road surface and maintained on an as needed basis.

(b) Fugitive particulate matter (dust) emissions from aggregate stockpiles shall be controlled by one or more of the following measures:

(1) Maintain minimum size and number of stock piles of aggregate.
(2) Treating around the stockpile area with emulsified asphalt on an as needed basis.
(3) Treating around the stockpile area with water on an as needed basis.
(4) Treating the stockpiles with water on an as needed basis.

(c) Fugitive particulate matter (dust) emissions from outdoor conveying of aggregates shall be controlled by one or more of the following measures:

(1) Apply water at the feed and the intermediate points on an as needed basis.

(d) Fugitive particulate matter (dust) emissions from the transferring of aggregates shall be controlled by one or more of the following measures:

(1) Minimize the vehicular distance between the transfer points.
(2) Enclose the transfer points.
(3) Apply water on transfer points on an as needed basis.

(e) Fugitive particulate matter (dust) emissions from transporting of aggregate by truck, front end loader, etc. shall be controlled by one or more of the following measures:

(1) Tarping the aggregate hauling vehicles.
(2) Maintain vehicle bodies in a condition to prevent leakage.
(3) Spray the aggregates with water.
(4) Maintain a 10 mile per hour (MPH) speed limit in the yard.

(f) Fugitive particulate matter (dust) emissions from the loading and unloading of aggregate shall be controlled by one or more of the following measures:

(1) Reduce free fall distance to a minimum.
(2) Reduce the rate of discharge of the aggregate.
(3) Spray the aggregate with water on an as needed basis.

“An as needed basis” means the frequency or quantity of application necessary to minimize visible particulate matter emissions.

Indiana Department of Environmental Management
Office of Air Quality

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

Source Background and Description

Source Name:	Brooks Construction Company, Inc.
Source Location:	3930 Hardrock Road, Ft. Wayne, IN 46819
County:	Allen
SIC Code:	2951
Operation Permit No.:	F003-23353-00351
Permit Reviewer:	Julia Handley/EVP

On March 16, 2007, the Indiana Department of Environmental Management, Office of Air Quality (IDEM, OAQ) had a notice published in the Ft. Wayne Journal Gazette, Ft. Wayne, Indiana, stating that Brooks Construction Company, Inc. had applied for a Federally Enforceable State Operating Permit (FESOP) to operate a stationary hot mix asphalt plant. The notice also stated that IDEM, OAQ proposed to issue a FESOP for this operation and provided information on how the public could review the proposed FESOP and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this FESOP should be issued as proposed.

Upon further review IDEM, OAQ has made the following changes to the FESOP (additions in bold, deletions in ~~strikeout~~):

Revision 1:

The conditions requiring the visible emission notations and pressure drop monitoring, have been revised to remove the phrase "when venting to the atmosphere". The units subject to these conditions always vent outdoors, therefore the statement is not required. Conditions D.1.14 and D.1.15 have been revised as shown below.

D.1.14 Visible Emissions Notations

(a) Daily visible emission notations of the aggregate drum mixer and burner baghouse stack exhaust SV1-D, the aggregate batch mixer and burner baghouse stack exhaust SV1-B, and the conveying, material transfer points, and screening shall be performed during normal daylight operations ~~when exhausting to the atmosphere~~. A trained employee shall record whether emissions are normal or abnormal.

***

D.1.15 Parametric Monitoring

The Permittee shall record the pressure drop across each of the baghouses used in conjunction with the aggregate dryer/mixer, once per day when the process is in operation ~~and venting to the atmosphere~~. When for any one reading, the pressure drop across either 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 - Response to Excursions or Exceedances. 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 - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

***

Revision 2:

Condition D.1.12 has been revised to clarify the record keeping requirements associated with visible emission notations and baghouse parametric monitoring.

D.1.17 Record Keeping Requirements

***

(d) To document compliance with Condition D.1.14, the Permittee shall maintain daily records of visible emission notations of the aggregate drum mixer and burner baghouse stack exhaust SV1-D, the aggregate batch mixer and burner baghouse stack exhaust SV1-B, and the conveying, material transfer points, and screening operation ~~or maintain a record of the reason why the visible emission notations were not taken~~. **The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation, (i.e. the process did not operate that day).**

(e) To document compliance with Condition D.1.15, the Permittee shall maintain daily records of the pressure drop ~~during normal operation when venting to the atmosphere.~~ **across the baghouse controlling the mixing and/or drying operations. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (i.e. the process did not operate that day).**

***

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Federally Enforceable State Operating Permit (FESOP) Renewal

Source Background and Description

Source Name:	Brooks Construction Company, Inc.
Source Location:	3930 Hardrock Road, Ft. Wayne, IN 46819
County:	Allen
SIC Code:	2951
Operation Permit No.:	F003-14035-03112
Operation Permit Issuance Date:	February 8, 2002
Permit Renewal No.:	F003-23353-00351
Permit Reviewer:	Julia Handley/EVP

The Office of Air Quality (OAQ) has reviewed a FESOP renewal application from Brooks Construction Company Inc. relating to the operation of a stationary hot mix asphalt plant.

History

This is a stationary source that has been located at its current location, 3930 Hardrock Road, Ft. Wayne, IN 46819, since initial permitting. However, this source has been previously permitted under portable source ID number 003-03112. Pursuant to 326 IAC 2-1.1-1(15), this source does not meets the definition of a portable source because it has not moved at least once in the last permit term. Therefore, the source ID number has been changed to stationary source ID number 003-00351.

Permitted Emission Units and Pollution Control Equipment

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

(a) The drum-mix portion of this source, consisting of the following:

(1) one (1) aggregate drum-mix dryer (ID #2), installed in 1992, with a maximum capacity of 400 tons per hour, equipped with one (1) natural gas fired, or landfill gas (LFG)/natural gas co-fired, aggregate dryer burner (ID #3), with a maximum rated capacity of 96.8 million British thermal units (MMBtu) per hour, using Nos. 2, 4, 5 and 6 fuel oils and Waste-Reclaimed oil as back-up fuel, with one (1) inertial knockout box and one (1) baghouse in series for particulate matter control, exhausting at one (1) stack identified as SV1-D;

(2) one (1) drag slat hot mix conveyor; three (3) feed conveyors; and one (1) screen; and

(3) cold-mix (stockpile mix) asphalt manufacturing operations and storage piles.

(b) The batch-mix portion of this source, consisting of the following:

(1) one (1) aggregate rotary dryer (ID #4), installed in 1989, with a maximum capacity of 220 tons per hour, equipped with one (1) natural gas fired aggregate dryer burner (ID #5), with a maximum rated capacity of 84.0 million British thermal units (MMBtu) per hour, using No. 2 oil as back-up fuel, with one (1) cyclone and one (1) baghouse in series for particulate matter control, exhausting at one (1) stack identified as SV1-B; and

(2) Asphalt batch tower, consisting of the following:

(A) one (1) hot elevator;

(B) one (1) screen;

(C) four (4) hot bins, each with a maximum holding capacity of 40 tons;

(D) one (1) aggregate hopper, with a maximum holding capacity of 6,000 pounds (lb);

(E) one (1) asphalt hopper, with a maximum holding capacity of 600 lb;

(F) one (1) pugmill, with a maximum holding capacity of 6,000 lb; and

(G) one (1) skip hoist with a maximum holding capacity of 6,000 lb.

(c) General material conveying and handling operations, including:

(1) cold feed system consisting of ten (10) bins with a total maximum holding capacity of 200 tons;

(2) storage silos consisting of five (5) bins with a total maximum storage capacity of 900 tons;

(3) two (2) recycled asphalt pavement (RAP) feed bins, each with a maximum holding capacity of 30 tons;

(4) one (1) RAP storage pile with a maximum storage capacity of 40,000 tons; and

(5) aggregate storage piles, with a total maximum storage capacity of 101,500 tons.

Under 40 CFR 60, Subpart I, this hot mix asphalt plant is considered an affected facility.

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) MMBtu per hour:

(1) one (1) direct-fired hot oil heater, installed in July 1982, with a heat input rating of 1.4 MMBtu per hour, exhausting at stacks SV2. This insignificant activity uses No. 2 oil as a back-up fuel.

(2) one (1) direct-fired hot oil heater, installed in April 1991, with a heat input rating of 1.4 MMBtu per hour, exhausting at stacks SV3. This insignificant activity uses No. 2 oil as a back-up fuel; and

(2) one (1) direct-fired hot oil heater, approved for construction in 2007, with a heat input rating of 2.0 MMBtu per hour, exhausting fugitively. This insignificant activity uses No. 2 oil as a back-up fuel.

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

(c) paved and unpaved roads and parking lots with public access [326 IAC 6-4][326 IAC 6-5];

(d) one (1) QA lab and one (1) State lab as defined in 326 IAC 2-7-1(21)(D);

(e) other categories with emissions below insignificant thresholds:

(1) storage tanks emitting less than one (1) ton per year of a single HAP and less than fifteen (15) lb per day of VOC including:

(A) one (1) liquid asphalt storage tank (ID #20A), constructed in January 1985, with a maximum storage capacity of 340,000 gallons, exhausting at one (1) stack, identified as SV4;

(B) one (1) liquid asphalt storage tank (ID #20B), constructed in 1969, with a maximum storage capacity of 15,000 gallons, exhausting at one (1) stack, identified as SV5;

(C) one (1) liquid asphalt storage tank (ID #20C), constructed in July 1992 each with a maximum storage capacity of 20,000 gallons, exhausting at one (1) stack, identified as SV6;

(D) one (1) liquid asphalt storage tank (ID #20D), constructed in 1997 with a maximum storage capacity of 20,000 gallons, exhausting at one (1) stack, identified as SV7;

(E) four (4) liquid asphalt storage tank (ID #20E, 20F, 20G, 20H), constructed in 2006, each with a maximum storage capacity of 30,000 gallons;

(F) one (1) liquid asphalt storage tank (ID #20I), constructed in 2006 with a maximum storage capacity of 325,000 gallons; and

(G) two (2) burner fuel storage tank (ID #20J and 20K), constructed in 2006 each with a maximum storage capacity of 30,000 gallons.

(2) cutting, grinding and welding operations located in the shop.

Existing Approvals

The source has been operating under the previous FESOP 003-14035-03112 issued on February 8, 2002, and the following amendments and revisions:

(a) First Significant Permit Revision 003-19122-03112 issued on September 2, 2004.

All conditions from previous approvals were incorporated into this FESOP except the following:

(a) F003-14035-03112 issued on February 8, 2002:

D.2.2 Record Keeping Requirements [326 IAC 12][40 CFR 60.110b, Subpart Kb]

Pursuant to New Source Performance Standard (NSPS), 326 IAC 12 and 40 CFR Part 60.116 Subpart Kb, the Permittee shall maintain accessible records for the life of each volatile liquid storage tank. The records for each tank shall include:

(a) The date the tank was manufactured,

(b) The dimensions of the tank,

(c) An analysis showing the capacity of the tank, and

(d) The vapor pressure of the VOC stored; indicating the minimum true vapor pressure of the VOC is less than 3 kPa for tank #20A and less than 15 kPa for tanks #20C and #20D.

Reason not incorporated: 40 CFR 60.110b, Subpart Kb, which was amended October 15, 2003, exempts storage vessels with a design over 75 cubic meters and less than 151 cubic meters storing materials with a maximum true vapor pressure less than 15.0 kPa, and tanks over 151 cubic meters storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) . Accordingly, storage tanks (ID Nos. 20A, 20C and 20D) are no longer 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.

(b) F003-14035-03112 issued on February 8, 2002:

D.2.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), the allowable PM emission rate from the cutting, grinding and welding operations located in the shop, as insignificant activities, shall not exceed the allowable emission rate of particulate matter per hour as determined by the following:

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

$E = 4.10\ P^{0.67}$ where: E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

Reason not incorporated: Pursuant to 326 IAC 6-3-1(b)(13) the grinding and welding operations are exempt from the requirements to 326 IAC 6-3-2 because these are trivial activities as defined under 326 IAC 2-7-1(40). The welding operations and associated equipment at this facility are used in routine fabrication, maintenance, and repair of buildings, structures, equipment, or vehicles at the source where air emissions from those activities would not be associated with any commercial production process. The grinding operation is exempt because these activities are performed using hand-held equipment. Pursuant to 326 IAC 6-3-1(b)(10) the cutting operations are exempt because less than three thousand four hundred (3,400) inches per hour of stock one (1) inch thickness or less is cut. Accordingly, the cutting, grinding and welding operations located in the shop are not subject to 326 IAC 6-3-2.

Enforcement Issue

IDEM is aware that the source did not apply for a FESOP renewal in a timely manner. IDEM is reviewing this matter and will take appropriate action.

Recommendation

The staff recommends to the Commissioner that the FESOP renewal 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 renewal application for the purposes of this review was received on July 13, 2006. Additional information was received on September 15, 2006.

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

Emission Calculations

See Appendix A, pages 1 through 20, of this document for detailed emission calculations.

Unrestricted Potential Emissions

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

Pollutant	Unrestricted Potential Emissions (tons/yr)
PM	Greater than 250
PM-10	Greater than 250
SO_2	Greater than 250
VOC	Greater than 250
CO	Greater than 250
NO_x	Greater than 250

HAPs	Unrestricted Potential Emissions (tons/yr)
Acetaldehyde	Less than 10
Acrolein	Less than 10
Arsenic	Less than 10
Benzene	Less than 10
Beryllium	Less than 10
Cadmium	Less than 10
Chromium	Less than 10
Cobalt	Less than 10
Ethyl benzene	Less than 10
Formaldehyde	Less than 10
HCl	Less than 10
Hexane	Less than 10
Lead	Less than 10
Manganese	Less than 10
Methyl chloroform	Less than 10
Mercury	Less than 10
Nickel	Less than 10
Propionaldehyde	Less than 10
Phenol	Less than 10
Quinone	Less than 10
Selenium	Less than 10
2,2,4 Trimethylpentane	Less than 10
Toluene	Less than 10
Total PAH HAPs	Less than 10
Xylene	Less than 10
other	Less than 10
Total	Less than 25

(a) The unrestricted potential emissions of PM_{10}, SO_2, VOC, CO and NO_x are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7. 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. Since there are applicable New Source Performance Standards that were in effect on August 7, 1980, 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 source has opted to remain a FESOP source. 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. Since the source has not constructed any new emission units, the source's potential to emit is based on the emission units included in the original FESOP.

	Potential To Emit (tons/year)							
Process/emission unit	PM	PM-10	SO_2	VOC	CO	NO_x	Single HAP	Combined HAPs
Drum Mixer and Dryer(1)	96.60(2)	48.97(3)	89.46(4)	16.00	65.00	79.19	9.90(5)	16.97
Batch Mixer and Dryer(1)	13.91(2)	7.05(3)		0.59	28.80	8.64	0.19(6)	0.55
Hot Oil Heaters	0.30	0.50	10.44	0.12	1.77	3.00	Negl.	Negl.
Conveying/Handling	30.02	14.20	-	-	-	-	-	
Unpaved Roads	106.53	27.15	-	-	-	-	-	
Storage Piles	0.79	0.28	-	-	-	-	-	
Load-out	1.42	1.42		10.62	3.66		0.06(7)	0.25
Silo filling(1)	0.34	0.34	-	6.97	0.67	-	0.05(8)	0.11
Cold Mix VOC Storage	-	-	-	65.61	-	-	-	
Total Emissions	249.90	99.90	99.90	99.90	99.90	90.83	<10	<25

(1) Limited PTE based upon annual throughput limits and fuel usage limit to comply with 326 IAC 2-8 (FESOP).
(2) Maximum allowable PM emissions for 326 IAC 2-2 (PSD) avoidance.
(3) Maximum allowable PM10 emissions in order to comply with 326 IAC 2-8 (FESOP).
(4) SO_2 emissions from the drum and batch operations based on combined fuel usage limit for the batch and drum aggregate dryers (#3 and #5).
(5) Largest single HAP from aggregate dryer and burner is HCl with a PTE of 9.90 tons per year.
(6) Largest single batch mixing is Xylene with a PTE of 0.19 tons per year.
(7) Largest single HAP from load-out is Xylene with a PTE of 0.06 tons per year.
(8) Largest single HAP from silo filling is Formaldehyde with a PTE of 0.05 tons per year.

County Attainment Status

The source is located in Allen County.

Pollutant	Status
PM2.5	Attainment
PM-10	Attainment
SO_2	Attainment
NO_2	Attainment
8-hour Ozone	Basic Nonattainment
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) 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 and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Allen County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

(b) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 redesignating Delaware, Greene, Jackson, Vanderburgh, Vigo and Warrick Counties to attainment for the eight-hour ozone standard, redesignating Lake County to attainment for the sulfur dioxide standard, and revoking the one-hour ozone standard in Indiana.

(c) Allen County has been classified as attainment for PM 2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. See the State Rule Applicability for the source section.

(d) Allen County has been classified as attainment or unclassifiable in Indiana for all other regulated 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

Existing 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	Less than 250
PM-10	Less than 100
SO_2	Less than 100
VOC	Less than 100
CO	Less than 100
NO_x	Less than 100
Single HAP	Less than 10
Combination HAPs	Less than 25

(a) This existing 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.

(b) This existing source is not a major stationary source because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year or greater, and it is not in one of the 28 listed source categories.

Federal Rule Applicability

(a) This stationary drum hot mix asphalt plant constructed in 1990 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 it was constructed after June 11, 1973. 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 be able to comply with this rule by using baghouses to limit particulate matter emissions from the drum mixer and dryer and the batch mixer and dryer to less than 0.04 gr/dscf.

The aggregate dryer and aggregate drum mixer and dryer and batch mixer and dryer are subject to the following portions of 40 CFR 60, Subpart I:

(1) 40 CFR 60.90.
(2) 40 CFR 60.91.
(3) 40 CFR 60.92.
(4) 40 CFR 60.93.

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

(b) The asphalt plant is not subject to the New Source Performance Standard 326 IAC 12 (40 CFR 60.670 through 60.676, Subpart OOO) "Standards of Performance for Nonmetallic Mineral Processing Plants" for recycled asphalt pavement (RAP) usage since the RAP is received onsite ready-to-use, and there is no crushing or grinding of the RAP prior to loading into the first storage silo/bin. Therefore, these requirements are not included in this permit.

(c) The 340,000 gallon storage tank (ID No. 20A), 325,000 gallon tank (ID No. 20I), 30,000 gallon tanks (ID Nos. 20E, 20F, 20G, 20H, 20J and 20K), and 20,000 gallon storage tanks (ID Nos. 20C and 20D) are subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.110b, Subpart Kb) because the tanks were constructed after the July 23, 1984 applicability date with individual storage capacities greater than 75 cubic meters (19,813 gallons). Tanks 20A and 20I, with storage capacities greater than 151 cubic meters (39,890 gallons), store materials with a maximum true vapor pressure less than 3.5 kPa, and therefore are exempt from the requirements of this rule. Tanks 20E, 20F, 20G, 20H, 20J, 20K, 20C and 20D, with storage capacities greater than 75 cubic meters (19,813 gallons) but less than 151 cubic meters, store materials with maximum true vapor pressures less than 15.0 kPa; therefore, pursuant to 40 CFR 60.110b(b), these tanks are exempt from this rule. Therefore NSPS Subpart Kb is not included in this permit.

(d) The 15,000 gallon liquid asphalt storage tank (ID #20B) is not subject to the requirements of 326 IAC 12, (40 CFR 60, Subparts K, Ka, and Kb) since the storage tank was constructed in 1969, before the earliest rule applicability date. Therefore NSPS Subparts K, Ka or Kb are not included in this permit.

(e) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20, 40 CFR Part 61 and 40 CFR Part 63) applicable to this source, because it is not a major source of HAP emissions. Therefore, these requirements are not included in this permit.

(f) The requirements of 40 CFR Part 64, Compliance Assurance Monitoring, are not included in this permit. These 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. Therefore, the requirements of 40 CFR 64, Compliance Assurance Monitoring, are not applicable to this source.

State Rule Applicability – Entire Source

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

This source, constructed in 1989, after the applicability date of August 7, 1977, is not considered a major source because it is not one of the 28 listed source categories and shall continue to limit pollutant emissions to less than 250 tons per year as follows. Particulate matter emissions from the drum mixer (#2) and dryer (#3) shall not exceed 0.193 pounds of PM per ton of asphalt mix based on an annual throughput limit of 1,000,000 tons of asphalt mix per year. This is equivalent to 96.60 ton per year from the drum mixer and dryer. Particulate matter emissions from the batch mixer (#4) and dryer (#5) shall not exceed 0.193 pounds of PM per ton of asphalt mix based on an annual throughput limit of 143,975 tons of asphalt mix per year. This is equivalent to 13.91 tons per year from the batch mixer and dryer. The source wide PM emissions will be limited to less than 250 tons per year. VOC, SO_2 CO, NO_x and PM_{10} emissions shall be limited to less than 100 tons per year as described under the FESOP section below. Therefore, the requirements of 326 IAC 2-7 (Part 70), and 326 IAC 2-2 (PSD) are not applicable.

326 IAC 2-3 (Emission Offset)

Allen County has been designated as basic nonattainment for the 8-hour ozone standard. This source is not considered a major source because the potential to emit of NO_x is limited to less than 100 tons per year and the VOC emissions shall be limited to less than 100 tons per year as described under the FESOP section below. Therefore, this source has been operating as a minor source pursuant to 326 IAC 2-3, Emission Offset.

326 IAC 2-6 (Emission Reporting)

Pursuant to 326 IAC 2-6-1, this source is not subject to this rule because it is complying with 326 IAC 2-8 (FESOP) and is not required to have an operating permit under 326 IAC 2-7 (Part 70). In addition, the source is not located in Lake or Porter counties, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 2-8 (FESOP)

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

(a) The annual production of hot mix asphalt from the batch mixer (#4) and dryer (#5) shall be limited to 143,975 tons of asphalt per twelve (12) consecutive month period, with compliance determined at the end of each month. This limit, in addition to the CO and NO_x limits in (b) and (c) below, is required to limit the source's emissions of all regulated pollutants, except PM, to less than 100 tons per year. Therefore, the requirements of 326 IAC 2-7 (Part 70), and 326 IAC 2-2 (PSD) are not applicable.

(b) CO emissions from the batch mix dryer shall not exceed 0.40 pounds of CO per ton of hot mix asphalt produced. This will limit CO emissions from the batch mixer/dryer to less than 28.80 tons per year. Compliance with this limit will satisfy 326 IAC 2-8-4 and render the requirements of Part 70 (326 IAC 2-7) and PSD (326 IAC 2-2) not applicable.

(c) NO_x emissions from the batch mix dryer shall not exceed 0.12 pound of NO_x per ton of hot mix asphalt produced. This will limit NO_x emissions from the batch mixer/dryer to less than 8.64 tons per year. Compliance with this limit will satisfy 326 IAC 2-8-4 and render the requirements of Part 70 (326 IAC 2-7) not applicable.

(d) The annual throughput of aggregate to the drum mixer (#2) and dryer (#3) shall be limited to 1,000,000 tons of asphalt per twelve (12) consecutive month period, with compliance determined at the end of each month. This limit, in addition to the CO limit in (e) below, is required to limit the source's emissions of all regulated pollutants, except PM, to less than 100 tons per year. Therefore, the requirements of 326 IAC 2-7 (Part 70), and 326 IAC 2-2 (PSD) are not applicable.

(e) CO emissions from the drum mixer and dryer shall not exceed 0.13 pounds of CO per ton of hot mix asphalt produced. This will limit CO emissions from the drum mixer/dryer to less than 65.00 tons per year. Compliance with this limit will satisfy 326 IAC 2-8-4 and render the requirements of Part 70 (326 IAC 2-7) and PSD (326 IAC 2-2) not applicable.

(f) The potential to emit NO_x from the combustion of Nos. 2, 4, 5, 6 fuel oils and waste oil in the 96.8 MMBtu per hour burner (#3) for the aggregate drum mix dryer based upon 8,760 hours per year of operation is limited to less than 88.26 tons per year necessary to limit source wide NO_x emissions to less than 100 tons per year via the fuel usage limitation based on SO_2 (See (g) below and Appendix A page 11 of 20).

(g) The input of No. 2 distillate fuel oil with a maximum fuel oil sulfur content of 0.5% and No. 2 distillate fuel oil equivalents to the two (2) aggregate dryer burners (ID#3 and ID#5) combined shall be limited to less than 2,574,477 U.S. gallons per twelve (12) consecutive month period with compliance determined at the end of each month. These input limits are required to limit the potential to emit sulfur dioxide (SO_2) from the source to less than 100 tons per 12 consecutive month period, with compliance determined at the end of each month. Therefore, the requirements of 326 IAC 2-7 do not apply.

(h) For purposes of determining compliance with paragraph (a) of this condition, the following shall apply:

(1) each one (1) million cubic feet (MMcf) of natural gas burned shall be equivalent to 8.6 gallons of No. 2 oil, based on SO_2 emissions, such that the total gallons of No. 2 distillate fuel oil and No. 2 oil equivalent input does not exceed the limit specified.

(2) each one (1) million cubic feet (MMcf) of landfill gas burned shall be equivalent to 89.2 gallons of No. 2 oil, based on SO_2 emissions, such that the total gallons of No. 2 distillate fuel oil and No. 2 oil equivalent input does not exceed the limit specified.

(3) every 1,000 gallon of No. 4 fuel oil burned shall be equivalent to 2,158 gallons of No. 2 oil, based on SO_2 emissions, such that the total gallons of No. 2 distillate fuel oil and No. 2 oil equivalent input does not exceed the limit specified.

(4) every 1,000 gallon of No. 5 fuel oil burned shall be equivalent to 2,259 gallons of No. 2 oil, based on SO_2 emissions, such that the total gallons of No. 2 distillate fuel oil and No. 2 oil equivalent input does not exceed the limit specified.

(5) every 1,000 gallon of No. 6 fuel oil burned shall be equivalent to 2,259 gallons of No. 2 oil, based on SO_2 emissions, such that the total gallons of No. 2 distillate fuel oil and No. 2 oil equivalent input does not exceed the limit specified.

(6) every 1,000 gallon of waste-reclaimed fuel oil burned shall be equivalent to 2,115 gallons of No. 2 oil, based on SO_2 emissions, such that the total gallons of No. 2 distillate fuel oil and No. 2 oil equivalent input does not exceed the limit specified.

These usage limits are required to limit the source's potential SO_2 emissions to less than 100 tons per year. This usage limit will also limit NO_x emissions to less than 100 tons per year. Therefore, these limits will render the requirements of 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD), and 326 IAC 2-3 (Emission Offset) not applicable.

(i) The following sulfur content limits shall apply:
(1) the sulfur content of No. 2 distillate oil shall not exceed 0.5% by weight;
(2) the sulfur content of No. 4 fuel oil shall not exceed 1.0% by weight;
(3) the sulfur content of No. 5 fuel oil shall not exceed 1.0% by weight;
(4) the sulfur content of No. 6 fuel oil shall not exceed 1.0% by weight; and
(5) the sulfur content of waste oil shall not exceed 1.0% by weight.

These usage limits in addition to the usage limits in paragraphs (g) and (h) are required to limit the source's potential to emit sulfur dioxide (SO_2) to less than 100 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD) will not apply.

(j) The input of re-refined waste oil with a limited sulfur content of 1.0 % and a maximum chlorine content of 0.4% in the 96.8 MMBtu per hour burner for the aggregate dryer shall not exceed 750,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month, such that the source-wide HCl emissions are limited to 9.90 tons per year and source-wide SO_2 and NO_x emissions are limited to less than 100 tons per year.

This fuel usage limitation will limit HCl emissions to less than 10 tons per year based on a maximum re-refined waste oil chlorine content of 0.4%. Since HCl is the only single HAP with unrestricted potential emissions of greater than 10 tons per year, this limit will ensure that source-wide single HAP and total HAP emissions are limited to less than 10 and 25 tons per year, respectively. This limit will render the requirements of 326 IAC 2-7 (Part 70), and 326 IAC 2-2 (PSD) not applicable.

(k) The VOC solvent used as diluent in the liquid binder used in cold mix asphalt production from the plant shall be limited such that no more than 65.61 tons of VOC emissions emitted per twelve (12) consecutive months. This shall be achieved by limiting the total VOC solvent of any one selected binder to not exceed the stated limit for that binder during the last twelve (12) months. When more than one binder is used, the formula below must be applied so that the total VOC emitted does not exceed 65.61 tons per twelve (12) consecutive month period.

Liquid binders used in the production of cold mix asphalt shall be defined as follows:

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

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

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

(4) Emulsified asphalt with solvent, containing a maximum of 15% of liquid binder by weight of VOC solvent and 46.4% by weight of the VOC solvent in the liquid blend evaporating. The percent oil distillate in emulsified asphalt with solvent liquid, as determined by ASTM, must be 7% or less of the total emulsion by volume

(5) Other asphalt with solvent binder, containing a maximum 25.9% of the liquid binder of VOC solvent and 2.5% by weight of the VOC solvent evaporating

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 69.06 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 93.72 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 262.43 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.

(4) Emulsified asphalt with solvent liquid binder usage shall not exceed 141.39 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.

(5) Other asphalt with solvent liquid binder shall not exceed 2,624.28 tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.

(6) The VOC solvent allotments in paragraphs (1) through (5) above shall be adjusted when more than one type of binder is used per twelve (12) month consecutive period rolled on a monthly basis. In order to determine the tons of VOC emitted per each type of binder, use the following formula and divide the tons of VOC solvent used for each type of binder by the corresponding adjustment ratio listed in the table that follows.

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

Type of binder	tons VOC solvent	adjustment ratio	tons VOC emitted
cutback asphalt rapid cure		1	
cutback asphalt medium cure		1.36	
cutback asphalt slow cure		3.8	
emulsified asphalt		2.04	
other asphalt		38	

The equivalent total tons of VOC of the combined liquid binders shall be less than 65.61 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.

(l) PM-10 emissions from the drum mixing and drying operation shall be limited to 0.098 pounds per ton of asphalt produced based on a limited annual throughput of 1,000,000 tons per year. The source will be able to comply with the PM-10 emission limit by utilizing a baghouse for controlling PM-10 emissions from the aggregate dryer to less than 0.098 pounds per ton of asphalt produced. Operation of the baghouse is required at all times to be able to comply with this limit. Compliance with this limit shall limit the source's potential to emit of PM-10 to less than 100 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD) are not applicable.

(m) PM-10 emissions from the batch mixing and drying operation shall be limited to 0.098 pounds per ton of asphalt produced based on a limited annual throughput of 143,975 tons per year. The source can comply with the PM-10 emission limit by utilizing a baghouse for controlling PM-10 emissions from the aggregate dryer to less than 0.098 pounds per ton of asphalt produced. Operation of the baghouse is required at all times to be able to comply with this limit. Compliance with this limit shall limit the source's potential to emit of PM-10 to less than 100 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD) are 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 2-4.1-1 (New Source Toxics Control)

Pursuant to 326 IAC 2-4.1-1 (New Source Toxics Control), any new process or production unit, which in and of itself emits or has the PTE 10 tons per year of any HAP or 25 tons per year of the combination of HAPs, and is constructed or reconstructed after July 27, 1997, must be controlled using technologies consistent with Maximum Achievable Control Technology (MACT).
This source has limited 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 6-4 (Fugitive Dust Emissions)

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).

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

This source is subject to 326 IAC 6-5, for fugitive particulate matter emissions. Pursuant to the rule, fugitive particulate matter emissions shall be controlled according to the dust control plan submitted on March 11, 1996. The source shall continue to comply with all the dust abatement measures of the dust control plan which consists of the following:

(a) Fugitive particulate matter (dust) emissions from paved roads, unpaved roads, and parking lots shall be controlled by one or more of the following measures:

(1) Paved roads and parking lots:
  (A) Cleaning by vacuum sweeping on an as needed basis (monthly at a minimum).
  (B) Power brooming while wet either from rain or application of water.

(2) Unpaved roads and parking lots:
  (A) Paving with asphalt.
  (B) Treating with emulsified asphalt on an as needed basis.
  (C) Treating with water on an as needed basis.
  (D) Double chip and seal the road surface and maintained on an as needed basis.

(b) Fugitive particulate matter (dust) emissions from aggregate stockpiles shall be controlled by one or more of the following measures:

(1) Maintain minimum size and number of stock piles of aggregate.
(2) Treating around the stockpile area with emulsified asphalt on an as needed basis.
(3) Treating around the stockpile area with water on an as needed basis.
(4) Treating the stockpiles with water on an as needed basis.

(c) Fugitive particulate matter (dust) emissions from outdoor conveying of aggregates shall be controlled by one or more of the following measures:

(1) Apply water at the feed and the intermediate points on an as needed basis.

(d) Fugitive particulate matter (dust) emissions from the transferring of aggregates shall be controlled by one or more of the following measures:

(1) Minimize the vehicular distance between the transfer points.
(2) Enclose the transfer points.
(3) Apply water on transfer points on an as needed basis.

(e) Fugitive particulate matter (dust) emissions from transporting of aggregate by truck, front end loader, etc. shall be controlled by one or more of the following measures:

(1) Tarping the aggregate hauling vehicles.
(2) Maintain vehicle bodies in a condition to prevent leakage.
(3) Spray the aggregates with water.
(4) Maintain a 10 mile per hour (MPH) speed limit in the yard.

(f) Fugitive particulate matter (dust) emissions from the loading and unloading of aggregate shall be controlled by one or more of the following measures:

(1) Reduce free fall distance to a minimum.
(2) Reduce the rate of discharge of the aggregate.
(3) Spray the aggregate with water on an as needed basis.

“An as needed basis” means the frequency or quantity of application necessary to minimize visible particulate matter emissions.

326 IAC 6-3-2 (Particulate Matter Emissions 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 not consistent with applicable limitations in 326 IAC 12, 40 CFR 60, Subpart I. Since the applicable PM limit established by 326 IAC 12, 40 CFR 60, Subpart I, is more stringent than the PM limits that would be established by 326 IAC 6-3-2, the limits pursuant to 326 IAC 6-3-2 do not apply (see Appendix A pages 20 of 20, for details).

The cutting, grinding and welding operations located in the shop, as insignificant activities, are not subject to the requirements of 326 IAC 6-3-2. Pursuant to 326 IAC 6-3-1(b)(13) the grinding and welding operations are exempt from the requirements to 326 IAC 6-3-2 because these are trivial activities as defined under 326 IAC 2-7-1(40). The welding operations and associated equipment at this facility are used in routine fabrication, maintenance, and repair of buildings, structures, equipment, or vehicles at the source where air emissions from those activities would not be associated with any commercial production process. The grinding operation is exempt because these activities are performed using hand-held equipment. Pursuant to 326 IAC 6-3-1(b)(10) the cutting operations are exempt because less than three thousand four hundred (3,400) inches per hour of stock one (1) inch thickness or less is cut. Accordingly, the cutting, grinding and welding operations located in the shop are not subject to the 326 IAC 6-3-2.

326 IAC 6.5-1-2 (Particulate Emissions Limitations)

The requirements of this rule apply to stationary sources located in the counties listed in 326 IAC 6.5-1-1. This source is located in Allen County which is not one of the specifically listed counties in 326 IAC 6.5-1-1(a). Therefore, this rule is not applicable to this source.

326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)

The drum mix dryer burner (ID No. 2) and batch mix dryer burner (ID No. 5) are subject to 326 IAC 7-1.1 because each has potential SO_2 emissions of greater than 25 tons per year (limited potential emissions combined are 96.86 tons per year). Pursuant to this rule, sulfur dioxide emissions from the dryer burner shall be limited to 0.5 pounds per MMBtu when using distillate oils, and shall be limited to 1.6 pounds per million BTU heat input for residual oil combustion. This is equivalent to the following maximum allowable sulfur contents of the following fuels: No. 2 fuel oil (0.5%), No. 4 fuel oil (1.6%), No. 5 fuel oil (1.5%), No. 6 fuel oil (1.6%) and waste oil (1.5%).

The two (2) 1.4 MMBtu/hr hot oil heaters and one (1) 2.0 MMBtu/hr hot oil heater are not subject to the requirements of this rule because potential SO_2 emissions from these units are less than 25 tons per year.

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

Pursuant to this rule, the source shall submit reports of calendar month average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate (pounds SO_2 per MMBtu), to the OAQ upon request.

326 IAC 8-1-6 (BACT)

This rule applies to facilities located anywhere in the state that were constructed on or after January 1, 1980, which have potential volatile organic compound (VOC) emissions of 25 tons per year or more, and which are not otherwise regulated by another provision of Article 8.

The batch mixer/dryer has unrestricted potential VOC emissions of 7.90 tons per year. Since the potential volatile organic compound (VOC) emissions from this facility are less than 25 tons per year, the batch mixer/dryer is not subject to 326 IAC 8-1-6.

The drum mixer/dryer has a limited potential to emit of less than 24.9 tons per year of VOC, based on a limited hot mix asphalt production rate of 1,000,000 tons per year. VOC emissions from the drum mixer and dryer shall not exceed 0.032 pound of VOC per ton of hot mix asphalt produced. This will limit total VOC emissions from the drum mix operations to less than 24.9 tons per year. Compliance with this limit will render the requirements of 326 IAC 8-1-6 not applicable. Therefore the requirements of 326 IAC 8-1-6 are not applicable.

The silo filling operation has a limited potential to emit of less than 24.9 tons per year of VOC, based on the limited throughput of 1,143,975 tons of hot mix asphalt produced per year (1,000,000 tons per year in the drum mix operation, and 143,975 tons of hot mix asphalt produced per year in the batch mix operation). VOC emissions from the silo filling operation shall not exceed 0.0122 pounds per ton of hot mix asphalt produced. This will limit total VOC emissions from the silo filling operations to less than 24.9 tons per year. Compliance with this limit will render the requirements of 326 IAC 8-1-6 not applicable. Therefore the requirements of 326 IAC 8-1-6 are not applicable.

326 IAC 8-5-2 (Asphalt paving rules)

This rule applies to any paving application constructed after January 1, 1980 located anywhere in the state. Pursuant to this rule, the source shall not cause or allow the use of cutback asphalt or asphalt emulsion containing more than seven percent (7%) oil distillate by volume of emulsion for any paving application, except in the following purposes:

(a) penetrating prime coating

(b) stockpile storage

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

This source uses stockpile mix containing 7% (wt) emulsified asphalt binder, which contains 1% (wt) fuel oil, for a net fuel oil content in the stockpile mix of 0.07% (wt), which equates to less than 7% (by vol). The operation will be able to comply with 326 IAC 8-5-2.

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

Pursuant to 326 IAC 8-4-1 (Applicability) and 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities), all petroleum liquid storage vessels with capacities greater than one hundred fifty thousand (150,000) liters (39,000 gallons) containing VOC whose true vapor pressure is greater than 10.5 kPa (1.52 psi) shall comply with the requirements for external fixed and floating roof tanks and the specified record keeping and reporting requirements. The 340,000 gallon liquid asphalt storage tank identified as 20A and 325,000 gallon liquid asphalt tank identified as 20I, are not subject to IAC 8-4-3 because its liquid asphalt vapor pressure is less than the rule applicability threshold of 10.5 kPa. Tanks (ID Nos20B, 20C, 20D, 20E, 20F, 20G, 20H, 20J, and 20K), are not subject to IAC 8-4-3 because their capacities are less than the rule applicability threshold capacity of 39,000 gallons.

326 IAC 8-7 (Specific VOC Reduction Requirements for Lake, Porter, Clark and Floyd Counties)

The requirements of this rule apply to stationary sources located in Lake, Porter, Clark and Floyd Counties that emit or have the potential to emit VOCs at levels equal to or greater than 25 tons per year in Lake and Porter Counties; 100 tons per year in Clark and Floyd Counties; and to any coating facility that emits or has the potential to emit 10 tons per year or greater in Lake, Porter, Clark or Floyd County. This source is located in Allen County. Therefore, this rule is not applicable to this source.

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

Pursuant to 326 IAC 8-9-1, on and after October 1, 1995 stationary vessels used to store volatile organic liquids (VOL) must comply with the requirement of the rule if located in Clark, Floyd, Lake or Porter Counties. Stationary vessels with capacities less than 39,000 gallons are only subject to the reporting and record keeping requirements of the rule. Stationary storage vessels subject to any provision of 40 CFR Part 60.110b, New Source Performance Standard for Volatile Organic Liquid Storage, are exempt from this rule. This source is located in Allen County. Therefore, this rule is not applicable to this source.

326 IAC 10-1 (Nitrogen Oxides Control in Clark and Floyd Counties)

The source is not located in Clark or Floyd Counties, therefore, the requirements of 326 IAC 10-1 are not applicable.

326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category)

This source does not operate a Portland cement kiln or a blast furnace gas boiler with a heat input greater than two hundred fifty million (250,000,000) British thermal units per hour. The 96.8 million Btu dryer burner and the 84.0 million Btu dryer burner are not subject to this rule, therefore the requirements of 326 IAC 10-3 are not applicable.

326 IAC 12-1 (New Source Performance Standards)

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

Compliance Requirements

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

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also 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:

The aggregate drum mixer and burner, aggregate batch mixer and burner, baghouse stack exhaust and the conveying, material transfer points, and screening have applicable compliance monitoring conditions as specified below:

(a) Daily visible emission notations of the aggregate drum mixer and burner, aggregate batch mixer and burner, baghouse stack exhausts and the conveying, material transfer points, and screening shall be performed 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) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

(f) The Permittee shall record the pressure drop across each of the baghouses used in conjunction with the aggregate drum dryer/mixer and aggregate batch dryer/mixer, once per day when the process is in operation and venting to the atmosphere. When for any one reading, the pressure drop across either 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 - Response to Excursions or Exceedances. 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 - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

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

(h) In the event that bag failure has been observed:

(1) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has 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).

(2) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. 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).

Bag failure can be indicated by a significant drop in the baghouse=s pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

These monitoring conditions are necessary because the baghouses for the aggregate drum mixing and drying process and the aggregate batch mixing and drying process must operate properly to ensure compliance with 326 IAC 2-8 (FESOP), 326 IAC 12, 40 CFR 60.90, Subpart I, and to ensure compliance with the PM and PM10 emission limits so that the requirements of 326 IAC 2-2 (PSD) do not apply.

Conclusion

The operation of this stationary hot mix asphalt plant shall be subject to the conditions of the FESOP 003-23353-00351.

Appendix A: Emission Calculations | Operation Permit No.- F003-23353-00351 | Plant I D 003-00351

Company Name: Brooks Construction Company, Inc
Plant Location: 3930 Hardrock Road, Ft. Wayne, IN
County: Allen
Permit Reviewer: Julia Handley/EVP

**** drum-mix aggregate dryer burner****

The following calculations determine the amount of emissions created by natural gas combustion, from the drum-mix 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: 96.8 MMBtu/hr * 8,760 hr/yr * Ef (lb/MMcf) = (ton/yr)
1000 Btu/cf * 2,000 lb/ton

P M:	1.9	lb/MMcf =	**0.81**	**ton/yr**
P M-10:	7.6	lb/MMcf =	**3.22**	**ton/yr**
S O 2:	0.6	lb/MMcf =	**0.25**	**ton/yr**
N O x:	100.0	lb/MMcf =	**42.40**	**ton/yr**
V O C:	5.5	lb/MMcf =	**2.33**	**ton/yr**
C O:	84.0	lb/MMcf =	**35.61**	**ton/yr**

The following calculations determine the amount of emissions created by landfill gas combustion, from the drum-mix aggregate dryer burner, based on 8,760 hours of operation and information supplied by EMCON (Andover, MA).

Criteria Pollutant: 96.8 MMBtu/hr * 8,760 hr/yr * Ef (lb/MMcf) = (ton/yr)
504.5 MMBtu/MMcf * 2,000 lb/ton

P M:	46.2	lb/MMcf =	**38.83**	**ton/yr**	**(**	**35.02**	**ton/yr) ***
P M-10:	46.2	lb/MMcf =	**38.83**	**ton/yr**	**(**	**35.27**	**ton/yr) ***
S O 2:	6.2	lb/MMcf =	**5.21**	**ton/yr**	**(**	**4.71**	**ton/yr) ***
N O x:	70.6	lb/MMcf =	**59.33**	**ton/yr**	**(**	**57.64**	**ton/yr) ***
V O C:	0.8	lb/MMcf =	**0.67**	**ton/yr**	**(**	**0.84**	**ton/yr) ***
C O:	17.7	lb/MMcf =	**14.88**	**ton/yr**	**(**	**16.95**	**ton/yr) ***

* The first value reflects total landfill gas combustion; however, this fuel, when used, must be co-fired with natural gas. The maximum landfill/natural gas ratio is 90% landfill gas/10% natural gas, which is reflected in parentheses.

The following calculations determine the amount of emissions created by the combustion of # 2 distillate fuel oil @ 0.5 % sulfur, from the drum-mix 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 1.3-3.

Criteria Pollutant: 96.8 MMBtu/hr * 8,760 hr/yr * Ef (lb/1,000 gal) = (ton/yr)
139,000 Btu/gal * 2,000 lb/ton

P M:	2.0	lb/1000 gal =	**6.10**	**ton/yr**
P M-10:	3.3	lb/1000 gal =	**10.07**	**ton/yr**
S O 2:	69.5	lb/1000 gal =	**211.99**	**ton/yr**
N O x:	20.0	lb/1000 gal =	**61.00**	**ton/yr**
V O C:	0.34	lb/1000 gal =	**1.04**	**ton/yr**
C O:	5.0	lb/1000 gal =	**15.25**	**ton/yr**

The following calculations determine the amount of emissions created by the combustion of # 4 fuel oil @ 1.0 % sulfur, from the drum-mix 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 1.3-3.

Criteria Pollutant: 96.8 MMBtu/hr * 8,760 hr/yr * Ef (lb/1,000 gal) = (ton/yr)
138,000 Btu/gal * 2,000 lb/ton

P M:	7.0	lb/1000 gal =	**21.51**	**ton/yr**
P M-10:	8.5	lb/1000 gal =	**26.11**	**ton/yr**
S O 2:	150.0	lb/1000 gal =	**460.85**	**ton/yr**
N O x:	20.0	lb/1000 gal =	**61.45**	**ton/yr**
V O C:	0.20	lb/1000 gal =	**0.61**	**ton/yr**
C O:	5.0	lb/1000 gal =	**15.36**	**ton/yr**

The following calculations determine the amount of emissions created by the combustion of #5 residual fuel oil
@ 1.0 % sulfur, from the drum-mix 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 1.3-3.

Criteria Pollutant: 96.8 MMBtu/hr * 8,760 hr/yr / 140,000 Btu/gal * 2,000 lb/ton * Ef (lb/1,000 gal) = (ton/yr)

P M:	12.4	lb/1000 gal =	**37.58**	**ton/yr**
P M-10:	13.9	lb/1000 gal =	**42.13**	**ton/yr**
S O 2:	157.0	lb/1000 gal =	**475.47**	**ton/yr**
N O x:	55.0	lb/1000 gal =	**166.57**	**ton/yr**
V O C:	0.28	lb/1000 gal =	**0.85**	**ton/yr**
C O:	5.0	lb/1000 gal =	**15.14**	**ton/yr**

The following calculations determine the amount of emissions created by the combustion of #6 fuel oil
@ 1.0 % sulfur, from the drum-mix 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 1.3-3.

Criteria Pollutant: 96.8 MMBtu/hr * 8,760 hr/yr / 150,000 Btu/gal * 2,000 lb/ton * Ef (lb/1,000 gal) = (ton/yr)

P M:	10.0	lb/1000 gal =	**28.27**	**ton/yr**
P M-10:	11.5	lb/1000 gal =	**32.51**	**ton/yr**
S O 2:	157.0	lb/1000 gal =	**443.77**	**ton/yr**
N O x:	55.0	lb/1000 gal =	**155.46**	**ton/yr**
V O C:	0.28	lb/1000 gal =	**0.79**	**ton/yr**
C O:	5.0	lb/1000 gal =	**14.13**	**ton/yr**

The following calculations determine the amount of emissions created by the combustion of re-refined waste oil
@ 1.0 % sulfur,
@ 1.00 % ash, and
@ 0.40 %Cl, from the drum-mix 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: 96.8 MMBtu/hr * 8,760 hr/yr / 140,000 Btu/gal * 2,000 lb/ton * Ef (lb/1,000 gal) = (ton/yr)

P M:	64.0	lb/1000 gal =	**193.82**	**ton/yr**
P M-10:	51.0	lb/1000 gal =	**154.45**	**ton/yr**
S O 2:	147.0	lb/1000 gal =	**445.18**	**ton/yr**
N O x:	19.0	lb/1000 gal =	**57.54**	**ton/yr**
V O C:	1.00	lb/1000 gal =	**3.03**	**ton/yr**
C O:	5.0	lb/1000 gal =	**15.14**	**ton/yr**
HCl:	26.4	lb/1000 gal =	**79.95**	**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:	**193.82**	**ton/yr**	Re-refined Waste Oil
P M-10:	**154.45**	**ton/yr**	Re-refined Waste Oil
S O 2:	**475.47**	**ton/yr**	Fuel Oil No. 5
N O x:	**166.57**	**ton/yr**	Fuel Oil No. 5
V O C:	**3.03**	**ton/yr**	Re-refined Waste Oil
C O:	**35.61**	**ton/yr**	Natural Gas
HCl:	**79.95**	**ton/yr**	Re-refined Waste Oil

**** batch-mix aggregate dryer burner****

The following calculations determine the amount of emissions created by natural gas combustion, from the batch-mix 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: 84 MMBtu/hr * 8,760 hr/yr / 1000 Btu/cf * 2,000 lb/ton * Ef (lb/MMcf) = (ton/yr)

P M:	1.9	lb/MMcf =	**0.70 ton/yr**
P M-10:	7.6	lb/MMcf =	**2.80 ton/yr**
S O 2:	0.6	lb/MMcf =	**0.22 ton/yr**
N O x:	100.0	lb/MMcf =	**36.79 ton/yr**
V O C:	5.5	lb/MMcf =	**2.02 ton/yr**
C O:	84.0	lb/MMcf =	**30.91 ton/yr**

The following calculations determine the amount of emissions created by the combustion of # 2 distillate fuel oil @ 0.5 % sulfur, from the batch-mix 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 1.3-3.

Criteria Pollutant: 84 MMBtu/hr * 8,760 hr/yr / 139,000 Btu/gal * 2,000 lb/ton * Ef (lb/1,000 gal) = (ton/yr)

P M:	2.0	lb/1000 gal =	**5.29 ton/yr**
P M-10:	3.3	lb/1000 gal =	**8.73 ton/yr**
S O 2:	69.5	lb/1000 gal =	**183.96 ton/yr**
N O x:	20.0	lb/1000 gal =	**52.94 ton/yr**
V O C:	0.34	lb/1000 gal =	**0.90 ton/yr**
C O:	5.0	lb/1000 gal =	**13.23 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:	**5.29**	**ton/yr**	Fuel Oil No. 2
P M-10:	**8.73**	**ton/yr**	Fuel Oil No. 2
S O 2:	**183.96**	**ton/yr**	Fuel Oil No. 2
N O x:	**52.94**	**ton/yr**	Fuel Oil No. 2
V O C:	**2.02**	**ton/yr**	Natural Gas
C O:	**30.91**	**ton/yr**	Natural Gas

****Insignificant Combustion Sources****

****hot oil heater****

The following calculations determine the amount of emissions created by the combustion of #2 distillate fuel oil, from two (2) - 1.4 MMBtu/hr hot oil heaters, and one (1) - 2.0 MMBtu/hr hot oil heater.
@ 0.5 % sulfur, from hot oil heater, based on 8760 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: 4.8 MMBtu/hr * 8,760 hr/yr * Ef (lb/1,000 gal) = (ton/yr)
140,000 Btu/gal * 2,000 lb/ton

P M:	2.0	lb/1000 gal =	**0.30**	**ton/yr**
P M-10:	3.3	lb/1000 gal =	**0.50**	**ton/yr**
S O 2:	69.5	lb/1000 gal =	**10.44**	**ton/yr**
N O x:	20.0	lb/1000 gal =	**3.00**	**ton/yr**
V O C:	0.34	lb/1000 gal =	**0.05**	**ton/yr**
C O:	5.0	lb/1000 gal =	**0.75**	**ton/yr**

The following calculations determine the amount of emissions created by natural gas combustion, from two (2) - 1.4 MMBtu/hr hot oil heaters, and one (1) - 2.0 MMBtu/hr 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, and 1.4-2.

Criteria Pollutant: 4.8 MMBtu/hr * 8,760 hr/yr * Ef (lb/MMcf) = (ton/yr)
1000 Btu/cf * 2,000 lb/ton

P M:	1.9	lb/MMcf =	**0.04**	**ton/yr**
P M-10:	7.6	lb/MMcf =	**0.16**	**ton/yr**
S O 2:	0.6	lb/MMcf =	**1.26E-02**	**ton/yr**
N O x:	100.0	lb/MMcf =	**2.10**	**ton/yr**
V O C:	5.5	lb/MMcf =	**0.12**	**ton/yr**
C O:	84.0	lb/MMcf =	**1.77**	**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:	**0.30**	**ton/yr**	Fuel Oil No. 2
P M-10:	**0.50**	**ton/yr**	Fuel Oil No. 2
S O 2:	**10.44**	**ton/yr**	Fuel Oil No. 2
N O x:	**3.00**	**ton/yr**	Fuel Oil No. 2
V O C:	**0.12**	**ton/yr**	Natural Gas
C O:	**1.77**	**ton/yr**	Natural Gas

*** * 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 US EPA'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 natural gas, fuel oil, or re-refined waste oil:

Pollutant: Ef lb/ton x 400 ton/hr x 8,760 hr/yr
2,000 lb/ton

Criteria Pollutant:

P M:	28	lb/ton =	**49,056.00**	**ton/yr**
P M-10:	6.5	lb/ton =	**11,388.00**	**ton/yr**
VOC:	0.032	lb/ton =	**56.06**	**ton/yr**
Pb:	0.0000033	lb/ton =	**0.01**	**ton/yr**
HCl:	0.00021	lb/ton =	**0.37**	**ton/yr**
NOx:	0.055	lb/ton =	**96.36**	**ton/yr**
CO:	0.13	lb/ton =	**227.76**	**ton/yr**

*** * aggregate drying: batch-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 US EPA's AP-42, 5th Edition, Section 11.1 - Hot Mix Asphalt Plants, Tables 11.1-1, and 11.1-6 for a batch mix dryer which has the capability of combusting either fuel oil or natural gas:

Pollutant: Ef lb/ton x 220 ton/hr x 8,760 hr/yr
2,000 lb/ton

Criteria Pollutant:

P M:	32	lb/ton =	**30,835.20**	**ton/yr**
P M-10:	4.5	lb/ton =	**4,336.20**	**ton/yr**
VOC:	0.0082	lb/ton =	**7.90**	**ton/yr**
CO:	0.4	lb/ton =	**385.44**	**ton/yr**
NOx:	0.12	lb/ton =	**115.63**	**ton/yr**

*** * 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))
= 5.23E-03 lb PM-10/ton
1.11E-02 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 = 1.5 material moisture content (%)

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

Total PM 10 Emissions:	**14.20**	**tons/yr**
Total PM Emissions:	**30.02**	**tons/yr**

*** * unpaved roads * ***

The following calculations determine the amount of emissions created by vehicle traffic on unpaved industrial roads, based on 8,760 hours of use and AP-42, Section 13.2.2.2, 13.2.2-2, 13.2.2-1 (1/2006)

74 trip/hr x 0.076 mile/trip x 2 (round trip) x 8,760 hr/yr = 98,532 mile/yr

Ef = k*(s/12)^a*(W/3)^b*[(365-P)/365]
= 1.10 lb PM-10/mile
= 4.32 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= 24 tons average vehicle weight
P= 125 number of days with at least 0.01 in of precipitation

PM-10: 1.10 lb/mi x 98,532 mi/yr = **54.30 tons/yr**
2000 lb/ton

PM: 4.32 lb/mi x 98,532 mi/yr = **213.06 tons/yr**
2000 lb/ton

*** * storage * ***

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

Material	Silt Content (wt %)	Pile Size (acres)	Storage Capacity (tons)	PM Emissions tons/yr	PM-10 Emissions tons/yr
Sand	1.1	1.033	67,500	0.24	0.08
Stone	1.0	1.263	33,000	0.27	0.09
Slag	1.0	0.115	1,000	0.02	0.01
RAP	0.8	1.530	40,000	0.26	0.09
Total				**0.79**	**0.28**

Sample Calculation:

Emissions (storage) = Ef * (Pile Size in acres) * (365 day/yr)
(2,000 lb/ton)

Ef = 1.7*(s/1.5)*(365-p)/235*(f/15)
= 1.16 lb/acre/day
where s = 1.0 % silt
p = 125 days of rain greater than or equal to 0.01 inches
f = 15 % of wind greater than or equal to 12 mph

*** * load-out * ***

The following calculations determine the amount of emissions created by plant load-out, based on 8,760 hours of use and US EPA's AP-42, Section 11.1, Tables 11.1-14 through 11.1-16.

PM/PM10 Ef = 0.000181 + 0.00141(-V)e((0.0251)(T+460)-20.43)
= 5.22E-04 lb PM or PM-10 per ton of asphalt mix produced
where V = -0.5 asphalt volatility (default value of -0.5 used per AP-42)
T= 325 hot mix asphalt (HMA)

PM/PM10 =	**1.42**	**tons/yr**	
Total PAH HAPs =	**0.08**	**tons/yr**	(5.93% of Organic PM emissions per AP-42)*
Phenol =	**0.02**	**tons/yr**	(1.18% of Organic PM emissions per AP-42)*

TOC Ef = 0.0172(-V)e((0.0251)(T+460)-20.43)
= 4.16E-03 lb TOC per ton of asphalt mix produced
where V = -0.5 asphalt volatility (default value of -0.5 used per AP-42)
T= 325 hot mix asphalt (HMA)

VOC =	**10.62**	**tons/yr**	(94% of TOC emissions per AP-42)
Worst Case Single HAP (Xylenes) =	**0.06**	**tons/yr**	(0.49% of TOC emissions per AP-42)
Total Volatile HAPs =	**0.17**	**tons/yr**	(1.5% of TOC emissions per AP-42)

CO Ef = 0.00558(-V)e((0.0251)(T+460)-20.43)
= 1.35E-03 lb CO per ton of asphalt mix produced
where V = -0.5 asphalt volatility (default value of -0.5 used per AP-42)
T= 325 hot mix asphalt (HMA)

CO = 3.66 tons/yr

*** * silo filling * ***

The following calculations determine the amount of emissions created by silo filling, based on 8,760 hours of use and US EPA's AP-42, Section 11.1, Tables 11.1-14 through 11.1-16.

PM/PM10 Ef = 0.000332 + 0.00105(-V)e((0.0251)(T+460)-20.43)
= 5.86E-04 lb PM or PM-10 per ton of asphalt mix produced
where V = -0.5 asphalt volatility (default value of -0.5 used per AP-42)
T= 325 hot mix asphalt (HMA)

PM/PM10 =	**1.59**	**tons/yr**	
Total PAH HAPs =	**0.11**	**tons/yr**	(11.40% of Organic PM emissions per AP-42)*

TOC Ef = 0.0504(-V)e((0.0251)(T+460)-20.43)
= 1.22E-02 lb TOC per ton of asphalt mix produced
where V = -0.5 asphalt volatility (default value of -0.5 used per AP-42)
T= 325 hot mix asphalt (HMA)

VOC =	**33.09**	**tons/yr**	(100% of TOC emissions per AP-42)
Worst Case Single HAP (Formaldehyde) =	**0.23**	**tons/yr**	(0.69% of TOC emissions per AP-42)
Total Volatile HAPs =	**0.43**	**tons/yr**	(1.3% of TOC emissions per AP-42)

CO Ef = 0.00488(-V)e((0.0251)(T+460)-20.43)
= 1.18E-03 lb CO per ton of asphalt mix produced
where V = -0.5 asphalt volatility (default value of -0.5 used per AP-42)
T= 325 hot mix asphalt (HMA)

CO = 3.20 tons/yr

* Organic PM emissions are calculated using the equation from Table 11.1-14.

Organic PM Ef = 0.00141(-V)e((0.0251)(T+460)-20.43)
= 3.41E-04 lb PM or PM-10 per ton of asphalt mix produced
where V = -0.5 asphalt volatility (default value of -0.5 used per AP-42)
T= 325 hot mix asphalt (HMA)

*** *cold mix VOC storage emissions * ***

I. Emulsified Asphalt with Solvent.

The following calculations determine the amount of VOC emissions created by the application of stockpile mix containing emulsified asphalt of which 46.4% by weight of VOC is evaporated, based on 8,760 hours of operation.

VOC Emission Factor = **0.0696 weight percent of Solvent in stockpile***
Potential Throughput (tons/yr) = **3,504,000 tons/yr stockpile mix**

Potential VOC Emissions (tons/yr) = Potential Throughput (tons/yr) * VOC Emission Factor (wt% flash-off)
Potential VOC Emissions = **2,438.78 tons/yr**

* Weight percent flash-off is based on use of emulsified asphalt containing a maximum of 15% of the liquid binder by weight of VOC solvent and 46.4% by weight of VOC solvent evaporating.

II. Cut back asphalt rapid cure

The following calculations determine the amount of VOC emissions created by the application stockpile mix containing cut back asphalt rapid cure of which 95% by weight of VOC is evaporated, based on 8,760 hours of operation.

VOC Emission Factor = **0.24035 weight percent flash-off of cold mix**
Potential Throughput (tons/yr) = **3,504,000 tons/yr stockpile mix**

Potential VOC Emissions (tons/yr) = Potential Throughput (tons/yr) * VOC Emission Factor (wt% flash-off)
Potential VOC Emissions = **8,421.86 tons/yr**

* Weight percent flash-off is based on use of gelled asphalt containing a maximum of 25.3% of the liquid binder by weight of VOC solvent and 95% by weight of VOC solvent evaporating.

III. Cut back asphalt medium cure

The following calculations determine the amount of VOC emissions created by the application stockpile mix containing cut back asphalt medium cure of which 70% by weight of VOC is evaporated, based on 8,760 hours of operation.

VOC Emission Factor = **0.2002 weight percent flash-off of cold mix**
Potential Throughput (tons/yr) = **3,504,000 tons/yr stockpile mix**

Potential VOC Emissions (tons/yr) = Potential Throughput (tons/yr) * VOC Emission Factor (wt% flash-off)
Potential VOC Emissions = **7,015.01 tons/yr**

* Weight percent flash-off is based on use of gelled asphalt containing a maximum of 28.6% of the liquid binder by weight of VOC solvent and 70% by weight of VOC solvent evaporating.

IV. Cut back asphalt slow cure

The following calculations determine the amount of VOC emissions created by the application stockpile mix containing cut back asphalt slow cure of which 25% by weight of VOC is evaporated, based on 8,760 hours of operation.

VOC Emission Factor = **0.05 weight percent flash-off of cold mix**
Potential Throughput (tons/yr) = **3,504,000 tons/yr stockpile mix**

Potential VOC Emissions (tons/yr) = Potential Throughput (tons/yr) * VOC Emission Factor (wt% flash-off)
Potential VOC Emissions = **1,752.00 tons/yr**

* Weight percent flash-off is based on use of gelled asphalt containing a maximum of 20% of the liquid binder by weight of VOC solvent and 25% by weight of VOC solvent evaporating.

V. Other asphalt with solvent binder

The following calculations determine the amount of VOC emissions created by the application stockpile mix containing cut back asphalt slow cure of which 25% by weight of VOC is evaporated, based on 8,760 hours of operation.

VOC Emission Factor = **0.006475 weight percent flash-off of cold mix**
Potential Throughput (tons/yr) = **3,504,000 tons/yr stockpile mix**

Potential VOC Emissions (tons/yr) = Potential Throughput (tons/yr) * VOC Emission Factor (wt% flash-off)
Potential VOC Emissions = **226.88 tons/yr**

* Weight percent flash-off is based on use of gelled asphalt containing a maximum of 25.9% of the liquid binder by weight of VOC solvent and 2.5% by weight of VOC solvent evaporating.

Worst Case from Cold Mix VOC Storage = 8,421.86 tons/yr

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

Criteria Pollutants:

P M:	**80,337.49**	**ton/yr**
P M-10:	**15,959.67**	**ton/yr**
S O 2:	**669.86**	**ton/yr**
N O x:	**285.20**	**ton/yr**
V O C:	**8,529.66**	**ton/yr**
C O:	**621.83**	**ton/yr**
HCl:	**80.3**	**ton/yr**

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

In order to qualify for the FESOP program, this source must limit SO2 and NOx emissions to 99.9 tons per year and single HAP emissions (HCl) to 9.9 tons per year Consequently, NOx, SO2, and HCl emissions from the aggregate dryer must be limited as follows:

NOx limited emissions=	99.9	tons per year -	11.64	= tons per year from other sources	88.26	tons per year
SO2 limited emissions=	99.9	tons per year -	10.44	= tons per year from other sources	89.46	tons per year
HCL limited emissions=			9.9	tons per year	9.90	tons per year

* Emissions of PM and PM-10 from aggregate drying operations are controlled with a 99.900 % control efficiency.

The following calculations determine the amount of emissions created by natural gas combustion, from the drum mix aggregate dryer, based on a maximum fuel usage of 847.97 MMcf

Criteria Pollutant: 847.97 MMcf/yr * Ef (lb/MMcf) = (ton/yr)
2,000 lb/ton

P M:	1.9	lb/MMcf =	**8.06E-04**	**ton/yr ***
P M-10:	7.6	lb/MMcf =	**3.22E-03**	**ton/yr ***
S O 2:	0.6	lb/MMcf =	**0.25**	**ton/yr**
N O x:	100.0	lb/MMcf =	**42.40**	**ton/yr**
V O C:	5.5	lb/MMcf =	**2.33**	**ton/yr**
C O:	84.0	lb/MMcf =	**35.61**	**ton/yr**

The following calculations determine the amount of emissions created by natural gas combustion, from the batch mix aggregate dryer, based on a maximum fuel usage of 735.84 MMcf

Criteria Pollutant: 735.84 MMcf/yr * Ef (lb/MMcf) = (ton/yr)
2,000 lb/ton

P M:	1.9	lb/MMcf =	**6.99E-04**	**ton/yr ***
P M-10:	7.6	lb/MMcf =	**2.80E-03**	**ton/yr ***
S O 2:	0.6	lb/MMcf =	**0.22**	**ton/yr**
N O x:	100.0	lb/MMcf =	**36.79**	**ton/yr**
V O C:	5.5	lb/MMcf =	**2.02**	**ton/yr**
C O:	84.0	lb/MMcf =	**30.91**	**ton/yr**

The following calculations determine the amount of emissions created by landfill gas combustion, from the drum-mix aggregate dryer, based on a maximum fuel usage of 1,680.81 MMcf

Criteria Pollutant: 1,680.81 MMcf/yr * Ef (lb/MMcf) = (ton/yr)
2,000 lb/ton

P M:	46.2	lb/MMcf =	**0.04**	**ton/yr ***	**0.04**	**ton/yr) [1]**
P M-10:	46.2	lb/MMcf =	**0.04**	**ton/yr ***	**0.04**	**ton/yr) [1]**
S O 2:	6.2	lb/MMcf =	**5.21**	**ton/yr**	**(4.71**	**ton/yr) [1]**
N O x:	70.6	lb/MMcf =	**59.33**	**ton/yr**	**(57.64**	**ton/yr) [1]**
V O C:	0.8	lb/MMcf =	**0.67**	**ton/yr**	**(0.84**	**ton/yr) [1]**
C O:	17.7	lb/MMcf =	**14.88**	**ton/yr**	**(16.95**	**ton/yr) [1]**

[1] The first value reflects total landfill gas combustion; however, this fuel, when used, must be co-fired with natural gas. The maximum landfill/natural gas ratio is 90% landfill gas/10% natural gas, which is reflected in parentheses.

The following calculations determine the amount of emissions created by the combustion of No. 2 distillate fuel oil in the drum-mix and batch mix aggregate dryers @ 0.5 % sulfur, from the aggregate dryer burner, based on a fuel usage limitation of 2,574,477 gal/yr:

Criteria Pollutant: 2,574 Kgal/yr: * Ef (lb/1,000 gal) = (ton/yr)
2,000 lb/ton

P M:	2.0	lb/1000 gal =	**2.57E-03**	**ton/yr**
P M-10:	3.3	lb/1000 gal =	**4.25E-03**	**ton/yr**
S O 2:	69.5	lb/1000 gal =	**89.46**	**ton/yr**
N O x:	20.0	lb/1000 gal =	**25.74**	**ton/yr**
V O C:	0.34	lb/1000 gal =	**0.44**	**ton/yr**
C O:	5.0	lb/1000 gal =	**6.44**	**ton/yr**

The following calculations determine the amount of emissions created by the combustion of No. 4 fuel oil in the drum mix aggregated dryer
@ 1.0 % sulfur, from the aggregate dryer burner, based on 8,760 hours of use and
based on a fuel usage limitation of 1,192,841 gal/yr:

Criteria Pollutant: 1,193 Kgal/yr: * Ef (lb/1,000 gal) = (ton/yr)
2,000 lb/ton

P M:	7.0	lb/1000 gal =	**4.17E-03 ton/yr**
P M-10:	8.5	lb/1000 gal =	**5.07E-03 ton/yr**
S O 2:	150.0	lb/1000 gal =	**89.46 ton/yr**
N O x:	20.0	lb/1000 gal =	**11.93 ton/yr**
V O C:	0.20	lb/1000 gal =	**0.12 ton/yr**
C O:	5.0	lb/1000 gal =	**2.98 ton/yr**

The following calculations determine the amount of emissions created by the combustion of #5 residual fuel oil in the drum mix aggregated dryer
@ 1.0 % sulfur, from the aggregate dryer burner, based on 8,760 hours of use and
based on a fuel usage limitation of 1,139,657 gal/yr:

Criteria Pollutant: 1,140 Kgal/yr: * Ef (lb/1,000 gal) = (ton/yr)
2,000 lb/ton

P M:	12.4	lb/1000 gal =	**7.07E-03 ton/yr**
P M-10:	13.9	lb/1000 gal =	**7.93E-03 ton/yr**
S O 2:	157.0	lb/1000 gal =	**89.46 ton/yr**
N O x:	55.0	lb/1000 gal =	**31.34 ton/yr**
V O C:	0.28	lb/1000 gal =	**0.16 ton/yr**
C O:	5.0	lb/1000 gal =	**2.85 ton/yr**

The following calculations determine the amount of emissions created by the combustion of #6 fuel oil in the drum mix aggregated dryer
@ 1.0 % sulfur, from the aggregate dryer burner, based on 8,760 hours of use and
based on a fuel usage limitation of 1,139,657 gal/yr:

Criteria Pollutant: 1,140 Kgal/yr: * Ef (lb/1,000 gal) = (ton/yr)
2,000 lb/ton

P M:	10.0	lb/1000 gal =	**5.70E-03 ton/yr**
P M-10:	11.5	lb/1000 gal =	**6.55E-03 ton/yr**
S O 2:	157.0	lb/1000 gal =	**89.46 ton/yr**
N O x:	55.0	lb/1000 gal =	**31.34 ton/yr**
V O C:	0.28	lb/1000 gal =	**0.16 ton/yr**
C O:	5.0	lb/1000 gal =	**2.85 ton/yr**

The following calculations determine the amount of emissions created by the combustion of re-refined waste oil in the drum mix aggregated dryer
@ 1.0 % sulfur,
@ 1.00 % ash, and
@ 0.400 %Cl, from the aggregate dryer burner, based on 8,760 hours of use and
based on a fuel usage limitation of 750,000 gal/yr:

Criteria Pollutant: 750 Kgal/yr: * Ef (lb/1,000 gal) = (ton/yr)
2,000 lb/ton

P M:	64.0	lb/1000 gal =	**0.02 ton/yr**
P M-10:	51.0	lb/1000 gal =	**0.02 ton/yr**
S O 2:	147.0	lb/1000 gal =	**55.13 ton/yr**
N O x:	19.0	lb/1000 gal =	**7.13 ton/yr**
V O C:	1.00	lb/1000 gal =	**0.38 ton/yr**
C O:	5.0	lb/1000 gal =	**1.88 ton/yr**
HCl:	26.4	lb/1000 gal =	**9.90 ton/yr**

Criteria Pollutant:		**Worst Case Fuel**
P M:	**0.04 ton/yr**	Landfill Gas*
P M-10:	**0.04 ton/yr**	Landfill Gas*
S O 2:	**89.46 ton/yr**	No. 2, 4, 5, 6, fuel oil
N O x:	**79.19 ton/yr**	Natural Gas
V O C:	**4.36 ton/yr**	Natural Gas
C O:	**66.52 ton/yr**	Natural Gas
HCl:	**9.90 ton/yr**	Re-refined Waste Oil

*** * Aggregate Burner Fuel Usage Limitations * ***

Fuel: Natural Gas

No fuel usage limit is needed for natural gas in the aggregate burner because the potential to emit of NOx and SO2 from the drum and batch mix dryers combined is less than the limit necessary to limit source wide emissions to 100tpy, as shown below:

NOx:	79.19	tons NOx/year potential	<	88.26	tons NOx/year limited
SO2:	0.48	tons SO2/year potential	<	89.46	tons SO2/year limited

Fuel: Landfill (90%) & Natural Gas (10%) Mix

No fuel usage limit is needed for Landfill & natural gas mixture in the aggregate burner because the potential to emit of NOx and SO2 is less than the limit necessary to limit source wide emissions to 100tpy, as shown below:

NOx:	57.64	tons NOx/year potential	<	88.26	tons NOx/year limited
SO2:	4.71	tons SO2/year potential	<	89.46	tons SO2/year limited

Fuel usage limitations are necessary for Nos. 2, 4, 5, and 6 fuel oils as well as waste oil because the potential to emit of SO2 and NOx is greater than the limit necessary to limit source wide emissions of each pollutant to 100 tpy.

Fuel: #2 distillate oil

89.46 tons SO2/year limited / 395.95 tons SO2/year potential x 11,394.30 Kgals/year potential = 2,574.477 Kgals/year limited

88.26 tons NOx/year limited / 113.94 tons NOx/year potential x 11,394.30 Kgals/year potential = 8,825.807 Kgals/year limited

Since the allowable fuel usage based upon SO2 is less than the allowable fuel usage based upon NOx, limiting SO2 emissions to less than 100 tons per year will also limit source wide NOx emissions to less than 100 tons per year. Therefore, the fuel usage limit based on SO2 will be included in the permit.

Fuel: #4 fuel oil

89.46 tons SO2/year limited / 460.85 tons SO2/year potential x 6,144.70 Kgals/year potential = 1,192.841 Kgals/year limited

88.26 tons NOx/year limited / 61.45 tons NOx/year potential x 6,144.70 Kgals/year potential = 8,825.807 Kgals/year limited

Since the allowable fuel usage based upon SO2 is less than the allowable fuel usage based upon NOx, limiting SO2 emissions to less than 100 tons per year will also limit source wide NOx emissions to less than 100 tons per year. Therefore, the fuel usage limit based on SO2 will be included in the permit.

Fuel: #5 fuel oil

89.46 tons SO2/year limited / 475.47 tons SO2/year potential x 6,056.91 Kgals/year potential = 1,139.657 Kgals/year limited

88.26 tons NOx/year limited / 166.57 tons NOx/year potential x 6,056.91 Kgals/year potential = 3,209.384 Kgals/year limited

Since the allowable fuel usage based upon SO2 is less than the allowable fuel usage based upon NOx, limiting SO2 emissions to less than 100 tons per year will also limit source wide NOx emissions to less than 100 tons per year. Therefore, the fuel usage limit based on SO2 will be included in the permit.

Fuel: #6 fuel oil

89.46 tons SO2/year limited / 443.77 tons SO2/year potential x 5,653.12 Kgals/year potential = 1,139.657 Kgals/year limited

88.26 tons NOx/year limited / 155.46 tons NOx/year potential x 5,653.12 Kgals/year potential = 3,209.384 Kgals/year limited

Since the allowable fuel usage based upon SO2 is less than the allowable fuel usage based upon NOx, limiting SO2 emissions to less than 100 tons per year will also limit source wide NOx emissions to less than 100 tons per year. Therefore, the fuel usage limit based on SO2 will be included in the permit.

Fuel: Re-refined waste oil

89.46 tons SO2/year limited / 445.18 tons SO2/year potential x 6,056.91 Kgals/year potential = 1,217.185 Kgals/year limited

88.26 tons NOx/year limited / 57.54 tons NOx/year potential x 6,056.91 Kgals/year potential = 9,290.323 Kgals/year limited

9.90 tons HCl/year limited / 79.95 tons HCl/year potential x 6,056.91 Kgals/year potential = 750.000 Kgals

Since the allowable fuel usage based upon HCl is less than the allowable fuel usage based upon NOx or SO2, limiting HCl emissions to less than 9.9 tons per year will also limit source wide NOx and SO2 emissions to less than 100 tons per year. Therefore, the fuel usage limit based on HCl will be included in the permit.

****Fuel Equivalences****

Most restrictive No. 2 oil usage =	2,574.5	kgal/yr
Most restrictive natural gas usage =	1,583.8	MMcf/yr (THIS IS THE POTENTIAL GAS USAGE - NO LIMIT NECESSARY)
Most restrictive landfill gas usage =	1,632.8	MMcf/yr (THIS IS THE POTENTIAL GAS USAGE - NO LIMIT NECESSARY)

Fuel equivalence is therefore determined from the limiting pollutant, SO2, as follows:

0.6 lb/MMcf = 69.5 lb/1000 gal	8.6	gallons per million cubic feet (MMcf) natural gas (i.e., every 1 MMcf natural gas burned is equivalent to 8.6 gallons of oil burned, based on SO2 emissions)
6.2 lb/MMcf = 69.5 lb/1000 gal	89.2	gallons per million cubic feet (MMcf) landfill gas (i.e., every 1 MMcf landfill gas burned is equivalent to 67.8 gallons of oil burned, based on SO2 emissions)
150.0 lb/1000 gal = 69.5 lb/1000 gal	2.158	every 1000 gallon of No. 4 fuel oil burned is equivalent to 2,158 gallons of No. 2 fuel oil, based on SO2 emissions
157.0 lb/1000 gal = 69.5 lb/1000 gal	2.259	every 1000 gallon of No. 5 fuel oil burned is equivalent to 2,259 gallons of No. 2 fuel oil, based on SO2 emissions
157.0 lb/1000 gal = 69.5 lb/1000 gal	2.259	every 1000 gallon of No. 6 fuel oil burned is equivalent to 2,259 gallons of No. 2 fuel oil, based on SO2 emissions
147.0 lb/1000 gal = 69.5 lb/1000 gal	2.115	every 1000 gallon of waste-reclaimed fuel oil burned is equivalent to 2,115 gallons of No. 2 fuel oil, based on SO2 emissions

Applying the equivalency ratios, the amount of equivalent fuels that could be burned are:

2,574.5 kgal/yr /	8.6 gallon/MMcf =	298,210.3	MMcf/year equivalent as natural gas
2,574.5 kgal/yr /	89.2 gallon/MMcf =	28,859.1	MMcf/year equivalent as landfill gas
2,574.5 kgal/yr /	2.2 kgal/kgal =	1,192.8	kgal/year equivalent as No. 4 fuel oil
2,574.5 kgal/yr /	2.3 kgal/kgal =	1,139.7	kgal/year equivalent as No. 5 fuel oil
2,574.5 kgal/yr /	2.3 kgal/kgal =	1,139.7	kgal/year equivalent as No. 6 fuel oil
2,574.5 kgal/yr /	2.1 kgal/kgal =	1,217.2	kgal/year equivalent as waste-reclaimed oil

These equivalent fuel usage amounts exceed the respective potential total natural gas and landfill gas usages in the two dryer burners. Since the potential fuel usages cannot be exceeded, the source-wide potential to emit NOx remains below 100 tpy (including other facilities) under each equivalent fuel use scenario, and a separate NOx limit is not created.
No fuel equivalence limit is required in order to limit HCl emissions because Natural Gas, landfill gas and #2, 4, 5, and 6 fuel oils do not contain chlorine.

In order to qualify for the FESOP program, this source must limit VOC emissions to 99.9 tons per year. Consequently, the annual hot mix asphalt production shall be limited as follows:

TOTAL	Annual throughput limit =	1,143,975	tons asphalt/year
Drum Mix operation:	Annual throughput limit =	1,000,000	tons asphalt/year
Batch Mix operation:	Annual throughput limit =	143,975	tons asphalt/year

* Emissions of PM and PM-10 from drying operations are controlled with a 99.9 % control efficiency.

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

The following calculations determine the amount of worst case emissions created by aggregate drying after controls, based on 8,760 hours of use and US EPA'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, natural gas, or re-refined waste oil:

Pollutant:	Ef	lb/ton x	1,000,000.00 / 2,000	ton/yr lb/ton
Criteria Pollutant:				
P M:	28	lb/ton =	**14.00**	**ton/yr**
P M-10:	6.5	lb/ton =	**3.25**	**ton/yr**
VOC:	0.032	lb/ton =	**16.00**	**ton/yr**
Pb:	0.0000033	lb/ton =	**0.00**	**ton/yr**
HCl:	0.00021	lb/ton =	**0.11**	**ton/yr**
NOx:	0.055	lb/ton =	**27.50**	**ton/yr**
CO:	0.13	lb/ton =	**65.00**	**ton/yr**

*** * aggregate drying: batch-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 US EPA's AP-42, 5th Edition, Section 11.1 - Hot Mix Asphalt Plants, Tables 11.1-1, and 11.1-6 for a batch mix dryer which has the capability of combusting either fuel oil or natural gas:

Pollutant:	Ef	lb/ton x	143,975.00 / 2,000	ton/yr lb/ton
Criteria Pollutant:				
P M:	32	lb/ton =	**2.30**	**ton/yr**
P M-10:	4.5	lb/ton =	**0.32**	**ton/yr**
VOC:	0.0082	lb/ton =	**0.59**	**ton/yr**
CO:	0.4	lb/ton =	**28.80**	**ton/yr**
NOx:	0.12	lb/ton =	**8.64**	**ton/yr**

*** * silo filling - Limited Throughput* ***

The following calculations determine the amount of emissions created by silo filling, based on 8,760 hours of use and US EPA's AP-42, Section 11.1, Tables 11.1-14 through 11.1-16.

PM/PM10 Ef = 0.000332 + 0.00105(-V)e((0.0251)(T+460)-20.43)
= 5.86E-04 lb PM or PM-10 per ton of asphalt mix produced
where V = -0.5 asphalt volatility (default value of -0.5 used per AP-42)
T= 325 hot mix asphalt (HMA)

PM/PM10 = 0.34 tons/yr
Total PAH HAPs= 0.02 tons/yr (11.40% of Organic PM emissions per AP-42)*

TOC Ef = 0.0504(-V)e((0.0251)(T+460)-20.43)
= 1.22E-02 lb TOC per ton of asphalt mix produced
where V = -0.5 asphalt volatility (default value of -0.5 used per AP-42)
T= 325 hot mix asphalt (HMA)

VOC = 6.97 tons/yr (100% of TOC emissions per AP-42)
Worst Case Single HAP (Formaldehyde) = 0.05 tons/yr (0.69% of TOC emissions per AP-42)

Total Volatile HAPs = 0.09 tons/yr (1.3% of TOC emissions per AP-42)

CO Ef = 0.00488(-V)e((0.0251)(T+460)-20.43)
= 1.18E-03 lb CO per ton of asphalt mix produced
where V = -0.5 asphalt volatility (default value of -0.5 used per AP-42)
T= 325 hot mix asphalt (HMA)

CO = 0.67 tons/yr

* Organic PM emissions are calculated using the equation from Table 11.1-14.

Organic PM Ef = 0.00141(-V)e((0.0251)(T+460)-20.43)
= 3.41E-04 lb PM or PM-10 per ton of asphalt mix produced
where V = -0.5 asphalt volatility (default value of -0.5 used per AP-42)
T= 325 hot mix asphalt (HMA)

*** *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:

Emulsified asphalt:

Maximum weight % of VOC solvent in binder	15.0%
Weight % VOC solvent in binder that evaporates:	46.4%
Volume % of diluent allowed =	7% (per 326 IAC 8-5-2)

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)

Other asphalt with solvent binder:

Maximum weight % of VOC solvent in binder	25.9%
Weight % VOC solvent in binder that evaporates:	2.5%
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 99.90 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 as follows:

(99.90 tons VOC/yr -	34.29	tons VOC/yr from other sources after controls =	**65.61**	**tons of VOC emitted per year**

This is equivalent to limiting the usage of cold mix asphalt with solvent liquid binder to less than the following:

141.39	tons of VOC solvent per 12 consecutive month period for emulsified asphalt.
69.06	tons of VOC solvent per 12 consecutive month period for rapid cure cut back asphalt.
93.72	tons of VOC solvent per 12 consecutive month period for medium cure cut back asphalt.
262.43	tons of VOC solvent per 12 consecutive month period for slow cure cut back asphalt.
2624.28	tons of VOC solvent per 12 consecutive month period for other asphalt with solvent binder.

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

drum & batch mixers & dryer burner combustion			nonfugitive			
C O:	16.34	ton/yr x			**16.34**	
P M-10:	3.62	ton/yr x			**3.62**	
S O 2:	89.46	ton/yr x			**89.46**	
N O x:	87.83	ton/yr x			**87.83**	
V O C:	16.59	ton/yr x			**16.59**	
C O:	93.80	ton/yr x			**93.80**	
HCl:	9.90	ton/yr x			**9.90**	
hot oil heaters:			nonfugitive			
P M:	0.30	ton/yr x	100.00%	emitted after controls =	**0.30**	**ton/yr**
P M-10:	0.50	ton/yr x	100.00%	emitted after controls =	**0.50**	**ton/yr**
S O 2:	10.44	ton/yr x	100.00%	emitted after controls =	**10.44**	**ton/yr**
N O x:	3.00	ton/yr x	100.00%	emitted after controls =	**3.00**	**ton/yr**
VOC:	0.12	ton/yr x	100.00%	emitted after controls =	**0.12**	**ton/yr**
C O:	1.77	ton/yr x	100.00%	emitted after controls =	**1.77**	**ton/yr**
conveying/handling:			fugitive			
P M:	30.02	ton/yr x	50%	emitted after controls =	**15.01**	**ton/yr**
P M-10:	14.20	ton/yr x	50%	emitted after controls =	**7.10**	**ton/yr**
unpaved roads			fugitive			
P M:	213.06	ton/yr x	50%	emitted after controls =	**106.53**	**ton/yr**
P M-10:	54.30	ton/yr x	50%	emitted after controls =	**27.15**	**ton/yr**
storage piles:			fugitive			
P M:	0.79	ton/yr x	50%	emitted after controls =	**0.39**	**ton/yr**
P M-10:	0.28	ton/yr x	50%	emitted after controls =	**0.14**	**ton/yr**
load-out			fugitive			
P M:	1.42	ton/yr x	100%	emitted after controls =	**1.42**	**ton/yr**
P M-10:	1.42	ton/yr x	100%	emitted after controls =	**1.42**	**ton/yr**
VOC:	10.62	ton/yr x	100%	emitted after controls =	**10.62**	**ton/yr**
CO:	3.66	ton/yr x	100%	emitted after controls =	**3.66**	**ton/yr**
silo filling			fugitive			
P M:	0.34	ton/yr x	100%	emitted after controls =	**0.34**	**ton/yr**
P M-10:	0.34	ton/yr x	100%	emitted after controls =	**0.34**	**ton/yr**
VOC:	6.97	ton/yr x	100%	emitted after controls =	**6.97**	**ton/yr**
CO:	0.67	ton/yr x	100%	emitted after controls =	**0.67**	**ton/yr**
Cold mix storage:			fugitive			
VOC:	65.61	ton/yr x			**65.61**	**ton/yr**

*** * summary of source emissions after limitation and controls * ***

Criteria Pollutant:	**Non-Fugitive**	**Fugitive**	**Total**
PM:	**16.64 ton/yr**	**123.69 ton/yr**	**140.33 ton/yr**
PM-10:	**4.11 ton/yr**	**36.14 ton/yr**	**40.25 ton/yr**
S O 2:	**99.90 ton/yr**	**0.00 ton/yr**	**99.90 ton/yr**
N O x:	**90.83 ton/yr**	**0.00 ton/yr**	**90.83 ton/yr**
V O C:	**16.71 ton/yr**	**83.19 ton/yr**	**99.90 ton/yr**
C O:	**95.56 ton/yr**	**4.34 ton/yr**	**99.90 ton/yr**
HCl:	**9.90 ton/yr**	**0.00 ton/yr**	**9.90 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 @ 0.5 % 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):

180.8 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 =	3.17E-03	ton/yr	3.17E-06	ton/yr
Beryllium:	3	lb/10^12 Btu =	2.38E-03	ton/yr	2.38E-06	ton/yr
Cadmium:	3	lb/10^12 Btu =	2.38E-03	ton/yr	2.38E-06	ton/yr
Chromium:	3	lb/10^12 Btu =	2.38E-03	ton/yr	2.38E-06	ton/yr
Lead:	9	lb/10^12 Btu =	7.13E-03	ton/yr	7.13E-06	ton/yr
Manganese:	6	lb/10^12 Btu =	4.75E-03	ton/yr	4.75E-06	ton/yr
Mercury:	3	lb/10^12 Btu =	2.38E-03	ton/yr	2.38E-06	ton/yr
Nickel:	3	lb/10^12 Btu =	2.38E-03	ton/yr	2.38E-06	ton/yr
Selenium:	15	lb/10^12 Btu =	1.19E-02	ton/yr	1.19E-05	ton/yr
		Total HAPs =	**3.88E-02**	**ton/yr**	**3.88E-05**	**ton/yr**

The following calculations determine the amount of HAP emissions created by the combustion of waste oil before & after controls @ 1.0 % 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 1.11-1, 1.11-4.

Hazardous Air Pollutants (HAPs):

96.8 MMBtu/hr * 8,760 hr/yr / 140,000 Btu/gal * 2,000 lb/ton * Ef (lb/1,000 gal) = (ton/yr)

			Potential To Emit		Limited Emissions	
Arsenic:	1.10E-01	lb/1000 gal =	0.33	ton/yr	3.17E-06	ton/yr
Cadmium:	9.30E-03	lb/1000 gal =	2.82E-02	ton/yr	2.38E-06	ton/yr
Chromium:	2.00E-02	lb/1000 gal =	6.06E-02	ton/yr	2.38E-06	ton/yr
Cobalt:	2.10E-04	lb/1000 gal =	6.36E-04	ton/yr	2.38E-06	ton/yr
Lead:	1.87E-01	lb/1000 gal =	0.57	ton/yr	7.13E-06	ton/yr
Manganese:	6.80E-02	lb/1000 gal =	0.21	ton/yr	4.75E-06	ton/yr
Nickel:	1.10E-02	lb/1000 gal =	3.33E-02	ton/yr	2.38E-06	ton/yr
		Total HAPs =	**1.23**	**ton/yr**	**2.45E-05**	**ton/yr**

The following calculations determine the amount of HAP emissions created by the combustion of landfill gas before & after controls. The emission factor is taken from F003-14035-03112, issued February 8, 2002:

			Potential To Emit		Limited Emissions	
Total HAPs:	14.1	lb/MMcf = *	11.85	ton/yr	11.85	ton/yr

At a maximum usage of 90% LFG to 10% natural gas:

Total HAPs:*			10.70	ton/yr	10.70	ton/yr

* Based on F003-14035-03112, issued February 8, 2002. The maximum uncontrolled single HAP emission rate is: 8.49 tons per year for hydrogen chloride (HCl).

*** * aggregate drying: drum-mixer * ***

The following calculations determine the amount of HAP emissions created by aggregate drying before & after controls, based on 8,760 hours of use and US EPA'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).

Uncontrolled:

Ef lb/ton x 400 / 2000 lb/ton ton/hr x 8760 hr/yr

Controlled:

Ef lb/ton x 1,000,000.00 / 2000 lb/ton ton/yr

Hazardous Air Pollutants (HAPs):

				Potential To Emit		Limited Emissions	
Acetaldehyde	3.20E-04	lb/ton =	0.56	ton/yr	0.16	ton/yr
Acrolein	2.60E-05	lb/ton =	4.56E-02	ton/yr	0.01	ton/yr
Benzene:	3.90E-04	lb/ton =	0.68	ton/yr	0.20	ton/yr
Ethyl benzene:	2.40E-04	lb/ton =	0.42	ton/yr	0.12	ton/yr
Formaldehyde:	3.10E-03	lb/ton =	5.43	ton/yr	1.55	ton/yr
Hexane:	9.20E-04	lb/ton =	1.61	ton/yr	0.46	ton/yr
2,2,4 Trimethylpentane:	4.00E-05	lb/ton =	0.07	ton/yr	0.02	ton/yr
Methyl chloroform:	4.8E-05	lb/ton =	0.08	ton/yr	0.02	ton/yr
Propionaldehyde	1.30E-04	lb/ton =	0.23	ton/yr	0.07	ton/yr
Quinone	1.60E-04	lb/ton =	0.28	ton/yr	0.08	ton/yr
PAH (total) HAPs (fuel oil):*	8.8E-04	lb/ton =	1.54	ton/yr	0.44	ton/yr
PAH (total) HAPs (nat. gas):*	1.9E-04	lb/ton =	0.33	ton/yr	0.10	ton/yr
Toluene (fuel oil):	2.9E-03	lb/ton =	5.08	ton/yr	1.45	ton/yr
Toluene (nat. gas):	1.5E-04	lb/ton =	0.26	ton/yr	0.08	ton/yr
Xylene:	2.00E-04	lb/ton =	0.35	ton/yr	0.10	ton/yr
		Total HAPs =	16.98	ton/yr	4.85	ton/yr

Brooks Construction Company, Inc
stationary

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Plant I D 003-00351

*** * aggregate drying: batch-mixer * ***

The following calculations determine the amount of HAP emissions created by aggregate drying before & after controls, based on 8,760 hours of use and US EPA's AP-42, 5th Edition, Section 11.1 - Hot Mix Asphalt Plants, Table 11.1-9 for a batch 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).

Uncontrolled:

Ef	lb/ton x		220	ton/hr x	8760 hr/yr	
			2000	lb/ton		

Controlled:

Ef	lb/ton x		143,975.00	ton/yr		
			2000	lb/ton		

Hazardous Air Pollutants (HAPs):			Potential To Emit		Limited Emissions	
Acetaldehyde	3.20E-04	lb/ton =	0.31	ton/yr	0.02	ton/yr
Benzene:	2.80E-04	lb/ton =	0.27	ton/yr	0.02	ton/yr
Ethyl benzene:	2.20E-03	lb/ton =	2.12	ton/yr	0.16	ton/yr
Formaldehyde:	7.40E-04	lb/ton =	0.71	ton/yr	0.05	ton/yr
Quinone	2.70E-04	lb/ton =	0.26	ton/yr	0.02	ton/yr
Toluene:	1.0E-03	lb/ton =	0.96	ton/yr	0.07	ton/yr
Xylene:	2.70E-03	lb/ton =	2.60	ton/yr	0.19	ton/yr
Total PAH HAPs:	1.100E-04	lb/ton =	0.11	ton/yr	0.01	ton/yr
		Total HAPs =	**7.34**	**ton/yr**	**0.55**	**ton/yr**

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

potential to emit
Hazardous Air Pollutants (HAPs):

	LFG:	Natural gas:	Fuel oil:	
Acetaldehyde:	---	0.87	0.869	ton/yr
Acrolein:	---	0.05	0.046	ton/yr
Arsenic:	---	---	0.333	ton/yr
Benzene:	---	0.95	0.953	ton/yr
Beryllium:	---	---	0.002	ton/yr
Cadmium:	---	---	0.028	ton/yr
Chromium:	---	---	0.061	ton/yr
Cobalt:	---	---	0.001	ton/yr
Ethyl benzene:	---	2.54	2.540	ton/yr
Formaldehyde:	---	6.37	6.373	ton/yr
HCl:	8.49	---	80.319	ton/yr
Hexane:	---	1.61	1.612	ton/yr
Lead:	---	---	0.566	ton/yr
Manganese:	---	---	0.206	ton/yr
Methyl chloroform:	---	0.08	0.084	ton/yr
Mercury:	---	---	0.002	ton/yr
Nickel:	---	---	0.033	ton/yr
Propionaldehyde:	---	0.23	0.228	ton/yr
Phenol:	---	---	0.017	ton/yr
Quinone:	---	0.54	0.540	ton/yr
Selenium:	---	---	0.012	ton/yr
2,2,4 Trimethylpentane:	---	0.07	0.070	ton/yr
Toluene:	---	1.23	6.044	ton/yr
Total PAH HAPs:	---	0.63	1.837	ton/yr
Xylene:	---	2.95	0.406	ton/yr
other	2.21	---	---	
Total:	**10.70**	**18.12**	**103.18**	**ton/yr**

limited emissions
Hazardous Air Pollutants (HAPs):

	LFG:		Natural gas:	Fuel oil:	
Acetaldehyde:	---		0.87	0.183	ton/yr
Acrolein:	---		0.05	0.013	ton/yr
Arsenic:	---		---	0.000	ton/yr
Benzene:	---		0.95	0.215	ton/yr
Beryllium:	---		---	0.000	ton/yr
Cadmium:	---		---	0.000	ton/yr
Chromium:	---		---	0.000	ton/yr
Cobalt:	---		---	0.000	ton/yr
Ethyl benzene:	---		2.54	0.278	ton/yr
Formaldehyde:	---		6.37	1.832	ton/yr
HCl:	8.49		---	9.900	ton/yr
Hexane:	---		1.61	0.460	ton/yr
Lead:	---		---	0.000	ton/yr
Manganese:	---		---	0.000	ton/yr
Methyl chloroform:	---		0.08	0.024	ton/yr
Mercury:	---		---	0.000	ton/yr
Nickel:	---		---	0.000	ton/yr
Propionaldehyde:	---		0.23	0.065	ton/yr
Phenol:	---		---	0.017	ton/yr
Quinone:	---		0.54	0.099	ton/yr
Selenium:	---		---	0.000	ton/yr
2,2,4 Trimethylpentane:	---		0.07	0.020	ton/yr
Toluene:	---		1.23	1.522	ton/yr
Total PAH HAPs:	---		0.63	0.638	ton/yr
Xylene:	---		2.71	0.155	ton/yr
other	2.21		---	---	
Total:	**10.70**		**17.88**	**15.42**	**ton/yr**

*** * miscellaneous * ***

326 IAC 7 Compliance Calculations:

The following calculations determine the maximum sulfur content of distillate # 2 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 # 4 fuel oil allowable by 326 IAC 7:

1.6 lb/MMBtu x 138,000 Btu/gal= 220.8 lb/1000gal

220.8 lb/1000gal / 150 lb/1000 gal = 1.5 %

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

The following calculations determine the maximum sulfur content of distillate # 5 fuel oil allowable by 326 IAC 7:

1.6 lb/MMBtu x 140,000 Btu/gal= 224 lb/1000gal

224 lb/1000gal / 150 lb/1000 gal = 1.5 %

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

The following calculations determine the maximum sulfur content of distillate # 6 fuel oil allowable by 326 IAC 7:

1.6 lb/MMBtu x 150,000 Btu/gal= 240 lb/1000gal

240 lb/1000gal / 150 lb/1000 gal = 1.6 %

Sulfur content must be less than or equal to 1.6% 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 140,000 Btu/gal= 224 lb/1000gal

224 lb/1000gal / 150 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 the aggregate drying process with a process weight rates in excess of 30 tons per hour:

400 Tons per Hour Drum-Mix Plant:

limit = 55 * (400 ^ 0.11) - 40 = 66.31 lb/hr or

220 Tons per Hour Batch-Mix Plant:

limit = 55 * (220 ^ 0.11) - 40 = 59.55 lb/hr or

Since the emission limit pursuant to Subpart I of 40 CFR 60 are more stringent than this limit, the limit pursuant to 326 IAC 6-3-2 does not apply. The emission limit pursuant to Subpart I shall also render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

PM-10 Emission Limit for Aggregate mixer & Dryer:

(99.90 tons PM-10/yr - 43.87 tons PM-10/yr from other sources)
=
56.03 tons PM-10/yr = 12.79 lbs/hr (Will be able to comply)

Allowable PM-10 emissions for PSD non-applicability are apportioned to the two aggregate drying facilities as follows:

Batch Plant Aggregate Dryer:

143,975 tons/yr / 1,143,975 tons/yr (total) x 56.03 tons/yr = 7.05 tons/yr
Controlled PM-10 emissions from the batch aggregate dryer are 0.33 ton/yr < 1.61 lbs/hr
Based on a asphalt production max of 143,975 tons/year, this emission limit is equivalent to 0.098 lb PM per ton

Drum-Mix Plant Aggregate Dryer:

1,000,000 tons/yr / 1,143,975 tons/yr (total) x 56.03 tons/yr = 48.97 tons/yr
Controlled PM-10 emissions from the batch aggregate dryer are 3.29 ton/yr < 11.18 lbs/hr
Based on a asphalt production max of 1,000,000 tons/year, this emission limit is equivalent to 0.098 lb PM per ton

PM Emission Limit for Aggregate Mixer and Dryer:

Source-wide emissions of PM must be less than 250 tons per year such that the requirements of 326 IAC 2-2 (PSD) are not applicable. Therefore, PM from the 2 aggregate dryers shall be limited as follows:

(249.90 tons PM/yr - 139.39 tons PM/yr from other sources)
=
110.51 tons PM/yr = 25.23 lbs/hr (Will be able to comply)

Allowable PM emissions for PSD non-applicability are apportioned to the two aggregate drying facilities as follows:

Batch Plant Aggregate Dryer:

143,975 tons/yr / 1,143,975 tons/yr (total) x 110.51 tons/yr = 13.91 tons/yr
Controlled PM emissions from the batch aggregate dryer are 2.30 ton/yr < 3.18 lbs/hr
Based on a asphalt production max of 143,975 tons/year, this emission limit is equivalent to 0.193 lb PM per ton

Drum-Mix Plant Aggregate Dryer:

1,000,000 tons/yr / 1,143,975 tons/yr (total) x 110.51 tons/yr = 96.60 tons/yr
Controlled PM emissions from the batch aggregate dryer are 14.04 ton/yr < 22.05 lbs/hr
Based on a asphalt production max of 1,000,000 tons/year, this emission limit is equivalent to 0.193 lb PM per ton

40 CFR Part 60.90, Subpart I (Standards of Performance for Hot Mix Asphalt Plants) Compliance Calculations:

The following calculations determine compliance with NSPS 40 CFR Part 60.90, Subpart I, which limits stack emissions from asphalt plants to 0.04 gr/dscf: (Will be able to comply)

SV1B: Batch-mix Dryer

2.30 ton/yr * 2000 lb/ton * 7000 gr/lb = 0.002 gr/dscf
525,600 min/yr * 35,640 dscf/min

Allowable particulate emissions under NSPS equate to 53.52 tons per year. 12.22 lbs/hr

Note:
SCFM = 54,000 acfm * (460 + 68) *(1.0-0.05)/ (460 + 300)
= 35,640 scfm
Assumes exhaust gas temperature of 300F, and exhaust gas flow of 54,000 acfm.

SV1D: Drum-mix Dryer

14.04 ton/yr * 2000 lb/ton * 7000 gr/lb = 0.006 gr/dscf
525,600 min/yr * 60,720 dscf/min

Allowable particulate emissions under NSPS equate to 91.18 tons per year. 20.82 lbs/hr

Note:
SCFM = 92,000 acfm * (460 + 68) *(1.0-0.05)/ (460 + 300)
= 60,720 scfm
Assumes exhaust gas temperature of 300F, and exhaust gas flow of 54,000 acfm.