



Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

September 22, 2004

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

TO: Interested Parties / Applicant

RE: Aggregate Industries / SPR 127-19279-00083

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

Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures
FNPER.dot 9/16/03



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Joseph E. Kernan
Governor

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September 22, 2004

Mr. Rob Mason
Aggregate Industries
8075 Creekside Drive, Suite 200
Kalamazoo, MI 49024

Re: **127-19279-00083**
First Significant Revision to
FESOP 127-10404-00083

Dear Mr. Mason:

Aggregate Industries was issued a permit on September 13, 1999 for a hot mix drum asphalt paving source. A letter requesting changes to this permit was received on June 17, 2004. Pursuant to the provisions of 326 IAC 2-8-11.1 a Significant Permit Revision to this permit is hereby approved as described in the attached Technical Support Document.

The revision consists of adding used oil to the fuels utilized at the aggregate dryer.

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. For your convenience, the entire revised FESOP, with all revisions and amendments made to it, will be provided upon issuance.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact CarrieAnn Paukowits, c/o OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, at 631-691-3395 or in Indiana at 1-800-451-6027 (ext 631-691-3395).

Sincerely,

Original signed by
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

CAP/MES

cc: File - Porter County
U.S. EPA, Region V
Porter County Health Department
Northwest Regional Office
Air Compliance Section Inspector - Michael Hall
Compliance Branch
Administrative and Development Section
Technical Support and Modeling - Michele Boner



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

**Aggregate Industries
910 East Highway 30
Valparaiso, Indiana 46383**

(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.

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.: F 127-10404-00083	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: September 13, 1999 Expiration Date: September 13, 2004

First Reopening 127-13098-00083, issued on October 1, 2001
First Administrative Amendment 127-18063-00083, issued on September 16, 2003

First Significant Permit Revision: 127-19279-00083	Conditions Affected: A.1, A.2, B.23, C.1, C.14, all of Section D.1, D.2.1, D.2.3 and the Quarterly Report Form
Issued by: Original signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: September 22, 2004

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SECTION A

SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary hot mix drum asphalt paving source.

Authorized individual: Environmental/Property Manager
Source Address: 910 East Highway 30, Valparaiso, Indiana 46383
Mailing Address: 8075 Creekside Drive, Ste. 200, Kalamazoo, Michigan 49024
Phone Number: 219-942-4466
SIC Code: 2951
County Location: Porter
County Status: Nonattainment for ozone
Attainment for all other criteria pollutants
Source Status: Federally Enforceable State Operating Permit (FESOP)
Minor Source, under Emission Offset, PSD and nonattainment new source review rules;
Minor Source, Section 112 of the Clean Air Act

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

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

- (a) One (1) hot mix drum mixer exhausting through Stack S1, equipped with a baghouse for particulate matter control, capacity: 220 tons per hour.
- (b) One (1) 75 million British thermal units per hour aggregate dryer fired by natural gas or used (waste) oil also exhausting through Stack S1, equipped with a baghouse for particulate control.
- (c) One (1) 0.45 million British thermal units per hour hot oil heater firing natural gas exhausting at Stack S2.
- (d) One (1) liquid asphalt storage tank, capacity: 25,000 gallons.
- (e) Two (2) asphalt storage silos, capacity: 100 tons, each.
- (f) One (1) above ground, used oil storage tank, capacity: 18,000 - 19,800 gallons.

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

This stationary source does not currently have any insignificant activities, as defined in 326 IAC 2-7-1(21).

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

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

A.5 Prior Permit Conditions

- (a) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits.

- (b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, including any term or condition from a previously issued construction or operation permit, IDEM, OAQ, when applicable shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued.

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [IC 13]

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

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

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

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

This permit is issued for a fixed term of five (5) years from the effective date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3.

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

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

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

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

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

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

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

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

B.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)]

- (a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

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

- (b) 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.
- (c) Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit. If the Permittee wishes to assert a claim of confidentiality over any of the furnished records, the Permittee must furnish such records to IDEM, OAQ, along with a

claim of confidentiality under 326 IAC 17. If requested by IDEM, OAQ, or the U.S. EPA, to furnish copies of requested records directly to U. S. EPA, and if the Permittee is making a claim of confidentiality regarding the furnished records, the Permittee must furnish such confidential records directly to the U.S. EPA along with a claim of confidentiality under 40 CFR 2, Subpart B.

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

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

B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]

(a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit, except those specifically designated as not federally enforceable, constitutes a violation of the Clean Air Act and is grounds for:

- (1) Enforcement action;
- (2) Permit termination, revocation and reissuance, or modification; and
- (3) Denial of a permit renewal application.

(b) 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.

B.11 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 under this permit shall contain certification by a 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, on the attached Certification Form, with each submittal.

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

B.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The certification shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in letter form no later than April 15 of each year to:

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

(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 identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts as specified in Sections D of this permit, IDEM, OAQ, may require to determine the compliance status of the source.

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

B.13 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this permit, including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAQ, upon request and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

B.14 Emergency Provisions [326 IAC 2-8-12]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action

brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-8-12.

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

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

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

Failure to notify IDEM, OAQ, by telephone or facsimile within four (4) daytime business hours after the beginning of the emergency, or after the emergency is discovered or reasonably should have been discovered, shall constitute a violation of 326 IAC 2-8 and any other applicable rules. [326 IAC 2-8-12(f)]

(5) For each emergency lasting one (1) hour or more, the Permittee submitted notice either in writing or facsimile, of the emergency to:

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

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

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

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

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

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
 - (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
 - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions) for sources subject to this rule after the effective date of this rule. This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
 - (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
 - (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in compliance 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.

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 Provision), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

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

within ten (10) calendar days from the date of the discovery of the deviation.
- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
 - (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or

- (2) An emergency as defined in 326 IAC 2-7-1(12); or
- (3) Failure to implement elements of the Preventive Maintenance Plan unless such failure has caused or contributed to a deviation.

- (4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.

- (c) Written notification shall be submitted on the attached Emergency/Deviation Occurrence Reporting Form or its substantial equivalent. The notification does not need to be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) Proper notice submittal under 326 IAC 2-7-16 satisfies the requirement of this subsection.

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 FESOP modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)]
- (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).

Request for renewal shall be submitted to:

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

- (b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]
- (1) A timely renewal application is one that is:
- (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
- (B) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (2) If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.
- (c) Right to Operate After Application for Renewal [326 IAC 2-8-9]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ, takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ, any additional information identified as needed to process the application.

B.18 Permit Amendment or Modification [326 IAC 2-8-10] [326 IAC 2-8-11.1]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:
- Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015
- Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1) only if a certification is required by the terms of the applicable rule.
- (c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.19 Operational Flexibility [326 IAC 2-8-15]

- (a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met:
- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-1.1 has been obtained;
- (3) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed herein as a rate of emissions or in terms of total

emissions);

- (4) The Permittee notifies the:

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

and

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

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

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

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

- (b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-8-15(a) and the following additional conditions:

- (1) A brief description of the change within the source;
- (2) The date on which the change will occur;
- (3) Any change in emissions; and
- (4) Any permit term or condition that is no longer applicable as a result of the change.

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

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

A modification, construction, or reconstruction shall be approved if required by and in accordance with the applicable provisions of 326 IAC 2.

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)]

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) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements. [326 IAC 2-8-5(a)(4)]

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, P.O. Box 6015
Indianapolis, Indiana 46206-6015

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

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-11(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-8-4(6)][326 IAC 2-8-16]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. 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.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

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

C.1 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 volatile organic compounds (VOC) from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period. This limitation shall also satisfy the requirements of 326 IAC 2-3 (Emission Offset);
- (2) The potential to emit any regulated pollutant from the entire source, except particulate matter (PM), and VOC, shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period;
- (3) 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
- (4) 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) 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.

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

C.2 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), 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.3 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. 326 IAC 4-1-3(a)(2)(A) and (B) are not federally enforceable.

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

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

C.5 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). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 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 November 20, 1998. The plan consists of applying water on paved roads and storage piles on an as-needed basis.

C.7 Operation of Equipment [326 IAC 2-8-5(a)(4)]

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

C.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 61.140]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

The notifications do not require a certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-4 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) **Indiana Accredited Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

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, P.O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAQ, within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.11 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]

Compliance with applicable requirements shall be documented as required by this permit. All monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance. 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 Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

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

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

C.12 Maintenance of Monitoring Equipment [326 IAC 2-8-4(3)(A)(iii)]

- (a) In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.
- (b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.13 Monitoring Methods [326 IAC 3]

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

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

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

- (c) The Preventive Maintenance Plan for the pH meter shall include calibration using known standards. The frequency of calibration shall be adjusted such that the typical error found at calibration is less than one pH point.
- (d) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

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

C.15 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall:

- (a) Submit:
 - (1) A compliance schedule for meeting the requirements of 40 CFR 68 by the date provided in 40 CFR 68.10(a); or
 - (2) As a part of the compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and
 - (3) A verification to IDEM, OAQ, that a RMP or a revised plan was prepared and submitted as required by 40 CFR 68.
- (b) Provide annual certification to IDEM, OAQ, that the Risk Management Plan is being properly implemented.

All documents submitted pursuant to this condition shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.16 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-8-4][326 IAC 2-8-5] [326 IAC 1-6]

- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:
 - (1) This condition;
 - (2) The Compliance Determination Requirements in Section D of this permit;
 - (3) The Compliance Monitoring Requirements in Section D of this permit;
 - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
 - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ, upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within

ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of:

- (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
 - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.
- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
- (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;
 - (3) An automatic measurement was taken when the process was not operating; or
 - (4) The process has already returned to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAQ shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAQ within thirty (30) days of receipt of the notice of deficiency. IDEM, OAQ reserves the authority to use enforcement activities to resolve noncompliant stack tests.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ

that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.18 Emission Statement [326 IAC 2-6] [326 IAC 2-8-4(3)]

- (a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6. This annual statement must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8) (Emission Statement Operating Year). The annual statement must be submitted to:

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

- (b) The annual emission statement 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.19 Monitoring Data Availability

- (a) With the exception of performance tests conducted in accordance with Section C- Performance Testing all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements in (a) above.

C.20 General Record Keeping Requirements [326 IAC 2-8-4(3)][326 IAC 2-8-5]

- (a) Records of all required monitoring data and support information 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 kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAQ, representative. 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 written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
 - (1) The date, place, and time of sampling or measurements;
 - (2) The dates analyses were performed;
 - (3) The company or entity performing the analyses;
 - (4) The analytic techniques or methods used;
 - (5) The results of such analyses; and
 - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
 - (1) Copies of all reports required by this permit;
 - (2) All original strip chart recordings for continuous monitoring instrumentation;
 - (3) All calibration and maintenance records;
 - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.21 General Reporting Requirements [326 IAC 2-8-4(3)(C)]

- (a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "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, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) All instances of deviations as described in Section B- Deviations from Permit Requirements Conditions must be clearly identified in such reports. The Emergency/Deviation Occurrence Report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

Stratospheric Ozone Protection

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

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

- (a) Persons opening appliances for maintenance, service, repair or disposal must comply with the required practices pursuant to 40 CFR 82.156
- (b) Equipment used during the maintenance, service, repair or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 FACILITY OPERATION CONDITIONS

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

- (a) One (1) hot mix drum mixer exhausting through Stack S1, equipped with a baghouse for particulate matter control, capacity: 220 tons per hour.
- (b) One (1) 75 million British thermal units per hour aggregate dryer fired by natural gas or used (waste) oil also exhausting through Stack S1, equipped with a baghouse for particulate control.
- (c) One (1) 0.45 million British thermal units per hour hot oil heater firing natural gas exhausting at Stack S2.

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

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

D.1.1 Particulate Matter [40 CFR Part 60.90, Subpart I] [326 IAC 12] [326 IAC 2-2]

- (a) Pursuant to NSPS Subpart I and 326 IAC 12, the PM emission rate from the hot mix drum mixer exhausting through Stack S1 shall not exceed 90 milligrams per dry standard cubic meter (0.04 grains per dry standard cubic foot) and the opacity of emissions shall be less than twenty percent (20%).
- (b) The potential to emit PM from the aggregate dryer/mixer shall not exceed 0.221 pound per ton of asphalt processed, equivalent to 213 tons per year when operating at the maximum rate of 220 tons of asphalt per hour for every hour of the year. This will limit the potential to emit PM from the entire source to less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2, PSD, are not applicable.

D.1.2 PM₁₀ [326 IAC 2-8-4] [326 IAC 2-2]

Pursuant to 326 IAC 2-8-4, potential to emit PM₁₀ from the aggregate dryer/mixer shall not exceed 0.098 pounds per ton of asphalt processed, equivalent to 94.4 tons per year when operating at the maximum rate of 220 tons of asphalt per hour for every hour of the year. This will limit the potential to emit PM from the entire source to less than 100 tons per year. Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply. This will also make the requirements of 326 IAC 2-2, PSD, not applicable.

D.1.3 Volatile Organic Compounds (VOC) [326 IAC 8-5-2]

- (a) Pursuant to 326 IAC 8-5-2 (Miscellaneous Operations: asphalt paving), the owner or operator shall: not cause or allow the use of asphalt emulsion containing more than seven (7.0) percent oil distillate by volume of emulsion for any paving application except the following purposes:
 - (1) penetrating prime coating
 - (2) stockpile storage
 - (3) application during the months of November, December, January, February and March
- (b) No cutback asphalt or emulsified asphalt shall be used at this plant without prior approval from OAQ.

D.1.4 Sulfur Dioxide (SO₂) [326 IAC 2-8-4] [326 IAC 7-1.1-1] [326 IAC 7-2-1] [326 IAC 2-2]

- (a) Pursuant to 326 IAC 2-8-4, the total use of used oil by the aggregate dryer shall not exceed 841,121 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. The sulfur content of the used oil shall not exceed two and two-tenths percent (2.2%) by weight, based on a monthly weighted average. This will limit SO₂ emissions from the aggregate dryer to 99.0 tons per year and the potential to emit SO₂ from the entire source to less than 100 tons per year. Thus, the requirements of 326 IAC 2-7, Part 70, do not apply. Compliance with this limit shall also ensure that the requirements of 326 IAC 2-2, Prevention of Significant Deterioration (PSD), are not applicable.
- (b) Pursuant to 326 IAC 7-1.1 (SO₂ Emissions Limitations), the SO₂ emissions from the aggregate dryer shall not exceed one and six-tenths (1.6) pounds per million British thermal unit heat input when operating on used (waste) oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a thirty (30) day rolling weighted average.

D.1.5 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 dryer/burner and any control devices.

Compliance Determination Requirements

D.1.6 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

Pursuant to CP 127-8611-00083, issued July 31, 1997, compliance testing of the dryer/burner was performed on November 24, 1997. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. The Permittee shall perform PM and PM₁₀ testing utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM₁₀, or other methods as approved by the Commissioner. PM₁₀ includes filterable and condensable PM₁₀. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

D.1.7 Particulate Matter (PM and PM₁₀)

The baghouse for PM and PM₁₀ control shall be in operation and control emissions from the dryer/burner at all times that the dryer/burner is in operation.

D.1.8 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 one and six-tenths (1.6) pounds per million British thermal unit heat input when operating on used (waste) oil by:
- (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the aggregate dryer and drum mixer using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

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

D.1.9 Used Oil Requirements [329 IAC 13]

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

- (a) Receipt of an EPA identification number as outlined in 329 IAC 13-8-3 (Notification),
- (b) Compliance with the used oil storage requirements specified in 329 IAC 13-8-5 (Used Oil Storage), and
- (c) Maintaining records pursuant to 329 IAC 13-8-6 (Tracking).

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

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

D.1.10 Visible Emissions Notations

- (a) Visible emission notations of the baghouse stack exhaust S1 shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C- Compliance Monitoring Plan - Failure to Take Response Steps shall be considered a deviation from this permit.

D.1.11 Parametric Monitoring

- (a) The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the drying/mixing process, at least once per shift when the asphalt production process is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 4.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Monitoring Plan - Failure to

Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps shall be considered a deviation from this permit.

- (b) The Permittee shall record the inlet temperature to the baghouse used in conjunction with the aggregate dryer and drum mixer, at least once per shift when the aggregate dryer/mixer is in operation. When for any one reading, the inlet temperature to the baghouse is outside the normal range of 300 and 360 degrees Fahrenheit or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Monitoring Plan - Failure to Take Response Steps. This is required to prevent overheating of the bags and to prevent low temperatures from mudding up the bags. A temperature reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C- Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a deviation from this permit.

The instruments used for determining the pressure and temperature shall comply with Section C - Pressure Gauge Pressure Gauge and Other 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.1.12 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the drying/mixing operation when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.1.13 Broken or Failed Bag Detection

In the event that bag failure has been observed.

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.1.14 Record Keeping Requirements

- (a) To document compliance with Condition D.1.10, the Permittee shall maintain records of visible emission notations of the baghouse stack exhaust once per shift.
- (b) To document compliance with Condition D.1.11, the Permittee shall maintain the following:
 - (1) Records of the total static pressure drop during normal operation once per shift when venting to the atmosphere.
 - (2) Records of the inlet temperature during normal operation once per shift when venting to the atmosphere.
- (c) To document compliance with Condition D.1.4, the Permittee shall maintain records in accordance with (1) through (4) below.
 - (1) Calendar dates covered in the compliance determination period;
 - (2) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period, the natural gas fired boiler certification does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1); and

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

 - (3) The name of the fuel supplier; and
 - (4) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.
- (d) To document compliance with Condition D.1.4, the Permittee shall keep records of the amount of used oil used at the aggregate dryer burner. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
- (e) To document compliance with Condition D.1.12, the Permittee shall maintain records of the results of the inspections required under Condition D.1.12 and the dates the vents are redirected.
- (f) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.
- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.15 Reporting Requirements

A quarterly summary to document compliance with Condition D.1.4(a) 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. These reports shall include the amount of natural gas consumption each month. All records and reports shall use calendar months.

SECTION D.2

FACILITY OPERATION CONDITIONS

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

- (d) One (1) liquid asphalt storage tank, capacity: 25,000 gallons.
- (e) Two (2) asphalt storage silos, capacity: 100 tons, each.
- (f) One (1) above ground, used oil storage tank, capacity: 18,000 - 19,800 gallons.

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

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

D.2.1 Standards of Performance for Volatile Organic Liquid Storage Vessels [326 IAC 12] [40 CFR 60.116b]

The 25,000 gallon liquid asphalt storage tank and the used oil storage tank shall comply with the New Source Performance Standards (NSPS), 326 IAC 12 (40 CFR Part 60.116b, Subpart Kb). 40 CFR Part 60.116b paragraphs (a) and (b) require the Permittee to maintain accessible records showing the dimensions of the storage vessels and an analysis showing the capacities of the storage vessels.

Compliance Determination Requirements

D.2.2 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

The Permittee is not required to test this facility by this permit. However, IDEM may require compliance testing when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.3 Standards of Performance for Volatile Organic Liquid Storage Vessels [326 IAC 12] [40 CFR 60.116b]

The Permittee shall maintain accessible records showing the dimensions of the 25,000 gallon liquid asphalt storage tank and the used oil storage tank and an analysis showing the capacity of the storage vessels. Records shall be kept for the life of the storage tanks. A copy of 40 CFR Part 60, Subpart Kb, is attached.

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

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: Aggregate Industries
Source Address: 910 East Highway 30, Valparaiso, Indiana 46383
Mailing Address: 8075 Creekside Drive, Ste 200, Kalamazoo, Michigan 49024
FESOP No.: F 127-10404-00083

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) _____
- 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 DATA SECTION
P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY/DEVIATION OCCURRENCE REPORT**

Source Name: Aggregate Industries
Source Address: 910 East Highway 30, Valparaiso, Indiana 46383
Mailing Address: 8075 Creekside Drive, Ste 200, Kalamazoo, Michigan 49024
FESOP No.: F 127-10404-00083

This form consists of 2 pages

Page 1 of 2

Check either No. 1 or No.2
9 1. This is an emergency as defined in 326 IAC 2-7-1(12) The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and The Permittee must submit notice in writing or by facsimile within two (2) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16
9 2. This is a deviation, reportable per 326 IAC 2-8-4(3)(C) The Permittee must submit notice in writing within ten (10) calendar days

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/Deviation:
Describe the cause of the Emergency/Deviation:

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

Page 2 of 2

Date/Time Emergency/Deviation started:
Date/Time Emergency/Deviation was corrected:
Was the facility being properly operated at the time of the emergency/deviation? 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/deviation:
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: _____

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

FESOP Quarterly Report

Source Name: Aggregate Industries
Source Address: 910 East Highway 30, Valparaiso, Indiana 46383
Mailing Address: 8075 Creekside Drive, Ste 200, Kalamazoo, Michigan 49024
FESOP No.: F 127-10404-00083
Facility: Aggregate dryer
Parameter: Used oil usage
Limit: 841,121 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month

YEAR: _____

Month	Used Oil Usage	Used Oil Usage	Used Oil Usage
	This Month	Previous 11 Months	12 Month Total

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

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

Attach a signed certification to complete this report.

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

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

Source Name: Aggregate Industries
Source Address: 910 East Highway 30, Valparaiso, Indiana 46383
Mailing Address: 8075 Creekside Drive, Ste 200, Kalamazoo, Michigan 49024
FESOP No.: F 127-10404-00083

Months: _____ to _____ Year: _____

This report is an affirmation that the source has met all the compliance monitoring requirements stated in this permit. This report shall be submitted quarterly. Any deviation from the compliance monitoring requirements and the date(s) of each deviation must be reported. Additional pages may be attached if necessary. This form can be supplemented by attaching the Emergency/Deviation Occurrence Report. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.

Compliance Monitoring Requirement (eg. Permit Condition D.1.3)	Number of Deviations	Date of each Deviation

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

Attach a signed certification to complete this report.

Indiana Department of Environmental Management Office of Air Quality

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

Source Background and Description

Source Name:	Aggregate Industries
Source Location:	910 East Highway 30, Valparaiso, Indiana 46383
County:	Porter
SIC Code:	2951
Operation Permit No.:	F 127-10404-00083
Operation Permit Issuance Date:	September 13, 1999
Significant Permit Revision No.:	SPR 127-19279-00083
Permit Reviewer:	CarrieAnn Paukowits

The Office of Air Quality (OAQ) has reviewed a significant permit revision application from Aggregate Industries relating to the construction and operation of the following emission units and pollution control devices:

The proposed revision is for the use of used (waste) oil, in addition to natural gas, at the one (1) aggregate dryer. Item (b) of the equipment list will be revised as follows:

One (1) 75 million British thermal units per hour ~~burner~~ **aggregate dryer firing fired by natural gas or used (waste) oil** also exhausting through Stack S1, **equipped with a baghouse for particulate control.**

The applicant is also proposing to construct the following auxiliary equipment:

One (1) above ground, used oil storage tank, capacity: 18,000 - 19,800 gallons.

History

On June 17, 2004, Aggregate Industries submitted an application to the OAQ requesting to utilize used (waste) oil, in addition to natural gas, at the one (1) aggregate dryer. Aggregate Industries was issued a Federally Enforceable State Operating Permit (FESOP) on September 13, 1999. A first Reopening (127-13098-00083) was issued on October 1, 2001, and a first Administrative Amendment (127-18063-00083) was issued on September 16, 2003. A renewal application (127-18409-00083) was received on November 20, 2003, and has not been issued.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (EF)
S1	Existing stack for the aggregate dryer	17.0	3.8	42,000	300

Recommendation

The staff recommends to the Commissioner that the FESOP Significant Permit Revision be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on June 17, 2004. Additional information was received on July 2 and 7, 2004.

Emission Calculations

See pages 1 through 13 of 13 of Appendix A of this document for detailed emissions calculations. The emissions calculations include calculations for the existing source and for the proposed modification.

Potential To Emit of Revision

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA."

This table reflects the PTE before controls for this revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	105
PM ₁₀	91.0
SO ₂	537
VOC	2.28
CO	4.79
NO _x	36.5

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

Justification for Revision

The FESOP is being revised through a FESOP Significant Permit Revision. This revision is being performed pursuant to 326 IAC 2-8-11.1(f)(1) since the potentials to emit PM, PM₁₀, SO₂, and NO_x from this revision are greater than twenty five (25) tons per year.

County Attainment Status

The source is located in Porter County.

Pollutant	Status
PM ₁₀	attainment
SO ₂	attainment
NO ₂	attainment
1-Hour Ozone	severe nonattainment
8-Hour Ozone	moderate 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.
 - (1) On January 26, 1996 in 40 CFR 52.777(i), the U.S. EPA granted a waiver of the requirements of Section 182(f) of the CAA for Lake and Porter Counties, including the lower NO_x threshold for nonattainment new source review. Therefore, VOC emissions alone are considered when evaluating the rule applicability relating to the 1-hour ozone standards. Porter County has been designated as nonattainment in Indiana for the 1-hour ozone standard. Therefore, VOC emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability section of this document.
 - (2) VOC and NO_x emissions are considered when evaluating the rule applicability relating to the 8-hour ozone standard. Porter 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 nonattainment new source review.
- (b) Porter County has been classified as attainment or unclassifiable in Indiana for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability section of this document.

(c) Fugitive Emissions

Although this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, there are applicable New Source Performance Standards that were in effect on August 7, 1980. Therefore, the fugitive emissions are counted toward determination of PSD and Emission Offset applicability.

Since unpaved roads are not an affected facility of the applicable NSPS (40 CFR 60.90, Subpart I), fugitive PM emissions resulting from unpaved roads are not counted toward determination of PSD and Emission Offset applicability. However, this source does not have unpaved roads.

Source Status

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

Pollutant	Emissions (tons/year)
PM	77.3
PM ₁₀	99.9
SO ₂	0.199
VOC	1.83
CO	28.0
NO _x	24.2

- (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 more and it is not one of the 28 listed source categories, and no nonattainment regulated pollutant is emitted at a rate of 100 tons per year or more.
- (b) These emissions are based upon F 127-10404-00083, issued on September 13, 1999.

Potential to Emit of Revision After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this FESOP revision.

Process/facility	Potential to Emit (tons/year)						
	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs
Proposed Revision (Dryer/mixer emissions from used oil)	213	94.4	99.0	0.420	0.883	6.73	--
Dryer/mixer emissions from natural gas	213	94.4	0.197	1.81	27.6	32.9	--
Worst case dryer/mixer emissions	213	94.4	99.2	2.28	27.6	36.5	--
Existing source excluding dryer emissions	36.8	4.66	0.001	15.1	2.61	0.197	7.54
Total (Worst case of dryer emissions plus existing source excluding dryer emissions)	< 250	< 100	< 100	17.4	30.2	36.7	7.54
FESOP Threshold Level	--	100	100	100	100	100	10 individual 25 total
PSD and Emission Offset/Nonattainment NSR Threshold Levels	250	250	250	25	250	100	-

- (a) The used oil usage is limited to 841,121 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month, in order limit SO₂ emissions to less than 100 tons per year from the entire source. As a result of that limit, the potential to emit VOC, CO and NO_x is also limited as shown in the table. The potential to emit PM and PM₁₀ is separately limited. See "326 IAC 2-2" and "326 IAC 2-8-4" in the State Rule Applicability section of this document.
- (b) This revision to an existing minor stationary source is not major because the emission increase is less than the PSD, Emission Offset, or nonattainment new source review threshold levels. Therefore, pursuant to 326 IAC 2-2, 326 IAC 2-3 and 326 IAC 2-1.1-5, this source is a minor source.
- (c) This revision to an existing minor stationary source will not make the source a major source pursuant to 326 IAC 2-2, 326 IAC 2-3 and 326 IAC 2-1.1-5, because the potential to emit each attainment criteria pollutant will remain less than 250 tons per year and the potential to emit each nonattainment criteria pollutant will remain less than 100 tons per year.
- (d) This revision to the existing FESOP will not change the status of the stationary source because the emissions from the entire source will still be limited to less than the Part 70 major source thresholds.

Federal Rule Applicability

- (a) This source is already subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.90, Subpart I). The hot mix asphalt plant is required to comply with the following:
- (1) Pursuant to 40 CFR 60.93, performance tests are required as specified in this Subpart and as outlined in Part 60.8.
 - (2) Pursuant to 40 CFR 60.92, on or after the date on which the performance tests are completed, no owner or operator subject to the provisions of Subpart I shall discharge into the atmosphere from any affected facility any gases which:
 - (A) Contain particulate matter in excess of 90 milligrams per dry standard cubic foot (0.04 grains per dry standard cubic foot).
 - (B) Exhibit 20 percent opacity, or greater.

A stack test was performed on November 24, 1997. This test was approved by IDEM and indicated compliance with this rule. According to the calculations in Appendix A of this document, the source will still comply with this rule. Stack tests will be required every five (5) years to demonstrate continuous compliance.

- (b) On October 15, 2003, revisions to 40 CFR 60, Subpart Kb, became effective. As of the date this permit is being issued these revisions have not been incorporated into the Indiana state rules. Therefore, the requirements from the previous version of 40 CFR 60, Subpart Kb, published in the federal register on August 8, 1987, which is referenced by 326 IAC 12, will remain applicable until the revisions are incorporated into the Indiana State Implementation Plan (SIP) and the condition is modified in a subsequent permit action. See the "State Rule Applicability - Individual Facilities" section of this document for the applicability of 326 IAC 12.

The proposed used oil storage tank has a capacity less than seventy-five (75) cubic meters. Therefore, the requirements of 40 CFR 60, Subpart Kb are not applicable.

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

State Rule Applicability - Individual Facilities

326 IAC 2-2 (Prevention of Significant Deterioration)

- (a) The potential to emit PM from the entire source is greater than 250 tons per year with this modification. Pursuant to F 127-10404-00083, issued on September 13, 1999, the PM emissions from the aggregate dryer/mixer are limited to 9.5 pounds per hour. In order to allow for more flexibility, while ensuring that this source is not subject to 326 IAC 2-2, this limit has been revised to an annual limit. The unrestricted potential to emit PM from the total of all facilities at this source, other than the aggregate dryer/mixer is 36.8 tons per year. Therefore, the potential to emit PM from the aggregate dryer/mixer shall not exceed 0.221 pounds per ton of asphalt produced, when operating at the maximum asphalt production rate of 1,927,200 tons per year (220 tons per hour). This will limit the total potential to emit PM from the aggregate dryer/mixer to 213 tons per year, and the total source potential to emit PM to less than 250 tons per year. Since the potential to emit PM after control by the baghouse is 3.89 tons per year or 0.004 pounds of PM per ton of asphalt produced from the

aggregate dryer/mixer, compliance with this emission limitation is accomplished by using the baghouse as control. Thus the requirements of 326 IAC 2-2, PSD, are not applicable.

- (b) The potential to emit PM_{10} and SO_2 are limited by 326 IAC 2-8-4 to less than 100 tons per year. Compliance with those limits will also make this source a minor source pursuant to 326 IAC 2-2, PSD.

326 IAC 2-3 (Emission Offset)

The unrestricted potential VOC emissions are still less than twenty-five (25) tons per year. Therefore, no limit is required in order to make this source a minor source pursuant to 326 IAC 2-3, Emission Offset.

326 IAC 2-1.1-5 (Air quality requirements)

The unrestricted potential VOC and NO_x emissions are still less than 100 tons per year. Therefore, although this source is in a nonattainment area for the eight-hour ozone standard, this source is also a minor source pursuant to 326 IAC 2-1.1-5 for nonattainment new source review.

326 IAC 2-8-4 (FESOP)

- (a) Pursuant to this rule and F 127-10404-00083, issued on September 13, 1999, the PM_{10} emissions from the aggregate dryer/mixer shall not exceed 21.8 pounds per hour. In order to allow for more flexibility, while ensuring compliance with 326 IAC 2-8-4, this limit has been revised to an annual limit. The unrestricted potential to emit PM_{10} from the total of all facilities at this source, other than the aggregate dryer/mixer is 4.66 tons per year. Therefore, the potential to emit PM_{10} from the aggregate dryer/mixer shall not exceed 0.098 pounds per ton of asphalt produced, when operating at the maximum asphalt production rate of 1,927,200 tons per year (220 pounds per hour). This will limit the total potential to emit PM_{10} from the aggregate dryer/mixer to 94.4 tons per year, and the total source potential to emit PM_{10} to less than 100 tons per year. Since the potential to emit PM_{10} after control by the baghouse is 62.3 tons per year or 0.065 pounds of PM_{10} per ton of asphalt produced from the aggregate dryer/mixer, compliance with this emission limitation is accomplished by using the baghouse as control. Operation of the baghouse at all times shall ensure compliance with this limit. Therefore, the requirements of 326 IAC 2-7 do not apply.
- (b) The potential to emit SO_2 from this modification is greater than 100 tons per year. The use of used oil shall be limited to no more than 841,121 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. The sulfur content of the used oil shall not exceed two and two-tenths percent (2.2%) by weight. This will limit SO_2 emissions from the use of used oil to 99.0 tons per year and the potential to emit SO_2 from the entire source to less than 100 tons per year. Therefore, the requirements of 326 IAC 2-7 do not apply.
- (c) The existing FESOP limited the potential to emit NO_x to less than 25 tons per year because the source is in an area that is considered severe nonattainment for the 1-hour ozone standard. Because the U.S. EPA granted a waiver of the requirements of Section 182(f) of the CAA for Lake and Porter Counties, VOC emissions alone are considered when evaluating the rule applicability relating to the 1-hour ozone standards. Therefore, the 25 tons per year limit is not required and has been removed from the permit. Since the unrestricted potential to emit NO_x is less than 100 tons per year, there is no FESOP limit on NO_x emissions.

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

The asphalt manufacturing operations were subject to 326 IAC 6-3, Particulate Emission Limitations. Pursuant to 326 IAC 6-3-1(b)(2), if any limitation established by 326 IAC 12 concerning new source performance standards then the limitation contained in 326 IAC 6-3-2 shall not apply, but the limit in such 326 IAC 12 shall apply. Since the aggregate dryer/mixer is subject to 40 CFR 60.90, Subpart I, Standards of Performance for Hot Mix Asphalt Facilities, the requirements of 326 IAC 6-3-2 do not apply.

326 IAC 7 (Sulfur Dioxide Rules)

Since the potential to emit SO₂ from the dryer is twenty-five (25) tons per year or more as a result of this modification, the requirements of 326 IAC 7-1.1 are applicable.

When operating on used oil, the sulfur dioxide emissions shall be limited to one and six tenths (1.6) pounds per million British thermal units. Compliance with this limitation shall be accomplished by limiting the weight percent sulfur in the reused oil to no more than two and two-tenths percent (2.2%).

326 IAC 12-1 (New Source Performance Standards)

- (a) The hot mix asphalt plant will be required to comply with the requirements of 40 CFR 60.90, Subpart I, Standards of Performance for Hot Mix Asphalt Facilities, as described in the "Federal Rule Applicability" section of this TSD.
- (b) Pursuant to 326 IAC 12, the used oil storage tank, constructed after July 23, 1984, is required to comply with the previous version of 40 CFR Part 60.110b, Subpart Kb, published in the federal register on April 8, 1987, because the tank has a capacity greater than forty (40) cubic meters. However, the vapor pressure is less than 15.0 kiloPascals, and the tank is subject to only 40 CFR Part 60.116b, paragraphs (a) and (b), which require record keeping

329 IAC 13 (Used Oil Management)

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

- (a) Receipt of an EPA identification number as outlined in 329 IAC 13-8-3 (Notification),
- (b) Compliance with the used oil storage requirements specified in 329 IAC 13-8-5 (Used Oil Storage), and
- (c) Maintaining records pursuant to 329 IAC 13-8-6 (Tracking).

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

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 require-

ments are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

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

The aggregate dryer/mixer has applicable compliance monitoring conditions as specified below:

- (a) Visible emission notations of the baghouse stack exhaust S1 shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C- Compliance Monitoring Plan - Failure to Take Response Steps shall be considered a deviation from this permit.
- (b) The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the drying/mixing process, at least once per shift when the asphalt production process is in operation when venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 4.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Monitoring Plan - Failure to Take Response Steps. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps shall be considered a deviation from this permit.
- (c) The Permittee shall record the inlet temperature to the baghouse used in conjunction with the aggregate dryer and drum mixer, at least once per shift when the aggregate dryer/mixer is in operation. When for any one reading, the inlet temperature to the baghouse is outside the normal range of 300 and 360 degrees Fahrenheit or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Monitoring Plan - Failure to Take Response Steps. This is required to prevent overheating of the bags and to prevent low temperatures from mudding up the bags. A temperature reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C- Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a deviation from this permit.
- (d) An inspection shall be performed each calendar quarter of all bags controlling the drying/mixing operation when venting to the atmosphere. A baghouse inspection shall be per-

formed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

- (e) In the event that bag failure has been observed.
 - (1) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
 - (2) For single compartment baghouses, if failure is indicated by a significant drop in the bag-house's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (f) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

These monitoring conditions are necessary because the baghouse for the aggregate dryer/mixer must operate properly to ensure compliance with 40 CFR 60, Subpart I, 326 IAC 12-1, and 326 IAC 2-8 (FESOP), and to ensure that this source is a minor source pursuant to 326 IAC 2-2 (PSD).

Testing Requirements

Pursuant to F 127-10404-00083, issued on September 13, 1999, the Permittee is required to perform PM and PM₁₀ testing of the aggregate dryer at least every five (5) years. There are no additional testing requirements as a result of this revision.

Proposed Changes

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

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

The Permittee owns and operates a stationary hot mix drum asphalt paving source.

Authorized individual: ~~Joe Carrano~~ **Environmental/Property Manager**
Source Address: 910 East Highway 30, Valparaiso, Indiana 46383

Mailing Address: 8075 Creekside Drive, Ste. 200, Kalamazoo, Michigan 49024
Phone Number: 219-942-4466
SIC Code: 2951
County Location: Porter
County Status: Nonattainment for ozone
Attainment for all other criteria pollutants
Source Status: Federally Enforceable State Operating Permit (FESOP)
Minor Source, under Emission Offset Rules, **PSD and nonattainment new source review rules**;
Minor Source, Section 112 of the Clean Air Act

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

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

- (a) One (1) hot mix drum mixer exhausting through Stack S1, equipped with a baghouse for particulate matter control, capacity: 220 tons per hour.
- (b) One (1) 75 million British thermal units per hour ~~burner~~ **aggregate dryer firing fired by natural gas or used (waste) oil** also exhausting through Stack S1, **equipped with a baghouse for particulate control.**
- (c) One (1) 0.45 million British thermal units per hour hot oil heater firing natural gas exhausting at Stack S2.
- (d) One (1) liquid asphalt storage tank, capacity: 25,000 gallons.
- (e) Two (2) asphalt storage silos, capacity: 100 tons, each.
- (f) One (1) above ground, used oil storage tank, capacity: 18,000 - 19,800 gallons.**

B.23 Annual Fee Payment [326 IAC 2-8-4(6)][326 IAC 2-8-16]

- (a) The Permittee shall pay annual fees to IDEM, OAQ, within thirty (30) calendar days of receipt of a billing. 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-~~0425~~ **4230** (ask for OAQ, ~~Technical Support and Modeling~~ **Billing, Licensing, and Training** Section), to determine the appropriate permit fee.

C.1 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 ~~nitrogen oxides (NO_x) and~~ volatile organic compounds (VOC) from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period. This limitation shall also satisfy the requirements of 326 IAC 2-3 (Emission Offset);
 - (2) The potential to emit any regulated pollutant from the entire source, except particulate matter (PM), **and VOC and NO_x**, shall be limited to less than one-hundred

(100) tons per twelve (12) consecutive month period;

- (3) 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
 - (4) 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) 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.
 - (c) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.14 **Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)]**
[326 IAC 2-8-5(1)]

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.
- (b) **Whenever a condition in this permit requires the measurement of a temperature, flow rate, or pH level, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (2%) of full scale reading.**
- (c) **The Preventive Maintenance Plan for the pH meter shall include calibration using known standards. The frequency of calibration shall be adjusted such that the typical error found at calibration is less than one pH point.**
- (d) **The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.**

Note that some conditions have been added to Section D.1 and one (1) condition has been removed from that section. Therefore, all conditions in Section D.1 have been re-numbered accordingly.

SECTION D.1 FACILITY OPERATION CONDITIONS

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

- (a) One (1) hot mix drum mixer exhausting through Stack S1, equipped with a baghouse for particulate matter control, capacity: 220 tons per hour.
- (b) One (1) 75 million British thermal units per hour burner **aggregate dryer firing fired by natural gas or used (waste) oil** also exhausting through Stack S1, **equipped with a baghouse for particulate control.**
- (c) One (1) 0.45 million British thermal units per hour hot oil heater firing natural gas exhausting at Stack S2.

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

~~D.1.1 Nitrogen Oxides (NO_x) [326 IAC 2-3] [326 IAC 2-8]~~

- ~~(a) The total input of natural gas to the aggregate dryer/burner shall be limited to 480 million cubic feet per twelve (12) consecutive month period. This fuel limit is equivalent to 24.0 tons per year of NO_x.~~
- ~~(b) The requirement from CP 127-8611-00083, issued July 31, 1997, Condition No. 9, that established a 342.9 million cubic feet per year has been revised to 480 million cubic feet per twelve (12) consecutive month period since the NO_x emission factor has been changed from 140 to 100 pounds per million cubic feet.~~

~~D.1.21 Particulate Matter [40 CFR Part 60.90, Subpart I] [326 IAC 6-3] [326 IAC 12] [326 IAC 2-2]~~

- ~~(a) Pursuant to NSPS Subpart I and 326 IAC 12, the PM emission rate from the hot mix drum mixer exhausting through Stack S1 shall not exceed **90 milligrams per dry standard cubic meter** (0.04 grains per dry standard cubic foot) **and the opacity of emissions shall be less than twenty percent (20%)**, equivalent to 9.50 pounds per hour at a flow rate of 27,720 dry standard cubic feet per minute. The 27,720 dry standard cubic feet per minute flow rate is equivalent to 42,000 actual cubic feet per minute at a temperature of 300 degrees Fahrenheit and a moisture content of 5.0 percent.~~

~~This PM emission limit also satisfies the requirements of 326 IAC 6-3-2.~~

- ~~(b) The potential to emit PM from the aggregate dryer/mixer shall not exceed **0.221 pound per ton of asphalt processed, equivalent to 213 tons per year when operating at the maximum rate of 220 tons of asphalt per hour for every hour of the year. This will limit the potential to emit PM from the entire source to less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2, PSD, are not applicable.**~~

~~D.1.32 PM₁₀ [326 IAC 2-8-4] [326 IAC 2-2]~~

~~Pursuant to 326 IAC 2-8-4, PM₁₀ emissions from the hot mix drum mixer exhausting through Stack S1 shall not exceed 21.8 pounds per hour (95.4 tons per year). **potential to emit PM₁₀ from the aggregate dryer/mixer shall not exceed 0.098 pounds per ton of asphalt processed, equivalent to 94.4 tons per year when operating at the maximum rate of 220 tons of asphalt per hour for every hour of the year. This will limit the potential to emit PM from the entire source to less than 100 tons per year.** Compliance with this limit will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply. **This will also make the requirements of 326 IAC 2-2, PSD, not applicable.**~~

D.1.4 Sulfur Dioxide (SO₂) [326 IAC 2-8-4] [326 IAC 7-1.1-1] [326 IAC 7-2-1] [326 IAC 2-2]

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- (a) Pursuant to 326 IAC 2-8-4, the total use of used oil by the aggregate dryer shall not exceed 841,121 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. The sulfur content of the used oil shall not exceed two and two-tenths percent (2.2%) by weight, based on a monthly weighted average. This will limit SO₂ emissions from the aggregate dryer to 99.0 tons per year and the potential to emit SO₂ from the entire source to less than 100 tons per year. Thus, the requirements of 326 IAC 2-7, Part 70, do not apply. Compliance with this limit shall also ensure that the requirements of 326 IAC 2-2, Prevention of Significant Deterioration (PSD), are not applicable.
- (b) Pursuant to 326 IAC 7-1.1 (SO₂ Emissions Limitations), the SO₂ emissions from the aggregate dryer shall not exceed one and six-tenths (1.6) pounds per million British thermal unit heat input when operating on used (waste) oil. Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a thirty (30) day rolling weighted average.

D.1.7 Particulate Matter (PM and PM₁₀)

The baghouse for PM and PM₁₀ control shall be in operation and control emissions from the dryer/burner at all times that the dryer/burner is in operation.

D.1.8 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 one and six-tenths (1.6) pounds per million British thermal unit heat input when operating on used (waste) oil by:
- (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the aggregate dryer and drum mixer using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

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

D.1.9 Used Oil Requirements [329 IAC 13]

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

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

- (b) **Compliance with the used oil storage requirements specified in 329 IAC 13-8-5 (Used Oil Storage), and**
- (c) **Maintaining records pursuant to 329 IAC 13-8-6 (Tracking).**

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

D.1.810 Visible Emissions Notations

- (a) ~~Daily~~ Visible emission notations of the baghouse stack exhaust S1 shall be performed **once per shift** during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. **Failure to take response steps in accordance with Section C- Compliance Monitoring Plan - Failure to Take Response Steps shall be considered a deviation from this permit.**

D.1.911 Parametric Monitoring

- (a) The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the drying/mixing process, at least once per shift when the asphalt production process is in operation when venting to the atmosphere. **When for any one reading, Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within is outside the normal range of 4.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Monitoring Plan - Failure to Take Response Steps. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps shall be considered a deviation from this permit.**
- (b) **The Permittee shall record the inlet temperature to the baghouse used in conjunction with the aggregate dryer and drum mixer, at least once per shift when the aggregate dryer/mixer is in operation. When for any one reading, the inlet temperature to the baghouse is outside the normal range of 300 and 360 degrees Fahrenheit or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Monitoring Plan - Failure to Take Response Steps. This is required to prevent overheating of the bags and to prevent low temperatures from mudding up the bags. A temperature reading that is outside the above mentioned range is not a deviation from this permit. Failure to take**

response steps in accordance with Section C- Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a deviation from this permit.

The instruments used for determining the pressure **and temperature** shall comply with Section C - Pressure Gauge Pressure Gauge **and Other 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.1.143 Broken or Failed Bag Detection

In the event that bag failure has been observed.

- (a) **For multi-compartment units**, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. **Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a deviation from this permit. If operations continue after bag failure is observed and it will be 10 days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification. 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 single compartment baghouses, **if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then** failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

D.1.124 Record Keeping Requirements

- (a) To document compliance with Condition ~~D.1.8~~ **D.1.10**, the Permittee shall maintain records of visible emission notations of the baghouse stack exhaust once per shift.
- (b) To document compliance with Condition ~~D.1.9~~ **D.1.11**, the Permittee shall maintain the following:
- (1) ~~Daily records of the following operational parameters during normal operation when venting to the atmosphere:~~
- (A) ~~Inlet and outlet differential static pressure; and~~
- (B) ~~Cleaning cycle: frequency and differential pressure.~~
- (2) ~~Documentation of all response steps implemented, per event.~~
- (3) ~~Operation and preventive maintenance logs, including work purchases orders, shall~~

be maintained.

~~(4) Quality Assurance/Quality Control (QA/QC) procedures.~~

~~(5) Operator standard operating procedures (SOP).~~

~~(6) Manufacturer's specifications or its equivalent.~~

~~(7) Equipment "troubleshooting" contingency plan.~~

~~(8) Documentation of the dates vents are redirected.~~

(1) Records of the total static pressure drop during normal operation once per shift when venting to the atmosphere.

(2) Records of the inlet temperature during normal operation once per shift when venting to the atmosphere.

~~(c) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) and (2) below.~~

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

~~(2) Actual natural gas consumption.~~

To document compliance with Condition D.1.4, the Permittee shall maintain records in accordance with (1) through (4) below.

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

(2) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period, the natural gas fired boiler certification does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1); and

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

(3) The name of the fuel supplier; and

(4) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

(d) To document compliance with Condition D.1.4, the Permittee shall keep records of the amount of used oil used at the aggregate dryer burner. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

(e) To document compliance with Condition D.1.12, the Permittee shall maintain records of the results of the inspections required under Condition D.1.12 and the dates the vents are redirected.

(f) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

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

D.1.135 Reporting Requirements

A quarterly summary to document compliance with Condition ~~D.1.4~~ **D.1.4(a)** 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. These reports shall include the amount of natural gas consumption each month. All records and reports shall use calendar months.

SECTION D.2 FACILITY OPERATION CONDITIONS

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

- (d) One (1) liquid asphalt storage tank, capacity: 25,000 gallons.
- (e) Two (2) asphalt storage silos, capacity: 100 tons, each.
- (f) **One (1) above ground, used oil storage tank, capacity: 18,000 - 19,800 gallons.**

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

D.2.1 Standards of Performance for Volatile Organic Liquid Storage Vessels [326 IAC 12] [40 CFR 60.116b]

The 25,000 gallon liquid asphalt storage tank **and the used oil storage tank** shall comply with the New Source Performance Standards (NSPS), 326 IAC 12 (40 CFR Part 60.116b, Subpart Kb). 40 CFR Part 60.116b paragraphs (a) and (b) require the Permittee to maintain accessible records showing the dimensions of the storage vessels and an analysis showing the ~~capacity~~ **capacities** of the storage vessels.

D.2.3 Standards of Performance for Volatile Organic Liquid Storage Vessels [326 IAC 12] [40 CFR 60.116b]

The Permittee shall maintain accessible records showing the dimensions of the **25,000 gallon liquid asphalt storage tank and the used oil storage tank** and an analysis showing the capacity of the storage vessels. Records shall be kept for the life of the storage tanks. A copy of 40 CFR Part 60, Subpart Kb, is attached.

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

FESOP Quarterly Report

Source Name: Aggregate Industries
 Source Address: 910 East Highway 30, Valparaiso, Indiana 46383
 Mailing Address: 8075 Creekside Drive, Ste 200, Kalamazoo, Michigan 49024
 FESOP No.: F 127-10404-00083
 Facility: **Aggregate dryer/Burner**
 Parameter: ~~Natural gas consumption~~ **Used oil usage**
 Limit: ~~480 million cubic feet per twelve (12) consecutive month period~~
~~Equivalent to 24.0 tons of NO_x per twelve (12) consecutive month period~~
841,121 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month

YEAR: _____

Month	Natural Gas Used Oil Usage	Natural Gas Used Oil Usage	Natural Gas Used Oil Usage
	This Month	Previous 11 Months	12 Month Total

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

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

Attach a signed certification to complete this report.

Conclusion

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Significant Permit Revision No. 127-19279-00083.

Appendix A: Emission Calculations

Company Name: Aggregate Industries
 Plant Location: 910 East Highway 30, Valparaiso, Indiana 46383
 County: Porter
 FESOP Revision: 127-19279
 Plt. ID: 127-00083
 Date: June 17, 2004
 Permit Reviewer: CarrieAnn Paukowits

I. Potential Emissions

A. Source emissions before controls

Hot Oil Heater on Oil
 (oil/<100MMBTU/uncontrolled)

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

Pollutant:	0.00 MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	141800 Btu/gal * 2000 lbs/ton	
P M:	2.0 lbs/1000 gal =	<u>0.000</u> tons/yr
PM-10	3.3 lbs/1000 gal =	<u>0.000</u> tons/yr
S O x:	71.0 lbs/1000 gal =	<u>0.00</u> tons/yr
N O x:	20.0 lbs/1000 gal =	<u>0.000</u> tons/yr
V O C:	0.34 lbs/1000 gal =	<u>0.000</u> tons/yr
C O:	5.0 lbs/1000 gal =	<u>0.000</u> tons/yr

Hot Oil Heater on Gas
 (gas/<100MMBTU/uncontrolled)

ALREADY PERMITTED

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

Pollutant:	0.450 MMBtu/hr * 8760 hrs/yr	* Ef (lbs/MMcf) = (tons/yr)
	1000 Btu/cf * 2000 lbs/ton	
P M:	1.9 lbs/MMcf =	<u>0.004</u> tons/yr
P M-10:	7.6 lbs/MMcf =	<u>0.015</u> tons/yr
S O x:	0.6 lbs/MMcf =	<u>0.001</u> tons/yr
N O x:	100.0 lbs/MMcf =	<u>0.197</u> tons/yr
V O C:	5.5 lbs/MMcf =	<u>0.011</u> tons/yr
C O:	84.0 lbs/MMcf =	<u>0.166</u> tons/yr

Dryer Burner

(gas/<100MMBTU/uncontrolled)

ALREADY PERMITTED

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

Pollutant:	75.000 MMBtu/hr * 8760 hrs/yr	* Ef (lbs/MMcf) = (tons/yr)
	1000 Btu/cf * 2000 lbs/ton	
P M:	1.9 lbs/MMcf =	<u>0.624</u> tons/yr
P M-10:	7.6 lbs/MMcf =	<u>2.50</u> tons/yr
S O x:	0.6 lbs/MMcf =	<u>0.197</u> tons/yr
N O x:	100.0 lbs/MMcf =	<u>32.85</u> tons/yr
V O C:	5.5 lbs/MMcf =	<u>1.81</u> tons/yr
C O:	84.0 lbs/MMcf =	<u>27.59</u> tons/yr

Dryer Burner (gas/>100MMBTU/uncontrolled)

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

Pollutant:	0 MMBtu/hr * 8760 hrs/yr	* Ef (lbs/MMcf) = (tons/yr) (tons/yr)
	1000 Btu/cf * 2000 lbs/ton	
P M:	1.9 lbs/MMcf =	<u>0.000</u> tons/yr
P M-10:	7.6 lbs/MMcf =	<u>0.00</u> tons/yr
S O x:	0.6 lbs/MMcf =	<u>0.000</u> tons/yr
N O x:	190.0 lbs/MMcf =	<u>0.0</u> tons/yr
V O C:	5.5 lbs/MMcf =	<u>0.00</u> tons/yr
C O:	84.0 lbs/MMcf =	<u>0.0</u> tons/yr

Dryer Burner (gas/>100MMBTU/low nox)

The following calculations determine the amount of emissions created by natural gas combustion, based on 8760 hours of use, AP-42 Ch. 1.4, Tables 1.4-1, 1.4-2, 1.4-3 (low NOx burner = 140, flue gas recirculation = 100)

Pollutant:	0.000 MMBtu/hr * 8760 hrs/yr	* Ef (lbs/MMcf) = (tons/yr) (tons/yr)
	1000 Btu/cf * 2000 lbs/ton	
P M:	1.9 lbs/MMcf =	<u>0.000</u> tons/yr
P M-10:	7.6 lbs/MMcf =	<u>0.000</u> tons/yr
S O x:	0.6 lbs/MMcf =	<u>0.000</u> tons/yr
N O x:	140.0 lbs/MMcf =	<u>0.000</u> tons/yr
V O C:	5.5 lbs/MMcf =	<u>0.000</u> tons/yr
C O:	84.0 lb/MMcf =	<u>0.000</u> tons/yr

Dryer Burner (#2 & #1 oil) <100

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

Pollutant:	0.0 MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	141000 Btu/gal * 2000 lbs/ton	
P M:	2.0 lbs/1000 gal =	<u>0.000</u> tons/yr
PM-10:	3.3 lbs/1000 gal =	<u>0.000</u> tons/yr
S O x:	71.0 lbs/1000 gal =	<u>0.000</u> tons/yr
N O x:	24.0 lbs/1000 gal =	<u>0.000</u> tons/yr
V O C:	0.20 lbs/1000 gal =	<u>0.000</u> tons/yr
C O:	5.0 lbs/1000 gal =	<u>0.000</u> tons/yr

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

(#4 oil/ <100MMBTU)

Dryer Burner

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

Pollutant:	0.000 MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	138000 Btu/gal * 2000 lbs/ton	
P M:	2.0 lbs/1000 gal =	<u>0.000</u> tons/yr
PM-10:	3.3 lbs/1000 gal =	<u>0.000</u> tons/yr
S O x:	75.0 lbs/1000 gal =	<u>0.000</u> tons/yr
N O x:	20.0 lbs/1000 gal =	<u>0.000</u> tons/yr
V O C:	0.34 lbs/1000 gal =	<u>0.000</u> tons/yr
C O:	5.0 lbs/1000 gal =	<u>0.000</u> tons/yr

(#4 oil/ >100MMBTU)

Dryer Burner

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

Pollutant:	0 MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	146000 Btu/gal * 2000 lbs/ton	
P M:	2.0 lbs/1000 gal =	<u>0.00</u> tons/yr
PM-10:	3.3 lbs/1000 gal =	<u>0.0</u> tons/yr
S O x:	75.0 lbs/1000 gal =	<u>0</u> tons/yr
N O x:	24.0 lbs/1000 gal =	<u>0.0</u> tons/yr
V O C:	0.20 lbs/1000 gal =	<u>0.000</u> tons/yr
C O:	5.0 lbs/1000 gal =	<u>0.0</u> tons/yr

(waste oil/ vaporizing burner)

The following calculations determine the amount of emissions created by waste fuel oil @ **2.200** % sulfur, based on 8760 hours of use and AP-42, Chapter 1.11

0.700	% Ash
0.003	% Lead

Pollutant:	0.0 MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	143970.0 Btu/gal * 2000 lbs/ton	
P M:	2.0 lbs/1000 gal =	<u>0.000</u> tons/yr
P M-10:	2.0 lbs/1000 gal =	<u>0.000</u> tons/yr
S O x:	220.0 lbs/1000 gal =	<u>0.000</u> tons/yr
N O x:	11.0 lbs/1000 gal =	<u>0.000</u> tons/yr
V O C:	1.0 lbs/1000 gal =	<u>0.000</u> tons/yr
C O:	1.7 lbs/1000 gal =	<u>0.000</u> tons/yr
Pb:	0.0 lbs/1000 gal =	<u>0.000</u> tons/yr

(waste oil/atomizing burner)

PROPOSED REVISION

The following calculations determine the amount of emissions created by waste fuel oil @ **2.200** % sulfur, based on 8760 hours of use and AP-42 Chapter 1.11

0.700	% Ash
0.003	% Lead

Pollutant:	75 MMBtu/hr * 8760 hrs/yr	* Ef (lbs/1000 gal) = (tons/yr)
	143970.0 Btu/gal * 2000 lbs/ton	
P M:	46.2 lbs/1000 gal =	105 tons/yr
P M-10:	39.9 lbs/1000 gal =	91.0 tons/yr
S O x:	235.4 lbs/1000 gal =	537 tons/yr
N O x:	16.0 lbs/1000 gal =	36.5 tons/yr
VOC	1.0 lbs/1000 gal =	2.28 tons/yr
C O:	2.10 lbs/1000 gal =	4.79 tons/yr
Pb:	0.15 lbs/1000 gal =	0.342 tons/yr

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

ALREADY PERMITTED

The following calculations determine the amount of emissions created by aggregate drying, based on 8760 hours of use and AP-42, Chapter 11.1, Table 11.1-3, rev. 12/00 PM based on stack tests of November 24, 1997, approved January 16, 1998 by IDEM and used in F 127-10404-00083

P M:	0.3025 lbs/ton x	220 tons/hr x	8760 hrs/yr =	291 tons/yr
		2000 lbs/ton		
P M-10:	6.5 lbs/ton x	220 tons/hr x	8760 hrs/yr =	6263 tons/yr
		2000 lbs/ton		
Lead:	0.0000033 lbs/ton x	220 tons/hr x	8760 hrs/yr =	0.003 tons/yr
		2000 lbs/ton		
HAPs:	0.0076 lbs/ton x	220 tons/hr x	8760 hrs/yr =	7.32 tons/yr
		2000 lbs/ton		

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

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

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

P M:	32 lbs/ton x	0.0 tons/hr x	8760 hrs/yr =	0.0 tons/yr
		2000 lbs/ton		
P M-10:	4.5 lbs/ton x	0 tons/hr x	8760 hrs/yr =	0.0 tons/yr
		2000 lbs/ton		
Lead:	0.0000033 lbs/ton x	0 tons/hr x	8760 hrs/yr =	0.0 tons/yr
		2000 lbs/ton		
HAPs:	0.0076 lbs/ton x	0 tons/hr x	8760 hrs/yr =	0.0 tons/yr
		2000 lbs/ton		

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

**** conveying / handling ****

ALREADY PERMITTED

The following calculations determine the amount of emissions created by material handling of aggregate, based on 8760 hours of use and AP-42, Ch 11.19.2

$$E_f = .0032 \cdot \frac{(U/5)^{1.3} \cdot k}{(M/2)^{1.4}}$$

where k = 1 (particle size multiplier)
 U = 12 mph mean wind speed (worst case)
 M = 5.0 % moisture

0.003 lbs/ton

P M : 0.003 lbs/ton x 238.0 tons/hr x 8760 hrs/yr = 2.89 tons/yr
 2000 lbs/ton

P M-10: 10% of PM = 0.289 tons/yr

Screening

PM: 238.0 tons/hr x 0.0315 lbs/ton / 2000 lbs/ton x 8760 hrs/yr = 32.8 tons/yr

AP-42 Ch.11.19.2

P M-10: 10% of PM = 3.28 tons/yr

**** unpaved roads ****

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

	0 trip/hr x	
	0 mile/trip x	
	2 (round trip) x	
	8760 hr/yr =	0 miles per year

PM

Method 1a:

$$E_f = k \left[\frac{s}{12} \right]^{0.9} \left[\frac{W}{3} \right]^b$$

= 6.73 lb/mile

where k = 4.9 (particle size multiplier for PM)
 s = 4.8 mean % silt content of unpaved roads
 b = 0.45 Constant for PM-10 and PM-30 or TSP
 W = 38 tons average vehicle weight
 M = 0.2 surface material moisture content, % (default is 0.2 for dry conditions)

$$E = \frac{6.73 \text{ lb/mi} \times 0 \text{ mi/yr}}{2000 \text{ lb/ton}} = 0.00 \text{ tons/yr}$$

Taking natural mitigation due to precipitation into consideration:

$$E_{ext} = E \cdot \left[\frac{365-p}{365} \right]$$

where p = 125 days of rain greater than or equal to 0.01 inches(see Fig. 13.2.2-1)

0.00 tons/yr

PM-10

Method 1a:

$$E_f = k \left[\frac{s}{12} \right]^{0.9} \left[\frac{W}{3} \right]^b$$

= 2.06 lb/mile

where k = 1.5 (particle size multiplier for PM-10)
 s = 4.8 mean % silt content of unpaved roads
 b = 0.45 Constant for PM-10 and PM-30 or TSP
 W = 38 tons average vehicle weight
 M = 0.2 surface material moisture content, % (default is 0.2 for dry conditions)

$$E = \frac{2.06 \text{ lb/mi} \times 0 \text{ mi/yr}}{2000 \text{ lb/ton}} = 0.00 \text{ tons/yr}$$

Taking natural mitigation due to precipitation into consideration:

$$E_{ext} = E \cdot \left[\frac{365-p}{365} \right]$$

where p = 125 days of rain greater than or equal to 0.01 inches(see Fig. 13.2.2-1)

0.00 tons/yr

PM

Method 1b:

$$E_f = [k \cdot (s/12)^{1.8} \cdot (S/30)^d \cdot (M/0.5)^c] - C$$

= 3.31 lb/mile

where k = 6.0 (particle size multiplier for PM)
 s = 4.8 mean % silt content of unpaved roads
 c = 0.3 Constant for PM
 d = 0.3 Constant for PM
 S = 35 Mean vehicle speed (mph)
 M = 0.2 Surface material moisture content, % (default is 0.2 for dry conditions)
 C = 0.00047 PM emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear

$$E = \frac{3.31 \text{ lb/mi} \times 0 \text{ mi/yr}}{2000 \text{ lb/ton}} = 0.00 \text{ tons/yr}$$

Taking natural mitigation due to precipitation into consideration:

$$E_{ext} = E \cdot [(365-p)/365] = 0.00 \text{ tons/yr}$$

where p = 125 days of rain greater than or equal to 0.01 inches(see Fig. 13.2.2-1)

PM-10

Method 1b:

$$E_f = [k \cdot (s/12)^{1.8} \cdot (S/30)^d \cdot (M/0.5)^c] - C$$

= 0.93 lb/mile

where k = 1.8 (particle size multiplier for PM-10)
 s = 4.8 mean % silt content of unpaved roads
 c = 0.2 Constant for PM-10
 d = 0.5 Constant for PM-10
 S = 35 Mean vehicle speed (mph)
 M = 0.2 Surface material moisture content, % (default is 0.2 for dry conditions)
 C = 0.00047 PM-10 emission factor for 1980's vehicle fleet exhaust, brake wear and tire wear

$$E = \frac{0.93 \text{ lb/mi} \times 0 \text{ mi/yr}}{2000 \text{ lb/ton}} = 0.00 \text{ tons/yr}$$

Taking natural mitigation due to precipitation into consideration:

$$E_{ext} = E \cdot [(365-p)/365] = 0.00 \text{ tons/yr}$$

where p = 125 days of rain greater than or equal to 0.01 inches(see Fig. 13.2.2-1)

All Trucking

Total PM: 0.00 tons/yr
 Total PM-10: 0.000 tons/yr

**** storage ****

ALREADY PERMITTED

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8760 hours of use and AP-42, Ch 11.2.3.

$$\begin{aligned}
 Ef &= 1.7 \cdot (s/1.5) \cdot (365-p) / 235 \cdot (f/15) \\
 &= 1.74 \text{ lbs/acre/day for sand} \\
 &= 1.16 \text{ lbs/acre/day for stone} \\
 &= 1.16 \text{ lbs/acre/day for slag} \\
 &= 1.16 \text{ lbs/acre/day for gravel} \\
 &= 1.16 \text{ lbs/acre/day for RAP} \\
 \text{where } s &= 1.5 \text{ \% silt for sand} \\
 s &= 1.0 \text{ \% silt of stone} \\
 s &= 1.0 \text{ \% silt of slag} \\
 s &= 1.0 \text{ \% silt of gravel} \\
 s &= 1.0 \text{ \% silt for RAP} \\
 p &= 125 \text{ days of rain greater than or equal to 0.01 inches} \\
 f &= 15 \text{ \% of wind greater than or equal to 12 mph}
 \end{aligned}$$

$$\begin{aligned}
 Ep \text{ (storage)} &= \frac{Ef \cdot sc \cdot (20 \text{ cuft/ton}) \cdot (365 \text{ days/yr})}{(2000 \text{ lbs/ton}) \cdot (43560 \text{ sqft/acre}) \cdot (25 \text{ ft})} \\
 &= 0.003 \text{ tons/yr for sand} \\
 &= 0.002 \text{ tons/yr for stone} \\
 &= 0.000 \text{ tons/yr for slag} \\
 &= 0.000 \text{ tons/yr for gravel} \\
 &= 0.000 \text{ tons/yr for RAP} \\
 \text{Total PM:} &= \underline{\underline{0.005}} \text{ tons/yr}
 \end{aligned}$$

$$\begin{aligned}
 \text{where } sc &= 0.5 \text{ ,000 tons storage capacity for sand} \\
 sc &= 0.5 \text{ ,000 tons storage capacity for stone} \\
 sc &= 0 \text{ ,000 tons storage capacity for slag} \\
 sc &= 0 \text{ ,000 tons storage capacity for gravel} \\
 sc &= 0 \text{ ,000 tons storage capacity for RAP}
 \end{aligned}$$

$$\begin{aligned}
 \text{P M-10:} \quad 35\% \text{ of PM} &= \underline{\underline{0.001}} \text{ tons/yr for sand} \\
 35\% \text{ of PM} &= \underline{\underline{0.001}} \text{ tons/yr for stone} \\
 35\% \text{ of PM} &= \underline{\underline{0.000}} \text{ tons/yr for slag} \\
 35\% \text{ of PM} &= \underline{\underline{0.000}} \text{ tons/yr for gravel} \\
 35\% \text{ of PM} &= \underline{\underline{0.000}} \text{ tons/yr for RAP} \\
 \text{Total PM-10:} &= \underline{\underline{0.002}} \text{ tons/yr}
 \end{aligned}$$

**** Recycled Asphalt Pavement System ****

Operation	Capacity (tons/hr)	Emission Factor for PM (lbs/ton)	Emission Factor for PM-10 (lbs/ton)	Potential PM Emissions (lbs/hr)	Potential PM-10 Emissions (lbs/hr)	Potential PM Emissions (tons/yr)	Potential PM-10 Emissions (tons/yr)
Screening	0	0.025	0.0087	0	0.00	0.0	0
Conveying	0	0.0029	0.0011	0	0.000	0.00	0.000
Breaker	0	0.0054	0.0024	0	0.000	0.00	0.00
Totals:				0.00	0.00	0.0	0.00

Methodology

Emission Factors for Recycled Asphalt Paving System are from AP-42, Draft Section 11.19.2, Table 11.19.2-2 (SCC 3-05-020-02, SCC 3-05-020-03, SCC 3-05-020-06)

RAP Crusher Operating on Diesel Fuel

Heat Input Capacity
 Horsepower (hp)

Potential Throughput
 hp-hr/yr

0

0.0

Emission Factor in lb/hp-hr	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Potential Emission in tons/yr	0.00	0.00	0.00	0.0	0.00	0.00

Methodology

Potential Throughput (hp-hr/yr) = hp * 8760 hr/yr

Use a conversion factor of 7,000 Btu per hp-hr to convert from horsepower to Btu/hr, unless the source gives you a source-specific brake-specific fuel consumption. (AP-42, Footnote a, Table 3.3-1)

Emission Factors are from AP42 (Supplement B 10/96), Table 3.3-2

Emission (tons/yr) = [Potential Throughput (hp-hr/yr) x Emission Factor (lb/hp-hr)] / (2,000 lb/ton)

**** Load Out and Yard Silo Filling ****

ALREADY PERMITTED

The following calculations determine the amount of emissions created by material handling of liquid asphalt based on 8760 hours of use and AP-42, Ch 11.1, Table 11.1-14, 15 and 16

Load Out	PM Ef =	0.000181 + 0.00141(-V)e ^{-(0.0251)(T + 460) - 20.43}	<u>0.000522</u> lbs/ton
	TOC Ef =	0.0172(-V)e ^{-(0.0251)(T + 460) - 20.43}	<u>0.004159</u> lbs/ton
	CO Ef =	0.00558(-V)e ^{-(0.0251)(T + 460) - 20.43}	<u>0.001349</u> lbs/ton
	HAP Ef =	((0.00141(-V)e ^{-(0.0251)(T + 460) - 20.43})*(5.93%+1.18%)) + TOC Ef x 1.5%	<u>0.000062</u> lbs/ton

where V= -0.5 (asphalt volatility)
 T = 325 (mix temperature in degrees Fahrenheit)

PM :	<u>0.000522</u> lbs/ton x	<u>220.0</u> tons/hr x	8760 hrs/yr =	<u>0.503</u> tons/yr
		2000 lbs/ton		
PM 10 :	<u>0.000522</u> lbs/ton x	<u>220.0</u> tons/hr x	8760 hrs/yr =	<u>0.503</u> tons/yr
		2000 lbs/ton		
VOC :	<u>0.004159</u> lbs/ton x	<u>220.0</u> tons/hr x	8760 hrs/yr =	<u>4.01</u> tons/yr
		2000 lbs/ton		
CO :	<u>0.001349</u> lbs/ton x	<u>220.0</u> tons/hr x	8760 hrs/yr =	<u>1.30</u> tons/yr
		2000 lbs/ton		
Total HAPs :	<u>0.000062</u> lbs/ton x	<u>220.0</u> tons/hr x	8760 hrs/yr =	<u>0.060</u> tons/yr
		2000 lbs/ton		

Silo Filling	PM Ef =	0.000332 + 0.00105(-V)e ^{-(0.0251)(T + 460) - 20.43}	<u>0.000586</u> lbs/ton
	TOC Ef =	0.0504(-V)e ^{-(0.0251)(T + 460) - 20.43}	<u>0.012187</u> lbs/ton
	CO Ef =	0.00488(-V)e ^{-(0.0251)(T + 460) - 20.43}	<u>0.001180</u> lbs/ton
	HAP Ef =	(0.00105(-V)e ^{-(0.0251)(T + 460) - 20.43})*11.4% + TOC Ef x 1.3%	<u>0.000158</u> lbs/ton

where V= -0.5 (asphalt volatility)
 T = 325 (mix temperature in degrees Fahrenheit)

PM :	<u>0.000586</u> lbs/ton x	<u>220.0</u> tons/hr x	8760 hrs/yr =	<u>0.565</u> tons/yr
		2000 lbs/ton		
PM 10 :	<u>0.000586</u> lbs/ton x	<u>220.0</u> tons/hr x	8760 hrs/yr =	<u>0.565</u> tons/yr
		2000 lbs/ton		
VOC :	<u>0.012187</u> lbs/ton x	<u>220.0</u> tons/hr x	8760 hrs/yr *	94.0%
		2000 lbs/ton		<u>11.04</u> tons/yr
CO :	<u>0.001180</u> lbs/ton x	<u>220.0</u> tons/hr x	8760 hrs/yr =	<u>1.14</u> tons/yr
		2000 lbs/ton		
Total HAPs :	<u>0.000158</u> lbs/ton x	<u>220.0</u> tons/hr x	8760 hrs/yr =	<u>0.153</u> tons/yr
		2000 lbs/ton		

Emissions before controls (combustion plus production) are as follows (fuel indicated is fuel used at dryer):

natural gas	#2 oil	#4 oil	waste oil
P M: <u>329</u> tons/yr	P M: <u>0</u> tons/yr	P M: <u>0</u> tons/yr	P M: <u>434</u> tons/yr
P M-10: <u>6271</u> tons/yr	P M-10: <u>0</u> tons/yr	P M-10: <u>0</u> tons/yr	P M-10: <u>6359</u> tons/yr
S O x: <u>0.198</u> tons/yr	S O x: <u>0.00</u> tons/yr	S O x: <u>0.00</u> tons/yr	S O x: <u>537</u> tons/yr
N O x: <u>33.0</u> tons/yr	N O x: <u>0</u> tons/yr	N O x: <u>0</u> tons/yr	N O x: <u>36.7</u> tons/yr
V O C: <u>16.9</u> tons/yr	V O C: <u>0.0</u> tons/yr	V O C: <u>0.0</u> tons/yr	V O C: <u>17.3</u> tons/yr
C O: <u>30.2</u> tons/yr	C O: <u>0.0</u> tons/yr	C O: <u>0.0</u> tons/yr	C O: <u>7.39</u> tons/yr
Lead: <u>0.003</u> tons/yr	Lead: <u>0.000</u> tons/yr	Lead: <u>0.000</u> tons/yr	Lead: <u>0.345</u> tons/yr
HAPs: <u>7.54</u> tons/yr	HAPs: <u>0.0</u> tons/yr	HAPs: <u>0.0</u> tons/yr	HAPs: <u>7.54</u> tons/yr

B. Source emissions after controls

dryer combustion: gas

P M:	0.62 tons/yr x	<u>0.00980</u> emitted after controls =	<u>0.006</u> tons/yr
P M-10:	2.50 tons/yr x	<u>0.00980</u> emitted after controls =	<u>0.024</u> tons/yr

dryer combustion: #2 oil

P M:	0.00 tons/yr x	<u>0.00980</u> emitted after controls =	<u>0.000</u> tons/yr
P M-10:	0.00 tons/yr x	<u>0.00980</u> emitted after controls =	<u>0.000</u> tons/yr

hot oil heater combustion: gas

P M:	0.004 tons/yr x	<u>1.00000</u> emitted after controls =	<u>0.004</u> tons/yr
P M-10:	0.015 tons/yr x	<u>1.00000</u> emitted after controls =	<u>0.015</u> tons/yr

hot oil heater combustion: #2 oil

P M:	0.000 tons/yr x	<u>1.00000</u> emitted after controls =	<u>0.000</u> tons/yr
P M-10:	0.000 tons/yr x	<u>1.00000</u> emitted after controls =	<u>0.000</u> tons/yr

dryer combustion: #4 oil

P M:	0.00 tons/yr x	<u>0.00980</u> emitted after controls =	<u>0.000</u> tons/yr
P M-10:	0.00 tons/yr x	<u>0.00980</u> emitted after controls =	<u>0.000</u> tons/yr

dryer combustion: waste oil

P M:	105.42 tons/yr x	<u>0.00980</u> emitted after controls =	<u>1.033</u> tons/yr
P M-10:	91.04 tons/yr x	<u>0.00980</u> emitted after controls =	<u>0.892</u> tons/yr

aggregate drying:

P M:	291.49 tons/yr x	<u>0.00980</u> emitted after controls =	<u>2.86</u> tons/yr
P M-10:	6263.40 tons/yr x	<u>0.00980</u> emitted after controls =	<u>61.38</u> tons/yr

conveying/handling:

P M:	2.89 tons/yr x	<u>1.000</u> emitted after controls =	<u>2.89</u> tons/yr
P M-10:	0.29 tons/yr x	<u>1.000</u> emitted after controls =	<u>0.289</u> tons/yr

screening

P M:	32.84 tons/yr x	<u>1.000</u> emitted after controls =	<u>32.8</u> tons/yr
P M-10:	3.28 tons/yr x	<u>1.000</u> emitted after controls =	<u>3.28</u> tons/yr

unpaved roads:

P M:	0.00 tons/yr x	50.00% emitted after controls =	<u>0.00</u> tons/yr
P M-10:	0.00 tons/yr x	50.00% emitted after controls =	<u>0.000</u> tons/yr

storage:

P M:	0.005 tons/yr x	50.00% emitted after controls =	<u>0.002</u> tons/yr
P M-10:	0.002 tons/yr x	50.00% emitted after controls =	<u>0.001</u> tons/yr

RAP System:

P M:	0.0 tons/yr x	100% emitted after controls =	<u>0.0</u> tons/yr
P M-10:	0.00 tons/yr x	100% emitted after controls =	<u>0.00</u> tons/yr

Load Out:

P M:	0.503 tons/yr x	100% emitted after controls =	<u>0.503</u> tons/yr
P M-10:	0.503 tons/yr x	100% emitted after controls =	<u>0.503</u> tons/yr

Silo Filling:

P M:	0.565 tons/yr x	100% emitted after controls =	<u>0.565</u> tons/yr
P M-10:	0.565 tons/yr x	100% emitted after controls =	<u>0.565</u> tons/yr

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

	Gas	#2 Oil	#4 Oil	Waste Oil	
P M:	39.7	0.0	0.0	40.7	tons/yr
P M-10:	66.1	0.0	0.0	66.9	tons/yr

II. Allowable Emissions

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

$$\begin{aligned}
 & \frac{0.04 \text{ grains}^*}{\text{dscf}} \times \frac{42000 \text{ acfm}^*}{525600 \text{ minutes}^*} \times \frac{1}{\text{year}} \times \frac{1}{7000 \text{ grains}} \times \frac{460 + \frac{528}{300} \text{ Temp}}{2000 \text{ lbs}} \times \frac{1 \text{ ton}}{2000 \text{ lbs}} \times \frac{100 - 5}{100} \% \text{ moisture} = 41.6 \text{ tons/yr}
 \end{aligned}$$

To meet NSPS Subpart I, the following value must be < amount calculated above

3.89 tons/yr

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

limit:	0.5 lbs/MMBtu		
	0.5 lbs/MMBtu x	<u>0.0</u> Btu/gal=	<u>0.0</u> lbs/1000gal
	0 lbs/1000gal /	<u>142.0</u> lb/1000 gal =	<u>0.000</u>

Sulfur content must be less than or equal to and to limit SO2 emissions to 99 tons per year or less. 0.0 % to comply with 326 IAC 7

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

limit:	1.6 lbs/MMBtu		
	1.6 lbs/MMBtu x	<u>143970</u> Btu/gal=	230.352 lbs/1000gal
	230.352 lbs/1000gal /	<u>107.0</u> lbs/1000 gal =	<u>2.15</u>

Sulfur content must be less than or equal to and to limit SO2 emissions to 99 tons per year or less. 2.2 % to comply with 326 IAC 7

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

limit:	0.5 lbs/MMBtu		
	0.5 lbs/MMBtu x	<u>0</u> Btu/gal=	0 lbs/1000gal
	0 lbs/1000gal /	<u>150.0</u> lbs/1000 gal =	<u>0.00</u>

Sulfur content must be less than or equal to and to limit SO2 emissions to 99 tons per year or less. 0.0 % to comply with 326 IAC 7

III. Limited Potential Emissions

FUEL USAGE LIMITATION: BASED ON NOx

NO LIMIT REQUIRED

FUEL USAGE LIMITATION: BASED ON SO2

FUEL USAGE LIMITATION FOR BURNER (Waste Oil)

$\frac{537 \text{ tons SO}_2}{\text{year}}$	*	$\frac{2000 \text{ lbs}}{\text{ton}}$	=	$\frac{1074239 \text{ lbs SO}_2}{\text{year}}$
$\frac{1074239 \text{ lbs SO}_2}{\text{year}}$	/	$\frac{235 \text{ lbs}}{1000 \text{ gal}}$	=	$\frac{4563461 \text{ gal}}{\text{year}}$
$\frac{4563461 \text{ gal}}{\text{year}}$	*	$\frac{99.0 \text{ tons/yr}}{537 \text{ tons/yr}}$	=	$\frac{841121 \text{ gal}}{\text{year}}$ FESOP Limit