



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: March 31, 2009

RE: Milestone Contractors, L.P. / 063-27273-03154

FROM: Matthew Stuckey, Branch 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, Suite N 501E, 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.dot12/03/07



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Mr. Robert Beyke
Milestone Contractors, L.P.
5950 South Belmont Avenue
Indianapolis, IN 46217

March 31, 2009

Re: 063-27273-03154
First Significant Revision to
F063-25985-03154

Dear Mr. Beyke:

Milestone Contractors, L.P. was issued a Federally Enforceable State Operating Permit (FESOP) Renewal No. F063-25985-03154 on November 3, 2008 for a stationary hot drum mix asphalt plant located at 7012 South County Road 750 East, Plainfield, Indiana 46168. On December 18, 2008, the Office of Air Quality (OAQ) received an application from the source requesting that IDEM revise the existing fuel equivalencies and the associated quarterly reporting form because the format is inconsistent with similar permitted Milestone asphalt plants, the fuel equivalencies do not specify what pollutant they are for, and the permit does not include fuel equivalencies for NOx emissions. Upon further review, IDEM has determined that the PM2.5 emission limit for the dryer/mixer was incorrect. Based on the current PM2.5 emission limits the source is limited to 206.12 tons of PM2.5 per year. Since this source is located in a Hendricks County, PM2.5 emissions should have been limited to less than 100 tons per year. Therefore, PM2.5 emissions have been limited to less than 100 tons per year. The attached Technical Support Document (TSD) provides additional explanation of the changes to the source/permit. Pursuant to the provisions of 326 IAC 2-8-11.1, these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-8-11.1(f). 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 (TSD).

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. Attached please find the entire revised permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Brian Williams, of my staff, at 317-234-5375 or 1-800-451-6027, and ask for extension 4-5375.

Sincerely,

Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

Attachments: Technical Support Document and revised permit

IC/BMW

cc: File - Hendricks County

Milestone Contractors, L.P.
Plainfield, Indiana
Permit Reviewer: Brian Williams

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FESOP SPR No. 063-27273-03154

Hendricks County Health Department
U.S. EPA, Region V
Air Compliance Section
Compliance Data Section
Technical Support and Modeling
Permits Administrative and Development
Billing, Licensing and Training Section



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Federally Enforceable State Operating Permit Renewal OFFICE OF AIR QUALITY

Milestone Contractors, L.P.
7012 South County Road 750 East
Plainfield, Indiana 46168

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

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

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.

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.

Operation Permit No.: F063-25985-03154	
Originally Signed by: Iryn Calilung, Section Chief Permit Administration and Support Section Office of Air Quality	Issuance Date: November 3, 2008 Expiration Date: November 3, 2018
First Administrative Amendment No.: F063-27175-03154, issued on December 10, 2008	

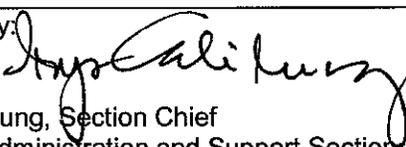
First Significant Permit Revision No.: F063-27273-03154	
Issued by:  Iryn Calilung, Section Chief Permit Administration and Support Section Office of Air Quality	Issuance Date: March 31, 2009 Expiration Date: November 3, 2018

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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 drum mix asphalt plant.

Source Address:	7012 South County Road 750 East, Plainfield, Indiana 46168
Mailing Address:	5950 South Belmont Avenue, Indianapolis, Indiana 46217
General Source Phone Number:	317-788-6885
SIC Code:	2951
County Location:	Hendricks
Source Location Status:	Nonattainment for PM2.5 standard Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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) asphalt counterflow drum mix dryer capable of processing 400 tons per hour of raw material, constructed in 1997, equipped with one (1) 123 million (MM) British thermal units (Btu) per hour natural gas-fired burner, using waste oil and No. 2 distillate fuel oil as back-up fuels, with one (1) jet pulse baghouse for particulate control, exhausting at one (1) stack (ID No. S-1).

Under NSPS 40 CFR 60, Subpart I, this source is considered an effected facility.

- (b) one (1) drag slat conveyor, two (2) feed conveyors, and one (1) screen;
- (c) cold-mix (stockpile mix) asphalt storage piles;
- (d) two 30,000-gallon liquid asphalt storage tanks, identified as Tanks 14 and 15;
- (e) one 15,000-gallon liquid asphalt storage tank, identified as Tank 24; and
- (f) one 20,000-gallon fuel oil (waste oil/No. 2 distillate fuel oil) storage tank, identified as Tank 16.

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

This stationary source also includes the following insignificant activities:

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour:
 - (1) one (1) natural gas-fired hot oil heater, with a maximum rated capacity of 2.2 MMBtu per hour, using No. 2 fuel oil as back-up fuel, exhausting through one (1) stack (ID No. S-2); and
 - (2) one (1) 0.06 MMBtu per hour, natural gas-fired, plant maintenance shop heater.
- (b) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six (6) million Btu per hour:
 - (1) one (1) 0.5 MMBtu per hour propane-fired hand torch used for maintenance purposes.
- (c) Fuel oil-fired combustion sources with heat input equal to or less than two (2) million Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight:
 - (1) one (1) 0.35 MMBtu per hour No. 2 distillate fuel oil fired portable space heater.
- (d) Combustion source flame safety purging on startup.
- (e) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000gallons per month.
- (f) The following VOC and HAP storage containers:
 - (1) Storage tanks with capacities less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons; and
 - (2) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (g) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.
- (h) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6 (parts washer using non-HAP Safety Kleen or Crystal Clean solvent). [326 IAC 8-3-2]
- (i) Cleaners and solvents having a vapor pressure equal to or less than 2 kPa; 15mm Hg; or 0.3 psi measured at 38 degrees C (100°F) or; having a vapor pressure equal to or less than 0.7 kPa; 5 mm Hg; or 0.1 psi measured at 20°C (68°F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
- (j) Closed loop heating and cooling systems.

- (k) A laboratory as defined in 326 IAC 2-7-1(20)(C).
- (l) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (m) Paved and unpaved roads and parking lots with public access.
- (n) One (1) cold feed system consisting of eight (8) compartments.
- (o) One (1) hot mix asphalt cement storage silo system with a maximum storage capacity of 640 tons.
- (p) One (1) Reclaimed Asphalt Pavement (RAP) feed system.
- (q) Aggregate storage piles, with a total maximum storage capacity of 94,038 tons.

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

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

SECTION B GENERAL CONDITIONS

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

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

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

-
- (a) This permit, F063-25985-03154, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

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

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

B.5 Severability [326 IAC 2-8-4(4)]

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

B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

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

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

-
- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

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

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices.

All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) The annual compliance certification report shall include the following:
 - (1) The appropriate identification of each term or condition of this permit that is the basis of the certification;
 - (2) The compliance status;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and
 - (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

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

B.10 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.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60 and 40 CFR Part 63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
 - (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

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

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

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

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

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
 - (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
 - (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
 - (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.
 - (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

- (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
- (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

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

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

B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to F063-25985-03154 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

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

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

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

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

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

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

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination
[326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
 - (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.17 Permit Renewal [326 IAC 2-8-3(h)]

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

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
 - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

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

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

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

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

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

B.19 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

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

- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
- (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
- (4) The Permittee notifies the:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

and

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

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

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

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

- (b) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.
- (e) This condition does not apply to emission trades of SO₂ or NO_x under 326 IAC 21 or 326 IAC 10-4.

B.20 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

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

B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

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

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

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) The potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period. This limitation shall make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

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

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

C.3 Opacity [326 IAC 5-1]

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

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

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A,

Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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

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

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

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

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

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

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

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the attached plan, which is included as Attachment A. The provisions of 326 IAC 6-5 are not federally enforceable.

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 by using ambient air quality modeling pursuant to 326 IAC 1-7-4.

C.9 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

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

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-52 IGCN 1003
Indianapolis, Indiana 46204-2251

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

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed 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 Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

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

C.10 Performance Testing [326 IAC 3-6]

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

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

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

C.12 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

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

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

C.13 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

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

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

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

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

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

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

- (a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.
- (b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

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

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

C.17 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
 - (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

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

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

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

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

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

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

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

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

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

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

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) one (1) asphalt counterflow drum mix dryer capable of processing 400 tons per hour of raw material, constructed in 1997, equipped with one (1) 123 million (MM) British thermal units (Btu) per hour natural gas-fired burner, using waste oil and No. 2 distillate fuel oil as back-up fuels, with one (1) jet pulse baghouse for particulate control, exhausting at one (1) stack (ID No. S-1).

(b) one (1) drag slat conveyor, two (2) feed conveyors, and one (1) screen;

Under NSPS 40 CFR 60, Subpart I, this source is considered an effected facility.

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

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

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

In order to render 326 IAC 2-2 not applicable, the Permittee shall comply with the following:

- (a) The amount of asphalt processed shall not exceed 995,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The PM emissions from the dryer/mixer shall not exceed 0.380 pounds per ton of asphalt processed.

Compliance with these limitations, combined with the limited potential to emit from other emission units at this source, shall limit the source-wide total potential to emit PM to less than 250 tons per 12 consecutive month period and shall render 326 IAC 2-2 (PSD) not applicable.

D.1.2 Dryer and Mixer FESOP Limits [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-1.1-5]

Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following:

- (a) The amount of asphalt processed shall not exceed 995,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The PM10 emissions from the dryer/mixer shall not exceed 0.16 pounds per ton of asphalt processed.
- (c) The PM2.5 emissions from the dryer/mixer shall not exceed 0.176 pounds of PM2.5 per ton of asphalt produced.
- (d) The CO emissions from the dryer/mixer shall not exceed 0.130 pounds per ton of asphalt processed.
- (e) The VOC emissions from the dryer/mixer shall not exceed 0.032 pounds per ton of asphalt processed.
- (f) The SO2 emissions from the dryer/mixer shall not exceed 0.058 pounds per ton of asphalt processed.

- (g) The NOx emissions from the dryer/mixer shall not exceed 0.055 pounds per ton of asphalt processed.

Compliance with these limitations, combined with the limited PTE from other emission units at this source, shall limit the source-wide total potential to emit PM10, PM2.5, CO, VOC, SO2 and NOx to less than 100 tons per 12 consecutive month period, and shall render 326 IAC 2-7 (Part 70), 326 IAC 2-2 (PSD), and 326 IAC 2-1.1-5 (Nonattainment New Source Review) not applicable.

D.1.3 Fuel Usage and Equivalency Limits [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-4.1] [326 IAC 2-1.1-5]

Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following:

(a) Natural Gas

- (1) The natural gas combusted in the dryer/mixer burner shall not exceed 990 million standard cubic feet (MMcf) per twelve (12) consecutive month period, with compliance determined at the end of each month.

For purposes of determining compliance, the following shall apply:

- (i) every kilogallon of No. 2 fuel oil burned in the dryer/mixer burner shall be equivalent to 0.1263 MMcf of natural gas, based on NOx emissions, such that the total MMcf of natural gas and natural gas equivalent input does not exceed the limit specified;
- (ii) every kilogallon of re-refined waste oil burned in the aggregate dryer/burner shall be equivalent to 0.10 MMcf of natural gas, based on NOx emissions, such that the total MMcf of natural gas and natural gas equivalent input does not exceed the limit specified.

- (2) The NOx emissions from the dryer/mixer burner shall not exceed 190 pounds per MMcf of natural gas.

(b) No. 2 Fuel Oil

- (1) The No. 2 fuel oil combusted in the dryer/mixer burner shall not exceed 2,148,790 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

For purposes of determining compliance, the following shall apply:

- (i) every gallon of waste oil burned in the dryer/mixer burner shall be equivalent to 1.40 gallons of No. 2 fuel oil, based on SO₂ emissions, that the total gallons of No. 2 fuel oil and No. 2 fuel oil equivalent input does not exceed the limit specified;
- (ii) every MMcf of natural gas burned in the dryer/mixer burner shall be equivalent to 0.008 gallons of No. 2 fuel oil, based on SO₂ emissions, such that the total gallons of No. 2 fuel oil and No. 2 fuel oil equivalent input does not exceed the limit specified.

- (2) The sulfur content of the No. 2 fuel oil used in the dryer/mixer burner shall not exceed 0.5% by weight.

- (3) The SO₂ emissions from the dryer/mixer burner shall not exceed 78.5 pounds per thousand gallons (lb/kgal) of No. 2 fuel oil.
 - (4) The NO_x emissions from the dryer/mixer burner and heater shall not exceed 24.0 pounds per thousand gallons (lb/kgal) of No. 2 fuel oil.
- (c) Waste Oil
- (1) The waste oil combusted in the dryer/mixer burner shall not exceed 1,400,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- For purposes of determining compliance, the following shall apply:
- (i) every gallon of No. 2 fuel oil burned in the dryer/mixer burner shall be equivalent to 0.71 gallons of waste oil, based on SO₂ emissions, that the total gallons of waste oil and waste oil equivalent input does not exceed the limit specified;
 - (ii) every MMcf of natural gas burned in the dryer/mixer burner shall be equivalent to 0.005 gallons of waste oil, based on SO₂ emissions, such that the total gallons of waste oil and waste oil equivalent input does not exceed the limit specified.
- (2) The sulfur content of the waste oil used in the dryer/mixer burner shall not exceed 0.75% by weight.
 - (3) The SO₂ emissions from the dryer/mixer burner shall not exceed 110.3 pounds per thousand gallons (lb/kgal) of waste oil.
 - (4) The NO_x emissions from the dryer/mixer burner shall not exceed than 19 pounds per thousand gallons (lb/kgal) of waste oil.
 - (5) The HCl emissions shall not exceed 13.2 pounds of HCl per 1,000 gallons of waste oil burned.
 - (6) The waste oil combusted in the dryer/mixer burner shall not contain more than 1.02 % ash, 0.20 % chlorine and 0.010% Lead.

Compliance with these limitations, combined with the limited PTE from other emission units at this source, shall limit the source-wide total potential to emit SO₂ and NO_x to less than 100 tons per 12 consecutive month period, HCl to less than 10 tons per 12 consecutive month period, and any combination of HAPs to less than 25 tons per 12 consecutive month period, and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (PSD), 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)), and 326 IAC 2-1.1-5 (Nonattainment New Source Review) not applicable.

D.1.4 Sulfur Dioxide (SO₂) [326 IAC 7-1.1]

Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), the sulfur dioxide emissions from the 123.0 million Btu per hour burner for the aggregate dryer shall be limited to:

- (a) 1.6 pounds per MMBtu heat input when using waste oil.
- (b) 0.5 pounds per million Btu heat input when using distillate oil.

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 facility 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]

In order to demonstrate compliance with Conditions D.1.1 and D.1.2, the Permittee shall perform PM, PM_{2.5} and PM₁₀ testing for the jet pulse baghouse within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), signed on May 8th, 2008 or five (5) years from the most recent valid stack test, which ever is later.

These tests shall be conducted utilizing methods as approved by the Commissioner.

These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

Testing shall be conducted in accordance with Section C - Performance Testing. PM₁₀ includes filterable and condensable PM.

D.1.7 Particulate Control

- (a) In order to comply with Conditions D.1.1 and D.1.2, the baghouse for the dryer/mixer shall be in operation and control emissions from the dryer/mixer at all times when the dryer/mixer is in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (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.

D.1.8 Sulfur Dioxide (SO₂) Emissions and Sulfur Content

Compliance with the sulfur dioxide emissions and sulfur content limitations in Conditions D.1.3, D.1.4 shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate compliance with sulfur dioxide emissions and sulfur content limitations by:
 - (1) Providing vendor analysis of heat content and sulfur content 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 dryer/mixer, using 40 CFR 60, Appendix A, Method 6 in accordance

with the procedures in 326 IAC 3-6.

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

D.1.9 Hydrogen Chloride (HCl) Emissions and Chlorine Content

In order to comply with Condition D.1.3, the Permittee shall demonstrate that the chlorine content of the fuel used for the dryer/mixer burner all other fuel combustion equipment does not exceed 0.20 percent by weight, when combusting waste oil, by providing a vendor analysis of fuel delivered accompanied by a vendor certification.

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 conveyors, screens, material transfer points, and dryer/mixer stack (S-1) exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.1.11 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the dryer/mixer at least once per day when the dryer/mixer is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of one (1.0) to eight (8.0) inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.
- (b) The instruments used for determining the pressure and temperature shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.12 Broken or Failed Bag Detection

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

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

D.1.13 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.1 and D.1.2, the Permittee shall keep records of the amount of asphalt processed through the dryer/mixer. Records necessary to demonstrate compliance shall be available within thirty (30) days of the end of each compliance period.
- (b) To document compliance with Conditions D.1.4 and D.1.5, the Permittee shall maintain records in accordance with (1) through (7) below.
- (1) Calendar dates covered in the compliance determination period;
 - (2) Actual fuel usage, sulfur content, heat content and equivalent sulfur dioxide and NOx emission rates for each fuel used at the source per month;
 - (3) Actual waste oil usage, chlorine content, and equivalent hydrogen chloride (HCl) emission rate per month;
 - (4) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

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

- (5) Fuel supplier certifications;
- (6) The name of the fuel supplier; and
- (7) A statement from the fuel supplier that certifies the sulfur content of the distillate (No. 2) and residual (refinery blend) fuel oil and waste oil and the chlorine content of waste oil.

The Permittee shall maintain records of all recording/monitoring data and support information in accordance with Section C - General Record Keeping Requirements, of this permit. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

- (d) To document compliance with Condition D.1.10, the Permittee shall maintain daily records of the visible emission notations from each of the conveyors, screens, material transfer points, and dryer/mixer stack (S-1) exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the plant did not operate that day).

- (e) To document compliance with Condition D.1.11, the Permittee shall maintain the Daily records of the pressure drop across the baghouse controlling the dryer/mixer. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g., the dryer/mixer did not operate that day).
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.14 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1, D.1.2, D.1.3 and D.1.4 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

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

SECTION D.2 FACILITY CONDITIONS

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

- (a) cold-mix (stockpile mix) asphalt storage piles

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

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

D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-5-2]

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

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

D.2.2 Volatile Organic Compounds (VOC) [326 IAC 2-8-4][326 IAC 2-2]

Pursuant to 326 IAC 2-8-4, the cutback asphalt medium cure liquid binder usage (containing a maximum of 28.6% of the liquid binder by weight of VOC solvent and 70% by weight of VOC solvent evaporating) shall not exceed 76 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit, combined with the limited PTE of other emission units at the source, shall limit the VOC emissions from the entire source to less than 100 tons per twelve (12) consecutive month period, and shall render requirements of 326 IAC 2-7 and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

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

D.2.3 Record Keeping Requirements

To document compliance with Conditions D.2.1 and D.2.2, the Permittee shall maintain records as indicated below. Records maintained shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limit established in Conditions D.2.1 and D.2.2.

- (a) Calendar dates covered in the compliance determination period;
- (b) Cutback asphalt medium cure liquid binder usage in the production of cold mix asphalt each month.
- (c) VOC solvent content by weight of the cutback asphalt medium cure liquid binder used in the production of cold mix asphalt each month.
- (d) Amount of VOC solvent used in the production of cold mix asphalt, and the amount of VOC emitted each month..

Records may include: delivery tickets, manufacturer's data, material safety data sheets (MSDS), and other documents necessary to verify the type and amount used. Test results of ASTM tests for asphalt cutback and asphalt emulsion may be used to document volatilization

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

D.2.4 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.2.1 and D.2.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.3

FACILITY OPERATION CONDITIONS

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

- (a) Degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6 (parts washer using non-HAP Safety Kleen or Crystal Clean solvent). [326 IAC 8-3-2]

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

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

D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

SECTION E.1

FACILITY OPERATION CONDITIONS

Emissions Unit Description: Hot-Mix Asphalt Plant

- (a) One (1) asphalt counterflow drum mix dryer capable of processing 400 tons per hour of raw material, constructed in 1997, equipped with one (1) 123 million (MM) British thermal units (Btu) per hour natural gas-fired burner, using waste oil and No. 2 distillate fuel oil as back-up fuels, with one (1) jet pulse baghouse for particulate control, exhausting at one (1) stack (ID No. S-1).
- (b) one (1) drag slat conveyor, two (2) feed conveyors, and one (1) screen;
- (c) cold-mix (stockpile mix) asphalt storage piles;
- (d) two 30,000-gallon liquid asphalt storage tanks, identified as Tanks 14 and 15;
- (e) one 15,000-gallon liquid asphalt storage tank, identified as Tank 24; and
- (f) one 20,000-gallon fuel oil (waste oil/No. 2 distillate fuel oil) storage tank, identified as Tank 16.

Under NSPS 40 CFR 60, Subpart I, this source is considered an effected facility.

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

New Source Performance Standards (NSPS) Requirements [326 IAC 2-8-4(1)]

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

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

E.1.2 NSPS Subpart I Requirements - Standards of Performance for Hot Mix Asphalt Facilities [40 CFR Part 60, Subpart I] [326 IAC 12-1]

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

Pursuant to 40 CFR 60.90(a), the affected facility to which the provisions of this subpart apply is each hot mix asphalt facility.

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

§ 60.90 Applicability and designation of affected facility.

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

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

[42 FR 37936, July 25, 1977, as amended at 51 FR 12325, Apr. 10, 1986]

§ 60.91 *Definitions.*

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

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

[51 FR 12325, Apr. 10, 1986]

§ 60.92 *Standard for particulate matter.*

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

- (1) Contain particulate matter in excess of 90 mg/dscm (four hundredths (0.04) gr/dscf).
- (2) Exhibit 20 percent opacity, or greater.

[39 FR 9314, Mar. 8, 1974, as amended at 40 FR 46259, Oct. 6, 1975]

§ 60.93 *Test methods and procedures.*

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

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

- (1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf).
- (2) Method 9 and the procedures in §60.11 shall be used to determine opacity.

[54 FR 6667, Feb. 14, 1989]

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Mailing Address: 5950 South Belmont Avenue, Indianapolis, Indiana 46217
FESOP Permit No.: F063-25985-03154

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

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify) _____
- Report (specify) _____
- Notification (specify) _____
- Affidavit (specify) _____
- Other (specify) _____

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

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865**

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

Source Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Mailing Address: 5950 South Belmont Avenue, Indianapolis, Indiana 46217
FESOP Permit No.: F063-25985-03154

This form consists of 2 pages

Page 1 of 2

- | |
|---|
| <input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12) <ul style="list-style-type: none">• The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and• The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16 |
|---|

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

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

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

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH**

FESOP Quarterly Report

Source Name: Milestone Contractors,L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Mailing Address: 5950 South Belmont Avenue, Indianapolis, Indiana 46217
FESOP Permit No.: F063-25985-03154
Facility: 123 MMBtu/hr burner for the aggregate dryer
Parameter: Natural gas and equivalent usage limit to limit NOx emissions
Limit: The usage of natural gas and natural gas equivalents in the dryer/mixer burner shall not exceed 990 million standard cubic feet (MMcf) per twelve (12) consecutive month period, with compliance determined at the end of each month. For purposes of determining compliance with this limit, the fuel equivalency ratios in Condition D.1.3(a)(1)(i) and (ii) shall be used such that the total MMcf of natural gas and natural gas equivalents input does not exceed the limit specified.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Natural Gas and Equivalent Usage This Month (MMcf)	Natural Gas and Equivalent Usage Previous 11 Months (MMcf)	Natural gas and Equivalent Usage 12 Month Total (MMcf)
Month 1			
Month 2			
Month 3			

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

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

Attach a signed certification to complete this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY COMPLIANCE AND ENFORCEMENT BRANCH

FESOP Quarterly Report

Source Name: Milestone Contractors,L.P.
 Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
 Mailing Address: 5950 South Belmont Avenue, Indianapolis, Indiana 46217
 FESOP Permit No.: F063-25985-03154
 Facility: 123 MMBtu/hr burner for the aggregate dryer
 Parameter: No. 2 fuel oil and equivalent usage limit to limit SO₂ emissions
 Limit: The usage of No. 2 fuel oil and No. 2 fuel oil equivalents in the dryer/mixer burner shall not exceed 2,148,790 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. For purposes of determining compliance with this limit, the fuel equivalency ratios in Condition D.1.3(b)(1)(i) and (ii) shall be used such that the total gallons of No. 2 fuel oil and No. 2 fuel oil equivalents input does not exceed the limit specified.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	No. 2 Fuel Oil and Equivalent Usage This Month (gallons)	No. 2 Fuel Oil and Equivalent Usage Previous 11 Months (gallons)	No. 2 Fuel Oil and Equivalent Usage 12 Month Total (gallons)
Month 1			
Month 2			
Month 3			

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

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

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE AND ENFORCEMENT BRANCH**

FESOP Quarterly Report

Source Name: Milestone Contractors,L.P.
 Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
 Mailing Address: 5950 South Belmont Avenue, Indianapolis, Indiana 46217
 FESOP Permit No.: F063-25985-03154
 Facility: 123 MMBtu/hr burner for the aggregate dryer
 Parameter: Waste oil and equivalent usage limit to limit SO₂ and HCl emissions
 Limit: The usage of waste oil and waste oil equivalents in the dryer/mixer burner shall not exceed 1,400,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. For purposes of determining compliance with this limit, the fuel equivalency ratios in Condition D.1.3(c)(1)(i) and (ii) shall be used such that the total gallons of waste oil and waste oil equivalents input does not exceed the limit specified.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Waste Oil and Equivalent Usage This Month (gallons)	Waste Oil and Equivalent Usage Previous 11 Months (gallons)	Waste Oil and Equivalent Usage 12 Month Total (gallons)
Month 1			
Month 2			
Month 3			

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

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

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH**

FESOP Quarterly Report

Source Name: Milestone Contractors,L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Mailing Address: 5950 South Belmont Avenue, Indianapolis, Indiana 46217
FESOP Permit No.: F063-25985-03154
Facility: Cold Mix Asphalt Storage
Parameter: Cutback asphalt medium cure liquid binder usage
Limit: 76 tons of VOC solvent per twelve (12) consecutive month period

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Total VOC Solvent Usage This Month (tons)	Total VOC Solvent Usage Previous 11 Months (tons)	12 Month Total VOC Solvent Usage (tons)

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

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

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH**

FESOP Quarterly Report

Source Name: Milestone Contractors,L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Mailing Address: 5950 South Belmont Avenue, Indianapolis, Indiana 46217
FESOP Permit No.: F063-25985-03154
Facility: One (1) Asphalt Counterflow Drum Mix Dryer
Parameter: Asphalt processed
Limit: 995,000 tons per twelve (12) consecutive month period,
with compliance determined at the end of each month.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Asphalt Processed This Month (tons)	Total Asphalt Processed During Previous 11 Months (tons)	Asphalt Processed 12 Month Total (tons)

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

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

Attach a signed certification to complete this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Mailing Address: 5950 South Belmont Avenue, Indianapolis, Indiana 46217
FESOP Permit No.: F063-25985-03154

Months: _____ to _____ Year: _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

ATTACHMENT A

Fugitive Dust Control Plan

- (a) Fugitive particulate matter emissions from paved roads, unpaved roads, and parking lots shall be controlled by one or more of the following methods:
- Paved roads and parking lots:
- (1) power brooming while wet either from rain or application of water on an as needed basis.
- Unpaved roads and parking lots:
- (1) paving with asphalt;
 - (2) treating with emulsified asphalt on an as needed basis;
 - (3) treating with water on an as needed basis; or
 - (4) double chip and seal the road surface and maintained on an as needed basis.
- (b) Fugitive particulate matter emissions from aggregate stockpiles shall be controlled by one or more of the following methods on an as needed basis:
- (1) maintaining minimum size and number of stockpiles of aggregate;
 - (2) treating around the stockpile area with emulsified asphalt;
 - (3) treating around the stockpile area with water; or
 - (4) treating the stockpiles with water.
- (c) Fugitive particulate matter emissions from outdoor conveying of aggregates shall be controlled by the following methods:
- (1) applying water at the feed and the intermediate points.
- (d) Fugitive particulate matter emissions from the transfer of aggregates shall be controlled by one of the following methods:
- (1) minimize the vehicular distance between transfer points;
 - (2) enclose the transfer points; or
 - (3) apply water on transfer points on an as needed basis.
- (e) Fugitive particulate matter emissions from transportation of aggregate by truck, front end loader, etc. shall be controlled by one of the following methods:
- (1) tarping the aggregate hauling vehicles;
 - (2) maintain vehicle bodies in condition to prevent leakage;
 - (3) spray the aggregates with water; or
 - (4) maintain a 10 mph speed limit in the yard.
- (f) Fugitive particulate matter emissions from the loading and unloading of aggregate shall be controlled by one of the following methods:
- (1) reduce free fall distance to a minimum;
 - (2) reduce the rate of discharge of the aggregate; or
 - (3) spray the aggregate with water on an as needed basis.

**Indiana Department of Environmental Management
Office of Air Quality**

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

Source Background and Description

Source Name:	Milestone Contractors, L.P.
Source Location:	7012 South County Road 750 East, Plainfield, IN 46168
County:	Hendricks
SIC Code:	2951
Operation Permit No.:	F 063-25985-03154
Operation Permit Issuance Date:	November 3, 2008
Significant Permit Revision No.:	063-27273-03154
Permit Reviewer:	Brian Williams

On February 5, 2009, the Office of Air Quality (OAQ) had a notice published in the Hendricks County Flyer, Avon, Indiana, stating that Milestone Contractors, L.P. had applied for a Significant Permit Revision to a FESOP to revise the existing fuel equivalencies found in Condition D.1.3(d) and the associated quarterly reporting form because the format was inconsistent with similar permitted Milestone asphalt plants, the fuel equivalencies did not specify what pollutant they were for, and the permit did not include fuel equivalencies for NOx emissions. The notice also stated that the OAQ proposed to issue a Significant Permit Revision to a FESOP for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments and Responses

No comments were received during the public notice period.

Additional Changes

IDEM, OAQ has decided to make additional revisions to the permit as described below, with deleted language as ~~strikeouts~~ and new language **bolded**.

- (a) Several of IDEM's Branches and sections have been renamed. Therefore, IDEM has updated the addresses listed in the permit. References to Permit Administration and Development Section and the Permits Branch have been changed to Permit Administration and Support Section. References to Asbestos Section, Compliance Data Section, Air Compliance Section, and Compliance Branch have been changed to Compliance and Enforcement Branch.
- (b) IDEM has decided to reference 326 IAC 2 in Section B-Source Modification Requirements, rather than the specific construction rule.

...
B.20 Source Modification Requirement [326 IAC 2-8-11.1]

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

- (c) IDEM has decided not to list the submission date of the ERP because the ERP can be updated without permit change.

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

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

- (a) The Permittee prepared and shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures on ~~December 17, 2003.~~

...

- (d) IDEM has decided not to list the submission date of the Fugitive Dust Plan because the plan has been included with the permit and requires permit action to change the plan.

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

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the **attached** plan, ~~submitted on April 2, 1998.~~ The plan which is included as Attachment A. **The provisions of 326 IAC 6-5 are not federally enforceable.**

...

IDEM Contact

- (a) Questions regarding this proposed Significant Permit Revision to a FESOP can be directed to Brian Williams at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) (234-5375) or toll free at 1-800-451-6027 extension (4-5375).
- (b) A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

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 (FESOP)

Source Description and Location

Source Name:	Milestone Contractors, L.P.
Source Location:	7012 South County Road 750 East, Plainfield, IN 46168
County:	Hendricks
SIC Code:	2951
Operation Permit No.:	F 063-25985-03154
Operation Permit Issuance Date:	November 3, 2008
Significant Permit Revision No.:	063-27273-03154
Permit Reviewer:	Brian Williams

On December 18, 2008, the Office of Air Quality (OAQ) has received an application from Milestone Contractors, L.P. related to a modification to an existing stationary hot drum mix asphalt plant.

Existing Approvals

The source was issued FESOP Renewal No. 063-25985-03154 on November 3, 2008. The source has since received Administrative Amendment No 063-27175-03154, issued on December 10, 2008.

County Attainment Status

The source is located in Hendricks County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective October 19, 2007, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.

¹Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.

Basic nonattainment designation effective federally April 5, 2005, for PM_{2.5}.

- (a) **Ozone Standards**
Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Hendricks County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM_{2.5}**
U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Hendricks County as nonattainment for PM_{2.5}. On March 7, 2005 the Indiana Attorney General's Office, on behalf of IDEM, filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data.

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)								
	PM	PM10	PM2.5	SO ₂	NOx	VOC	CO	Total HAPs	Worst Single HAP
Total Fugitive Emissions	55.53	17.07	17.07	0	0	61.52	1.52	13.97	4.77 xylene
Total PTE of Entire Source	244.58	96.67	206.12	84.34	98.00	77.44	66.19	24.83	9.57 HCl
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	NA	250	250	250	250	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	100	NA	NA	NA	NA	NA	NA
negl. = negligible These emissions are based upon TSD to FESOP Renewal No. 063-25985-03154.									

- (a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1).
- (b) This existing source is not a major stationary source under Emission Offset (326 IAC 2-3), because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year or more.
- (c) This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the Permittee has accepted limits on HAPs emissions to less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by Milestone Contractors, L.P. on December 18, 2008, requesting that IDEM revise the existing fuel equivalencies found in Condition D.1.3(d) and the associated quarterly reporting form because the format is inconsistent with similar permitted Milestone asphalt plants, the fuel equivalencies do not specify what pollutant they are for, and the permit does not include fuel equivalencies for NOx emissions.

Upon further review, IDEM has determined that the PM2.5 emission limit for the dryer/mixer was incorrect. On January 5, 2005, Hendricks County was designated nonattainment for PM2.5. On March 7, 2005, the Indiana Attorney General's Office, on behalf of IDEM, filed a lawsuit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's New Source Review Rule for PM2.5 promulgated on May 8, 2008, and effective on July 15 2008. As a result, in FESOP Renewal No. F063-25985-03154, issued on November 3, 2008, direct PM2.5 and SO₂ emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. However, based on the current PM2.5 emission limits found in Condition D.1.1(c) the source is limited to 206.12 tons of PM2.5 per year. Since this source is located in a Hendricks County, PM2.5 emissions should have been limited to less than 100 tons per year. Therefore, Condition D.1.1(c) has been revised to limit PM2.5 emissions to less than 100 tons per year.

Enforcement Issues

There are no pending enforcement actions related to this revision.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – FESOP Revision

The following table is used to determine the appropriate permit level under 326 IAC 2-8.11.1. This table reflects the PTE before controls of the proposed revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	PTE of Proposed Revision (tons/year)								
	PM	PM10*	PM2.5	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Dryer/Mixer (Before Revision)	189.05	79.6	189.05	84.34	98.00	15.92	64.68	10.86	9.57 HCl
Fugitive Emissions (Before Revision)	55.53	17.07	17.07	0	0	61.52	1.52	13.97	4.77 xylene
Total PTE of Entire Source Before Revision	244.58	96.67	206.12	84.34	98.00	77.44	66.19	24.83	9.57 HCl
Dryer/Mixer (After Revision)	189.05	79.6	87.33	84.34	98.00	15.92	64.68	10.86	9.57 HCl
Fugitive Emissions (After Revision)	55.53	17.07	7.67	0	0	61.52	1.52	13.97	4.77 xylene
Total PTE of Entire Source After Revision	244.58	96.67	95.00	84.34	98.00	77.44	66.19	24.83	9.57 HCl
Total PTE of Proposed Revision	0	0	-111.12	0	0	0	0	0	0
negl. = negligible * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".									

This FESOP is being revised through a FESOP Significant Permit Revision pursuant to 326 IAC 2-8-11.1(g)(2) because it involves adjustment to the existing source-wide emissions limitations to maintain the FESOP status of the source (see PTE of the Entire Source After The Issuance of the FESOP Revision Section).

PTE of the Entire Source After Issuance of the FESOP Revision

The table below summarizes the potential to emit of the entire source (reflecting adjustment of existing limits), with updated emissions shown as **bold** values and previous emissions shown as ~~strikethrough~~ values.

Process/ Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)								
	PM	PM10*	PM2.5**	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Ducted Emissions									
Fuel Combustion (worst case)	47.33 45.70	37.74 36.41	37.74 36.41	84.34	98.00 94.05	1.93 2.72	29.4 41.58	10.86 10.78	9.57 9.24 HCl
Dryer/Mixer	189.05	79.6	189.05 87.33	28.86	27.36	15.92	64.68	5.30	1.54
Worst Case Emissions	189.05	79.6	189.05 87.33	84.34	98.00 94.05	15.92	64.68	10.86 10.78	9.57 9.24 HCl
Fugitive Emissions									
Asphalt Load-Out, Silo Filling, On-Site Yard	0.55	0.55	0.55	0	0	8.52	1.43	0.14	0.04
Hot Oil System	0	0	0	0	0	0.0018	0.09	0.0018	0.0012
Material Storage Piles	0.65	0.23	0.23	0	0	0	0	0	0
Material Processing and Handling	3.21	1.52	1.52 0.23	0	0	0	0	0	0
Material Crushing, Screening, and Conveying	15.79	5.77	5.77	0	0	0	0	0	0
Paved and Unpaved Roads (worst case)	35.33	9.00	9.00 0.90	0	0	0	0	0	0
Cold Mix Asphalt Production	0	0	0	0	0	53.00	0	13.82	4.77 xylene
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	0	0	0	0
Total Fugitive Emissions	55.53	17.07	17.07 7.67	0	0	61.52	1.52	13.97	4.77 xylene
Total PTE of Entire Source	244.58	96.67	206.12 95.00	84.34	98.00 94.05	77.44	66.19	24.83 24.74	9.57 9.24 HCl
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	NA	250	250	250	250	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	100	NA	NA	NA	NA	NA	NA

negl. = negligible
 * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
 ** Source has requested an overall PM2.5 emission limit of 95.0 tons per year. Therefore, the source will limit PM2.5 emissions from the dryer/mixer to 0.176 tons of PM2.5 per ton of asphalt produced.

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this FESOP permit revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. (Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted)

Process/ Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)								
	PM	PM10*	PM2.5**	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Ducted Emissions									
Fuel Combustion (worst case)	45.70	36.41	36.41	84.34	94.05	2.72	41.58	10.78	9.24 HCl
Dryer/Mixer	189.05	79.6	87.33	28.86	27.36	15.92	64.68	5.30	1.54
Worst Case Emissions	189.05	79.6	87.33	84.34	94.05	15.92	64.68	10.78	9.24 HCl
Fugitive Emissions									
Asphalt Load-Out, Silo Filling, On-Site Yard	0.55	0.55	0.55	0	0	8.52	1.43	0.14	0.04
Hot Oil System	0	0	0	0	0	0.0018	0.09	0.0018	0.0012
Material Storage Piles	0.65	0.23	0.23	0	0	0	0	0	0
Material Processing and Handling	3.21	1.52	0.23	0	0	0	0	0	0
Material Crushing, Screening, and Conveying	15.79	5.77	5.77	0	0	0	0	0	0
Paved and Unpaved Roads (worst case)	35.33	9.00	0.90	0	0	0	0	0	0
Cold Mix Asphalt Production	0	0	0	0	0	53.00	0	13.82	4.77 xylene
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	0	0	0	0
Total Fugitive Emissions	55.53	17.07	7.67	0	0	61.52	1.52	13.97	4.77 xylene
Total PTE of Entire Source	244.58	96.67	95.00	84.34	94.05	77.44	66.19	24.74	9.24 HCl
Title V Major Source Thresholds	NA	100	-	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	NA	250	250	250	250	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	100	NA	NA	NA	NA	NA	NA

negl. = negligible
 * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
 ** Source has requested an overall PM2.5 emission limit of 95.0 tons per year. Therefore, the source will limit PM2.5 emissions from the dryer/mixer to 0.176 tons of PM2.5 per ton of asphalt produced.

(a) FESOP Status

This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP).

In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the source shall comply with the following revised fuel equivalency ratios:

(a) Natural Gas

For purposes of determining compliance, the following shall apply:

- (i) every kilogallon of No. 2 fuel oil burned in the dryer/mixer burner shall be equivalent to 0.1263 MMcf of natural gas, based on NO_x emissions, such that the total MMcf of natural gas and natural gas equivalent input does not exceed the limit specified;
- (ii) every kilogallon of re-refined waste oil burned in the aggregate dryer/burner shall be equivalent to 0.10 MMcf of natural gas, based on NO_x emissions, such that the total MMcf of natural gas and natural gas equivalent input does not exceed the limit specified.

(b) No. 2 Fuel Oil

For purposes of determining compliance, the following shall apply:

- (i) every gallon of waste oil burned in the dryer/mixer burner shall be equivalent to 1.40 gallons of No. 2 fuel oil, based on SO₂ emissions, that the total gallons of No. 2 fuel oil and No. 2 fuel oil equivalent input does not exceed the limit specified;
- (ii) every MMcf of natural gas burned in the dryer/mixer burner shall be equivalent to 0.008 gallons of No. 2 fuel oil, based on SO₂ emissions, such that the total gallons of No. 2 fuel oil and No. 2 fuel oil equivalent input does not exceed the limit specified.

(c) Waste Oil

For purposes of determining compliance, the following shall apply:

- (i) every gallon of No. 2 fuel oil burned in the dryer/mixer burner shall be equivalent to 0.71 gallons of waste oil, based on SO₂ emissions, that the total gallons of waste oil and waste oil equivalent input does not exceed the limit specified;
- (ii) every MMcf of natural gas burned in the dryer/mixer burner shall be equivalent to 0.005 gallons of waste oil, based on SO₂ emissions, such that the total gallons of waste oil and waste oil equivalent input does not exceed the limit specified.

Note: This revision did not require any changes to the existing emission, content, and fuel usage limits found in Condition D.1.3(a) through (c). The source shall continue to comply with all other applicable requirements and permit conditions as contained in FESOP Renewal No: 063-25985-03154, issued on November 3, 2008.

Compliance with these limitations, combined with the limited PTE from other emission units at this source, shall limit the source-wide total potential to emit SO₂ and NO_x to less than 100 tons per 12 consecutive month period, HCl to less than 10 tons per 12 consecutive month period, and any combination of HAPs to less than 25 tons per 12 consecutive month period, and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (PSD), 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)), and 326 IAC 2-1.1-5 (Nonattainment New Source Review) not applicable.

(b) PSD Minor Source

This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

(c) Nonattainment New Source Review

This modification to an existing Nonattainment NSR minor stationary source, under 326 IAC 2-1.1-5 (Nonattainment New Source Review), because the potential to emit particulate matter with a diameter less than ten 2.5 micrometers (PM_{2.5}), is limited less than 100 tons per year. Therefore, pursuant to 326 IAC 2-1.1-5, the Nonattainment New Source Review requirements do not apply.

In order to render the requirements of 326 IAC 2-1.1-5 (Nonattainment New Source Review) not applicable, the source shall comply with the following revised PM_{2.5} emission limit;

- (1) The asphalt production rate shall not exceed 995,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This revision did not require any changes to the existing asphalt production limit.
- (2) The PM_{2.5} emissions from the dryer/mixer shall not exceed 0.176 pounds of PM_{2.5} per ton of asphalt produced.

Compliance with these limits, combined with the potential to emit PM_{2.5} from all other emission units at this source, shall limit the source-wide total potential to emit of PM_{2.5} to less than 100 tons per 12 consecutive month period and shall render 326 IAC 2-1.1-5 (Nonattainment New Source Review) not applicable.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) There are no New Source Performance Standards (NSPS)(40 CFR Part 60) included for this proposed revision.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

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

Compliance Assurance Monitoring (CAM)

- (c) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The following state rules are applicable to the proposed revision:

- (a) 326 IAC 2-8-4 (FESOP)
This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP). See PTE of the Entire Source After Issuance of the FESOP Revision Section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the FESOP Revision Section above.
- (c) 326 IAC 2-1.1-5 (Nonattainment New Source Review)
This modification to an existing minor stationary source under 326 IAC 2-1.1-5 (Nonattainment New Source Review) will not change the minor status, because the potential to emit of PM_{2.5} from the entire source will continue to be less than 100 tons per year. Therefore, pursuant to 326 IAC 2-1.1-5, the Nonattainment New Source Review requirements do not apply. See PTE of the Entire Source After Issuance of the FESOP Revision Section above.
- (d) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The proposed revision is not subject to the requirements of 326 IAC 2-4.1, because the HAPs limits are maintained to be less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for any combination of HAPs for the entire source.
- (e) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (f) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
 - (1) 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.
 - (2) 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.
- (g) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source 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.

Compliance Determination, Monitoring and Testing Requirements

The existing compliance requirements will not change because of this revision. The source shall continue to comply with the applicable requirements and permit conditions as contained in FESOP Renewal No: 063-25985-03154, issued on November 3, 2008.

Proposed Changes

(a) The following changes listed below are due to the proposed revision. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

- (1) Condition D.1.1 has been revised to remove the existing PM2.5 emission limit for the existing dryer/mixer, since the source is located in a PM2.5 nonattainment county.
- (2) Condition D.1.2 has been revised to include a new PM2.5 emission limit for the existing dryer/mixer. Compliance with this limit will render the requirements of 326 IAC 2-1.1-5 (Nonattainment New Source Review) not applicable.
- (3) The fuel equivalencies found in Condition D.1.3(d) have been removed from the permit and replaced with updated fuel equivalencies for SO₂ emissions. In addition, NO_x fuel equivalencies have been added to the permit. As a result, the recordkeeping FESOP Quarterly Reports have been revised to reflect the new fuel equivalencies.
- (4) Condition D.1.13(b)(2) has been revised to indicate that the source must keep records of the NO_x emission rates for each fuel used at the source per month.

...
D.1.1 Particulate Matter (PM) and ~~PM2.5~~ [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable, the Permittee shall comply with the following:

- ...
~~(c) The PM2.5 emissions from the dryer/mixer shall not exceed 0.380 pounds per ton of asphalt processed.~~

Compliance with these limitations, combined with the limited potential to emit from other emission units at this source, shall limit the source-wide total potential to emit PM and ~~PM2.5~~ to less than 250 tons per 12 consecutive month period and shall render 326 IAC 2-2 (PSD) not applicable.

...
D.1.2 Dryer and Mixer FESOP Limits [326 IAC 2-8-4] [326 IAC 2-2] **[326 IAC 2-1.1-5]**

Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following:

- ...
(c) The PM2.5 emissions from the dryer/mixer shall not exceed 0.176 pounds of PM2.5 per ton of asphalt produced.
- ~~(ed)~~ The CO emissions from the dryer/mixer shall not exceed 0.130 pounds per ton of asphalt processed.
- ~~(de)~~ The VOC emissions from the dryer/mixer shall not exceed 0.032 pounds per ton of asphalt processed.
- ~~(ef)~~ The SO₂ emissions from the dryer/mixer shall not exceed 0.058 pounds per ton of asphalt processed.
- ~~(fg)~~ The NO_x emissions from the dryer/mixer shall not exceed 0.055 pounds per ton of asphalt processed.

Compliance with these limitations, combined with the limited PTE potential to emit from other emission units at this source, shall limit the source-wide total potential to emit PM10, **PM2.5**, CO, VOC, SO2 and NOx to less than 100 tons per 12 consecutive month period, and shall render 326 IAC 2-7 (Part 70), and 326 IAC 2-2 (PSD), and **326 IAC 2-1.1-5 (Nonattainment New Source Review)** not applicable.

D.1.3 Fuel Usage and Equivalency Limits [326 IAC 2-8-4] [326 IAC 2-2] [~~326 IAC 2-3~~] **[326 IAC 2-4.1]**
[326 IAC 2-1.1-5]

Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following:

(a) Natural Gas

- (i1) The natural gas combusted in the dryer/mixer burner shall not exceed 990 million standard cubic feet (MMscf) per twelve (12) consecutive month period, with compliance determined at the end of each month.

For purposes of determining compliance, the following shall apply:

- (i) **every kilogallon of No. 2 fuel oil burned in the dryer/mixer burner shall be equivalent to 0.1263 MMcf of natural gas, based on NOx emissions, such that the total MMcf of natural gas and natural gas equivalent input does not exceed the limit specified;**
- (ii) **every kilogallon of re-refined waste oil burned in the aggregate dryer/burner shall be equivalent to 0.10 MMcf of natural gas, based on NOx emissions, such that the total MMcf of natural gas and natural gas equivalent input does not exceed the limit specified.**
- (ii 2) The NOx emissions from the dryer/mixer burner shall not exceed 190 pounds per MMscf of natural gas.

(b) No. 2 Fuel Oil

- (i1) The No. 2 fuel oil combusted in the dryer/mixer burner shall not exceed 2,148,790 gallons per twelve (12) consecutive month period with compliance determined at the end of each month.

For purposes of determining compliance, the following shall apply:

- (i) **every gallon of waste oil burned in the dryer/mixer burner shall be equivalent to 1.40 gallons of No. 2 fuel oil, based on SO₂ emissions, that the total gallons of No. 2 fuel oil and No. 2 fuel oil equivalent input does not exceed the limit specified;**
- (ii) **every MMcf of natural gas burned in the dryer/mixer burner shall be equivalent to 0.008 gallons of No. 2 fuel oil, based on SO₂ emissions, such that the total gallons of No. 2 fuel oil and No. 2 fuel oil equivalent input does not exceed the limit specified.**
- (ii2) The sulfur content of the No. 2 fuel oil used in the dryer/mixer burner shall not exceed 0.5% by weight.
- (iii3) The SO₂ emissions from the dryer/mixer burner shall not exceed 78.5 pounds per thousand gallons (lb/kgal) of No. 2 fuel oil.

(iv4) The NOx emissions from the dryer/mixer burner and heater shall not exceed 24.0 pounds per thousand gallons (lb/kgal) of No. 2 fuel oil.

(c) Waste Oil

(i1) The waste oil combusted in the dryer/mixer burner shall not exceed 1,400,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

For purposes of determining compliance, the following shall apply:

(i) every gallon of No. 2 fuel oil burned in the dryer/mixer burner shall be equivalent to 0.71 gallons of waste oil, based on SO₂ emissions, that the total gallons of waste oil and waste oil equivalent input does not exceed the limit specified;

(ii) every MMcf of natural gas burned in the dryer/mixer burner shall be equivalent to 0.005 gallons of waste oil, based on SO₂ emissions, such that the total gallons of waste oil and waste oil equivalent input does not exceed the limit specified.

(ii2) The sulfur content of the waste oil used in the dryer/mixer burner shall not exceed 0.75% by weight.

(iii3) The SO₂ emissions from the dryer/mixer burner shall not exceed 110.3 pounds per thousand gallons (lb/kgal) of waste oil.

(iv4) The NOx emissions from the dryer/mixer burner shall not exceed than 19 pounds per thousand gallons (lb/kgal) of waste oil.

(v5) The HCl emissions shall not exceed 13.2 pounds of HCl per 1,000 gallons of waste oil burned.

(vi6) The waste oil combusted in the dryer/mixer burner shall not contain more than 1.02 % ash, 0.20 % chlorine and 0.010% Lead.

(d) Fuel Equivalency

~~For the purpose of determining compliance with these limits, the following fuel equivalencies shall be used:~~

~~131 MMCF of natural gas = 1000 gallons of No. 2 fuel oil~~

~~184 MMCF of natural gas = 1000 gallons of waste oil~~

~~1 gallon of waste oil = 1.40 gallons of No. 2 fuel oil~~

Compliance with these limitations, combined with the limited PTE from other emission units at this source, shall limit the source-wide total potential to emit SO₂ and NO_x to less than 100 tons per 12 consecutive month period, HCl to less than 10 tons per 12 consecutive month period, and any combination of HAPs to less than 25 tons per 12 consecutive month period, and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (PSD), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)), and **326 IAC 2-1.1-5 (Nonattainment New Source Review)** not applicable.

...

D.1.13 Record Keeping Requirements

... (b) To document compliance with Conditions D.1.4 and D.1.5, the Permittee shall maintain records in accordance with (1) through (7) below.

... (2) Actual fuel usage, sulfur content, heat content and equivalent sulfur dioxide **and NOx** emission rates for each fuel used at the source per month;

...
FESOP Quarterly Report
Source Name: ~~Milestone Contractors, L.P.~~
Source Address: ~~7012 South County Road 750 East, Plainfield, Indiana 46168~~
Mailing Address: ~~5950 South Belmont Avenue, Indianapolis, Indiana 46217~~
FESOP Permit No.: ~~F063-25985-03154~~
Facility: ~~123 MMBtu/hr burner for the aggregate dryer~~
Parameter: ~~Natural Gas; No. 2 Fuel Oil; and Waste Oil~~
Limit: ~~990 MMCF; 2,148,790 Gallons; and 1,400,000 Gallons per twelve (12) consecutive month period.~~

...
FESOP Quarterly Report
Source Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Mailing Address: 5950 South Belmont Avenue, Indianapolis, Indiana 46217
FESOP Permit No.: F063-25985-03154
Facility: 123 MMBtu/hr burner for the aggregate dryer
Parameter: Natural gas and equivalent usage limit to limit NOx emissions
Limit: The usage of natural gas and natural gas equivalents in the dryer/mixer burner shall not exceed 990 million standard cubic feet (MMcf) per twelve (12) consecutive month period, with compliance determined at the end of each month. For purposes of determining compliance with this limit, the fuel equivalency ratios in Condition D.1.3(a)(1)(i) and (ii) shall be used such that the total MMcf of natural gas and natural gas equivalents input does not exceed the limit specified.

...
FESOP Quarterly Report
Source Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Mailing Address: 5950 South Belmont Avenue, Indianapolis, Indiana 46217
FESOP Permit No.: F063-25985-03154
Facility: 123 MMBtu/hr burner for the aggregate dryer
Parameter: No. 2 fuel oil and equivalent usage limit to limit SO₂ emissions
Limit: The usage of No. 2 fuel oil and No. 2 fuel oil equivalents in the dryer/mixer burner shall not exceed 2,148,790 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. For purposes of determining compliance with this limit, the fuel equivalency ratios in Condition D.1.3(b)(1)(i) and (ii) shall be used such that the total gallons of No. 2 fuel oil and No. 2 fuel oil equivalents input does not exceed the limit specified.

...
FESOP Quarterly Report
Source Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Mailing Address: 5950 South Belmont Avenue, Indianapolis, Indiana 46217
FESOP Permit No.: F063-25985-03154
Facility: 123 MMBtu/hr burner for the aggregate dryer
Parameter: Waste oil and equivalent usage limit to limit SO₂ and HCl emissions

Limit: **The usage of waste oil and waste oil equivalents in the dryer/mixer burner shall not exceed 1,400,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. For purposes of determining compliance with this limit, the fuel equivalency ratios in Condition D.1.3(c)(1)(i) and (ii) shall be used such that the total gallons of waste oil and waste oil equivalents input does not exceed the limit specified.**

...

Conclusion and Recommendation

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 December 18, 2008.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Significant Revision No. 063-27273-03154. The staff recommends to the Commissioner that this FESOP Significant Revision be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Brian Williams at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) (234-5375) or toll free at 1-800-451-6027 extension (4-5375).
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

**Appendix A: Emissions Calculations
Unlimited/Uncontrolled Emission Summary**

Company Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Permit Number: 063-27273-03154
Reviewer: Brian Williams

Asphalt Plant Maximum Capacity

Maximum Hourly Asphalt Production =	400	ton/hr
Maximum Annual Asphalt Production =	3,504,000	ton/yr
Maximum Fuel Input Rate =	123	MMBtu/hr
Equivalent Natural Gas Usage =	1,077	MMCF/yr
Equivalent No. 2 Fuel Oil Usage =	7,696,286	gal/yr, and
Equivalent Used/Waste Oil Usage =	7,696,286	gal/yr, and
	0.50	% sulfur
	0.75	% sulfur
	1.02	% ash
	0.200	% chlorine,
	0.010	% lead

Unlimited/Uncontrolled Emissions

Process Description	Unlimited/Uncontrolled Potential to Emit (tons/year)								
	Criteria Pollutants						Hazardous Air Pollutants		
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Case HAP
Ducted Emissions									
Fuel Combustion (worst case)	251.21	200.18	200.18	424.26	102.36	3.85	45.25	55.15	50.80 (hydrogen chloride)
Dryer/Mixer	49056.00	11212.80	2628.00	101.62	96.36	56.06	227.76	18.68	5.43 (formaldehyde)
Worst Case Emissions	49056.00	11212.80	2628.00	424.26	102.36	56.06	227.76	55.15	50.80 (hydrogen chloride)
Fugitive Emissions									
Asphalt Load-Out, Silo Filling, On-Site Yard	1.94	1.94	1.94	0	0	30.01	5.05	0.50	0.16 (formaldehyde)
Hot Oil System	0	0	0	0	1.38	5.0E-02	0.81	1.8E-03	1.2E-03 (naphthalene)
Material Storage Piles	0.65	0.23	0.23	0	0	0	0	0	0
Material Processing and Handling	11.32	5.35	0.81	0	0	0	0	0	0
Material Crushing, Screening, and Conveying	55.59	20.31	20.31	0	0	0	0	0	0
Unpaved Roads (worst case)	152.66	38.91	3.89	0	0	0	0	0	0
Cold Mix Asphalt Production	0	0	0	0	0	49105.06	0	12808.42	4419.46 (xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	0	0	0	0
Total Fugitive Emissions	222.16	66.73	27.17	0.00	1.38	49135.12	5.86	12808.92	4419.46 (xylenes)
Totals Unlimited/Uncontrolled PTE	49278.16	11279.53	2655.17	424.26	103.74	49191.18	233.62	12864.07	4419.46 (xylenes)

negl = negligible

Appendix A: Emissions Calculations
Dryer/Mixer Fuel Combustion with Maximum Capacity > 100 MMBtu/hr
Unlimited/Uncontrolled

Company Name: Milestone Contractors, L.P.
 Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
 Permit Number: 063-27273-03154
 Reviewer: Brian Williams

The following calculations determine the Unlimited/Uncontrolled emissions created from the combustion of natural gas, fuel oil, propane, butane, or used/waste oil in the dryer/mixer and all other fuel combustion sources at the source.

Maximum Capacity

Maximum Annual Asphalt Production	3,504,000	ton/yr
Maximum Fuel Input Rate	123	MMBtu/hr
Equivalent Natural Gas Usage	1,077	MMCF/yr
Equivalent No. 2 Fuel Oil Usage	7,696,286	gal/yr, and
Equivalent Used/Waste Oil Usage	7,696,286	gal/yr, and
	0.50	% sulfur
	0.75	% sulfur
	1.02	% ash
	0.200	% chlorine
	0.010	% lead

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units)								Unlimited/Uncontrolled Potential to Emit (tons/yr)								Worse Case Fuel (tons/yr)	
	Natural Gas (lb/MMCF)	No. 2 Oil (lb/kgal)	Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Residual Fuel Oil (No. 5 or No. 6) (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/Waste Oil (lb/kgal)	Diesel Engine (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/Waste Oil (tons/yr)		Diesel Engine (tons/yr)
PM	1.9	2.0	7.0	3.22	0.6	0.6	65.3	43.4	1.02	7.70	0.00	0.00	0.000	0.000	251.21	0.00	251.21	
PM10/PM2.5	7.6	3.3	8.3	4.72	0.6	0.6	52.02	43.4	4.09	12.70	0.00	0.00	0.000	0.000	200.18	0.00	200.18	
SO2	0.6	78.5	0.0	0.0	0.000	0.000	110.3	40.6	0.32	302.08	0.00	0.00	0.000	0.000	424.26	0.00	424.26	
NOx	190	24.0	47.0	47.0	19.0	21.0	19.0	617.4	102.36	92.36	0.00	0.00	0.00	0.00	73.11	0.00	102.36	
VOC	5.5	0.20	0.20	0.28	0.50	0.60	1.0	49.00	2.96	0.77	0.00	0.00	0.00	0.00	3.85	0.00	3.85	
CO	84	5.0	5.0	5.0	3.2	3.6	5.0	133.0	45.25416	19.24	0.00	0.00	0.00	0.00	19.24	0.00	45.25	
Hazardous Air Pollutant																		
HCl								13.2									50.80	50.80
Antimony				5.25E-03	5.25E-03												negl	0.0E+00
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03					1.1E-04	2.15E-03	0.00E+00	0.00E+00					4.23E-01	4.2E-01
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05				negl	6.5E-06	1.62E-03	0.00E+00	0.00E+00					negl	1.6E-03
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04				9.3E-03	5.9E-04	1.62E-03	0.00E+00	0.00E+00					3.58E-02	3.6E-02
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04				2.0E-02	7.5E-04	1.62E-03	0.00E+00	0.00E+00					7.70E-02	7.7E-02
Cobalt	8.4E-05		6.02E-03	6.02E-03				2.1E-04	4.5E-05		0.00E+00	0.00E+00					8.08E-04	8.1E-04
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03				0.55	2.7E-04	4.85E-03	0.00E+00	0.00E+00					2.1E+00	2.1E
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03				6.8E-02	2.0E-04	3.23E-03	0.00E+00	0.00E+00					2.62E-01	0.26
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04					1.4E-04	1.62E-03	0.00E+00	0.00E+00						1.6E-03
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02				1.1E-02	1.1E-03	1.62E-03	0.00E+00	0.00E+00					4.23E-02	0.042
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04				negl	1.3E-05	8.08E-03	0.00E+00	0.00E+00					negl	8.1E-03
1,1,1-Trichloroethane			2.36E-04	2.36E-04							0.00E+00	0.00E+00						0.0E+00
1,3-Butadiene								5.47E-03										0.00E+00
Acetaldehyde								1.07E-01										0.00E+00
Acrolein								1.30E-02										0.00E+00
Benzene	2.1E-03		2.14E-04	2.14E-04				1.31E-01	1.1E-03		0.00E+00	0.00E+00						0.00E+00
Bis(2-ethylhexyl)phthalate								2.2E-03										8.47E-03
Dichlorobenzene	1.2E-03							8.0E-07	6.5E-04									3.08E-06
Ethylbenzene			6.36E-05	6.36E-05							0.00E+00	0.00E+00						0.0E+00
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				1.65E-01	4.0E-02	2.35E-01	0.00E+00	0.00E+00						0.00E+00
Hexane	1.8E+00								0.97									0.970
Phenol								2.4E-03										9.24E-03
Toluene	3.4E-03		6.20E-03	6.20E-03				5.73E-02	1.8E-03		0.00E+00	0.00E+00						0.00E+00
Total PAH Haps	negl		1.13E-03	1.13E-03				3.9E-02	2.35E-02	negl	0.00E+00	0.00E+00						1.50E-01
Polycyclic Organic Matter		3.30E-03								1.27E-02								
Xylene			1.09E-04	1.09E-04				3.99E-02			0.00E+00	0.00E+00						0.00E+00
Total HAPs	1.02	0.27	0.00	0.00	0	0	0	53.92	0.00	0.00	0.00	0.00	0	0	53.92	0.00	55.15	

Methodology

Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
 Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
 Equivalent Propane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0905 MMBtu]
 Equivalent Butane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0974 MMBtu]
 Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
 All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gal/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
 Sources of AP-42 Emission Factors for fuel combustion:
 Natural Gas: AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
 No. 2, No. 4, and No. 6 Fuel Oil: AP-42 Chapter 1.3 (dated 9/98), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11
 Propane and Butane: AP-42 Chapter 1.5 (dated 10/96), Tables 1.5-1 (assuming PM = PM10)
 Waste Oil: AP-42 Chapter 1.11 (dated 10/96), Tables 1.11-1, 1.11-2, 1.11-3, 1.11-4, and 1.11-5
 Diesel Engine Oil: AP-42 Chapter 3.3 (dated 10/96), Tables 3.3-1 and 3.3-2
 *Since there are no specific AP-42 HAP emission factors for combustion of No. 4 fuel oil, it was assumed that HAP emissions from combustion of No. 4 fuel oil were equal to combustion of residual or No. 6 fuel oil.

Abbreviations

PM = Particulate Matter
 HCl = Hydrogen Chloride
 PM10 = Particulate Matter (<10 um)
 PAH = Polycyclic Aromatic Hydrocarbon
 SO2 = Sulfur Dioxide
 NOx = Nitrogen Oxides
 VOC = Volatile Organic Compounds
 CO = Carbon Monoxide
 HAP = Hazardous Air Pollutant

**Appendix A: Emissions Calculations
Dryer/Mixer
Volatile Organic Compounds and Hazardous Air Pollutants
Unlimited/Uncontrolled**

Company Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Permit Number: 063-27273-03154
Reviewer: Brian Williams

The following calculations determine the unlimited/uncontrolled emissions from the aggregate drying/mixing

Maximum Annual Asphalt Production = 3,504,000 ton/yr

Criteria Pollutant	Uncontrolled Emission Factors (lb/ton)			Unlimited/Uncontrolled Potential to Emit (tons/yr)			Worse Case PTE
	Drum-Mix Plant (dryer/mixer)			Drum-Mix Plant (dryer/mixer)			
	Natural Gas	No. 2 Fuel Oil	Waste Oil	Natural Gas	No. 2 Fuel Oil	Waste Oil	
PM	28	28	28	49056	49056	49056	49056
PM10	6.4	6.4	6.4	11212.8	11212.8	11212.8	11212.8
PM2.5	1.5	1.5	1.5	2628	2628	2628	2628
SO2	0.0034	0.011	0.058	6.0	19.3	101.6	101.6
NOx	0.026	0.055	0.055	45.6	96.4	96.4	96.4
VOC	0.032	0.032	0.032	56.1	56.1	56.1	56.1
CO	0.13	0.13	0.13	227.8	227.8	227.8	227.8
Hazardous Air Pollutant							
HCl			2.10E-04			3.68E-01	0.37
Antimony	1.80E-07	1.80E-07	1.80E-07	3.15E-04	3.15E-04	3.15E-04	3.15E-04
Arsenic	5.60E-07	5.60E-07	5.60E-07	9.81E-04	9.81E-04	9.81E-04	9.81E-04
Beryllium	negl	negl	negl	negl	negl	negl	0.00E+00
Cadmium	4.10E-07	4.10E-07	4.10E-07	7.18E-04	7.18E-04	7.18E-04	7.18E-04
Chromium	5.50E-06	5.50E-06	5.50E-06	9.64E-03	9.64E-03	9.64E-03	9.64E-03
Cobalt	2.60E-08	2.60E-08	2.60E-08	4.56E-05	4.56E-05	4.56E-05	4.56E-05
Lead	6.20E-07	1.50E-05	1.50E-05	1.09E-03	2.63E-02	2.63E-02	2.63E-02
Manganese	7.70E-06	7.70E-06	7.70E-06	1.35E-02	1.35E-02	1.35E-02	1.35E-02
Mercury	2.40E-07	2.60E-06	2.60E-06	4.20E-04	4.56E-03	4.56E-03	4.56E-03
Nickel	6.30E-05	6.30E-05	6.30E-05	0.11	0.11	0.11	0.11
Selenium	3.50E-07	3.50E-07	3.50E-07	6.13E-04	6.13E-04	6.13E-04	6.13E-04
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	0.07	0.07	0.07	0.07
Acetaldehyde			1.30E-03			2.28	2.28
Acrolein			2.60E-05			4.56E-02	4.56E-02
Benzene	3.90E-04	3.90E-04	3.90E-04	0.68	0.68	0.68	0.68
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0.42	0.42	0.42	0.42
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	5.43	5.43	5.43	5.43
Hexane	9.20E-04	9.20E-04	9.20E-04	1.61	1.61	1.61	1.61
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0.08	0.08	0.08	0.08
MEK			2.00E-05			0.04	0.04
Propionaldehyde			1.30E-04			0.23	0.23
Quinone			1.60E-04			0.28	0.28
Toluene	1.50E-04	2.90E-03	2.90E-03	0.26	5.08	5.08	5.08
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0.33	1.54	1.54	1.54
Xylene	2.00E-04	2.00E-04	2.00E-04	0.35	0.35	0.35	0.35

Total HAPs 18.68

Worst Single HAP 5.43 (formaldehyde)

Methodology
Unlimited/Uncontrolled Potential to Emit (tons/yr) = (Maximum Annual Asphalt Production (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-3, 11.1-7, 11.1-8, 11.1-10, and 11.1-12

Abbreviations

VOC - Volatile Organic Compounds
HCl - Hydrogen Chloride
SO2 - Sulfur Dioxide
HAP = Hazardous Air Pollutant
PAH = Polyaromatic Hydrocarbon

**Appendix A: Emissions Calculations
Load-Out, Silo Filling, and Yard Emissions
Unlimited/Uncontrolled Emissions**

Company Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Permit Number: 063-27273-03154
Reviewer: Brian Williams

The following calculations determine the Unlimited/uncontrolled fugitive emissions from hot asphalt mix load-out, silo filling, and on-site yard for a drum mix hot mix asphalt plant

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.5	
Maximum Annual Asphalt Production =	3,504,000	tons/yr

Pollutant	Emission Factor (lb/ton asphalt)			Unlimited/Uncontrolled Potential to Emit (tons/yr)			
	Load-Out	Silo Filling	On-Site Yard	Load-Out	Silo Filling	On-Site Yard	Total
Total PM	5.2E-04	5.9E-04	NA	0.91	1.03	NA	1.94
Organic PM	3.4E-04	2.5E-04	NA	0.60	0.445	NA	1.04
TOC	0.004	0.012	0.001	7.29	21.35	1.927	30.6
CO	0.001	0.001	3.5E-04	2.36	2.067	0.617	5.05

NA = Not Applicable (no AP-42 Emission Factor)

PM/HAPs	0.042	0.051	0	0.093
VOC/HAPs	0.108	0.272	0.028	0.408
non-VOC/HAPs	5.6E-04	5.8E-05	1.5E-04	7.7E-04
non-VOC/non-HAPs	0.53	0.30	0.14	0.97

Total VOCs	6.85	21.35	1.8	30.0
Total HAPs	0.15	0.32	0.029	0.50
		Worst Single HAP		0.155
				(formaldehyde)

Methodology

Unlimited/Uncontrolled Potential to Emit (tons/yr) = (Maximum Annual Asphalt Production (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-14, 11.1-15, and 11.1-16

Plant Load-Out Emission Factor Equations (AP-42 Table 11.1-14):

Total PM/PM10 Ef = 0.000181 + 0.00141(-V)e^{-(0.0251)(T+460)-20.43}

Organic PM Ef = 0.00141(-V)e^{-(0.0251)(T+460)-20.43}

TOC Ef = 0.0172(-V)e^{-(0.0251)(T+460)-20.43}

CO Ef = 0.00558(-V)e^{-(0.0251)(T+460)-20.43}

Silo Filling Emission Factor Equations (AP-42 Table 11.1-14):

PM/PM10 Ef = 0.000332 + 0.00105(-V)e^{-(0.0251)(T+460)-20.43}

Organic PM Ef = 0.00105(-V)e^{-(0.0251)(T+460)-20.43}

TOC Ef = 0.0504(-V)e^{-(0.0251)(T+460)-20.43}

CO Ef = 0.00488(-V)e^{-(0.0251)(T+460)-20.43}

On Site Yard CO emissions estimated by multiplying the TOC emissions by 0.32

Abbreviations

- TOC = Total Organic Compounds
- CO = Carbon Monoxide
- PM = Particulate Matter
- HAP = Hazardous Air Pollutant
- VOC = Volatile Organic Compound

Appendix A: Emissions Calculations
Load-Out, Silo Filling, and Yard Emissions (continued)
Uncontrolled/Unlimited

Company Name: Milestone Contractors, L.P.
 Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
 Permit Number: 063-27273-03154
 Reviewer: Brian Williams

Organic Particulate-Based Compounds (Table 11.1-15)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Unlimited/Uncontrolled Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of Total Organic PM)	Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)	Load-out	Silo Filling	Onsite Yard	Total
PAH HAPs										
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	0.47%	1.6E-03	2.1E-03	NA	3.6E-03
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	1.7E-04	6.2E-05	NA	2.3E-04
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	4.2E-04	5.8E-04	NA	1.0E-03
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	1.1E-04	2.5E-04	NA	3.6E-04
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	4.5E-05	0	NA	4.5E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	1.3E-05	0	NA	1.3E-05
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	1.1E-05	0	NA	1.1E-05
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	1.4E-05	0	NA	1.4E-05
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	4.7E-05	4.2E-05	NA	8.9E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	6.2E-04	9.3E-04	NA	1.5E-03
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	2.2E-06	0	NA	2.2E-06
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	3.0E-04	6.7E-04	NA	9.7E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	4.6E-03	4.5E-03	NA	9.1E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	2.8E-06	0	NA	2.8E-06
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	1.4E-02	2.3E-02	NA	0.038
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	7.5E-03	8.1E-03	NA	1.6E-02
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	1.3E-04	1.3E-04	NA	2.6E-04
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	4.8E-03	8.0E-03	NA	1.3E-02
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	9.0E-04	2.0E-03	NA	2.9E-03
Total PAH HAPs							0.035	0.051	NA	0.086
Other semi-volatile HAPs										
Phenol		PM/HAP	---	Organic PM	1.18%	0	7.0E-03	0	0	7.0E-03

NA = Not Applicable (no AP-42 Emission Factor)

Methodology

Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Speciation Profile (%)] * [Organic PM (tons/yr)]
 Speciation Profiles from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-15 and 11.1-16

Abbreviations

PM = Particulate Matter
 HAP = Hazardous Air Pollutant
 POM = Polycyclic Organic Matter

Organic Volatile-Based Compounds (Table 11.1-16)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Unlimited/Uncontrolled Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of TOC)	Silo Filling and Asphalt Storage Tank (% by weight of TOC)	Load-out	Silo Filling	Onsite Yard	Total
VOC		VOC	---	TOC	94%	100%	6.85	21.35	1.81	30.01
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	4.7E-01	5.6E-02	1.3E-01	0.654
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	3.4E-03	1.2E-02	8.9E-04	0.016
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	5.2E-02	2.3E-01	1.4E-02	0.300
Total non-VOC/non-HAPS					7.30%	1.40%	0.532	0.299	0.141	0.97
Volatile organic HAPS										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	3.8E-03	6.8E-03	1.0E-03	1.2E-02
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	7.0E-04	1.0E-03	1.9E-04	1.9E-03
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	3.6E-03	8.3E-03	9.4E-04	1.3E-02
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	9.5E-04	3.4E-03	2.5E-04	4.6E-03
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	1.5E-05	8.5E-04	4.0E-06	8.7E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	1.1E-03	4.9E-03	2.9E-04	6.3E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	8.0E-03	0	2.1E-03	1.0E-02
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	2.0E-02	8.1E-03	5.4E-03	0.034
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	6.4E-03	1.5E-01	1.7E-03	0.155
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	1.1E-02	2.1E-02	2.9E-03	0.035
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	1.3E-04	6.6E-05	3.5E-05	2.3E-04
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	5.8E-05	0	5.8E-05
MTBE	1634-04-4	VOC/HAP	---	TOC	0	0	0	0	0	0
Styrene	100-42-5	VOC/HAP	---	TOC	0.0073%	0.0054%	5.3E-04	1.2E-03	1.4E-04	1.8E-03
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	5.6E-04	0	1.5E-04	7.1E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	1.5E-02	1.3E-02	4.0E-03	0.033
1,1,1-Trichloroethane	71-55-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichloroethene	79-01-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichlorofluoromethane	75-69-4	VOC/HAP	---	TOC	0.0013%	0	9.5E-05	0	2.5E-05	1.2E-04
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	3.0E-02	4.3E-02	7.9E-03	0.080
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	5.8E-03	1.2E-02	1.5E-03	2.0E-02
Total volatile organic HAPS					1.50%	1.30%	0.109	0.278	0.029	0.416

Methodology

Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Speciation Profile (%)] * [TOC (tons/yr)]

Speciation Profiles from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-15 and 11.1-16

Abbreviations

TOC = Total Organic Compounds

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

MTBE = Methyl tert butyl ether

Appendix A: Emissions Calculations

Hot Oil System

Uncontrolled/Unlimited Emissions

Company Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Permit Number: 063-27273-03154
Reviewer: Brian Williams

The following calculations determine the unlimited/uncontrolled fugitive emissions from heating of the oil used in the hot oil heating system.

Maximum Fuel Input Rate To Hot Oil Heater = 2.2 MMBtu/hr
 Equivalent Natural Gas Usage = 19.3 MMCF/yr
 Equivalent No. 2 Fuel Oil Usage = 137,657 gal/yr, and

Criteria Pollutant	Emission Factors		Unlimited/Uncontrolled Potential to Emit (tons/yr)		Worse Case PTE
	Natural Gas (lb/ft ³)	No. 2 Fuel Oil (lb/gal)	Natural Gas	No. 2 Fuel Oil	
VOC	2.60E-08	2.65E-05	2.51E-04	0.002	0.002
CO	8.90E-06	0.0012	0.086	0.083	0.086
Hazardous Air Pollutant					
Formaldehyde:	2.60E-08	3.50E-06	2.51E-04	2.41E-04	2.51E-04
Acenaphthene		5.30E-07		3.65E-05	3.65E-05
Acenaphthylene		2.00E-07		1.38E-05	1.38E-05
Anthracene		1.80E-07		1.24E-05	1.24E-05
Benzo(b)fluoranthene		1.00E-07		6.88E-06	6.88E-06
Fluoranthene		4.40E-08		3.03E-06	3.03E-06
Fluorene		3.20E-08		2.20E-06	2.20E-06
Naphthalene		1.70E-05		1.17E-03	1.17E-03
Phenanthrene		4.90E-06		3.37E-04	3.37E-04
Pyrene		3.20E-08		2.20E-06	2.20E-06

Total HAPs 1.83E-03
Worst Single HAP 1.17E-03 (Naphthalene)

Methodology

Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]

Equivalent No. 2 Fuel Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]

Natural Gas: Potential to Emit (tons/yr) = (Natural Gas Usage (MMCF/yr))*(Emission Factor (lb/CF))*(1000000 CF/MMCF)*(ton/2000 lbs)

No. 2 Fuel Oil: Potential to Emit (tons/yr) = (No. 2 Fuel Oil Usage (gals/yr))*(Emission Factor (lb/gal))*(ton/2000 lbs)

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

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Table 11.1-13

*Note: Emissions associated with fuel combustion in the hot oil heater are included in the fuel combustion calculations. Emissions (withdrawal and standing losses) associated with all volatile organic liquid (VOL) storage vessels are not included in the table above.

Abbreviations

CO = Carbon Monoxide

VOC = Volatile Organic Compound

Appendix A: Emissions Calculations

Material Storage Piles

Uncontrolled/Unlimited Emissions

Company Name: Milestone Contractors, L.P.

Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168

Permit Number: 063-27273-03154

Reviewer: Brian Williams

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

$$E_f = 1.7 \cdot (s/1.5) \cdot (365-p)/235 \cdot (f/15)$$

where E_f = emission factor (lb/acre/day)
 s = silt content (wt %)
 p = 125 days of rain greater than or equal to 0.01 inches
 f = 15% of wind greater than or equal to 12 mph

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10 (tons/yr)
Sand	1.2	1.39	1.00	0.254	0.089
RAP	0.2	0.23	1.02	0.043	0.015
Gravel	1.1	1.27	1.17	0.272	0.095
Slag	0.9	1.04	0.40	0.076	0.027
Totals				0.65	0.23

Methodology

PTE of PM (tons/yr) = (Emission Factor (lb/acre/day)) * (Maximum Pile Size (acres)) * (ton/2000 lbs) * (8760 hours/yr)

PTE of PM10 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%

*Silt content values obtained from AP-42 Table 13.2.4-1 (dated 1/95)

**Maximum pile size (acres) anticipated for a source with an annual asphalt production of 3,504,000 tons/yr

Abbreviations

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

PM2.5 = PM10

PTE = Potential to Emit

**Appendix A: Emissions Calculations
Material Processing and Handling
Fugitive Dust**

Company Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Permit Number: 063-27273-03154
Reviewer: Brian Williams

Batch or Continuous Drop Operations (AP-42 Section 13.2.4)

To estimate potential fugitive dust emissions from processing and handling of raw materials (batch or continuous drop operations), AP-42 emission factors for Aggregate Handling, Section 13.2.4 (fifth edition, 1/95) are utilized.

$$E_f = k \cdot (0.0032)^M \cdot [(U/5)^{1.3} / (M/2)^{1.4}]$$

where: E_f = Emission factor (lb/ton)

k (PM) = 0.74	= particle size multiplier (0.74 assumed for aerodynamic diameter ≤ 100 μm)
k (PM10) = 0.35	= particle size multiplier (0.35 assumed for aerodynamic diameter ≤ 10 μm)
k (PM2.5) = 0.053	= particle size multiplier (0.053 assumed for aerodynamic diameter ≤ 2.5 μm)
U = 10.2	= worst case annual mean wind speed (Source: NOAA, 2006*)
M = 4.0	= material % moisture content of aggregate (Source: AP-42 Section 11.1.1.1)
E_f (PM) = 2.27E-03	lb PM/ton of material handled
E_f (PM10) = 1.07E-03	lb PM10/ton of material handled
E_f (PM2.5) = 1.62E-04	lb PM2.5/ton of material handled

Maximum Annual Asphalt Production = 3,504,000 tons/yr
 Percent Asphalt Cement/Binder (weight %) = 5.0%
 Maximum Material Handling Throughput = 3,328,800 tons/yr

Type of Activity	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM10 (tons/yr)	Unlimited/Uncontrolled PTE of PM2.5 (tons/yr)
Truck unloading of materials into storage piles	3.77	1.78	0.27
Front-end loader dumping of materials into feeder bins	3.77	1.78	0.27
Conveyor dropping material into dryer/mixer or batch tower	3.77	1.78	0.27
Total (tons/yr)	11.32	5.35	0.81

Methodology

Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
 Limited Potential to Emit (tons/yr) = (Maximum Material Handling Throughput (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
 Raw materials may include limestone, sand, recycled asphalt pavement (RAP), gravel, slag, and other additives
 *Worst case annual mean wind speed (Indianapolis, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2006

Material Screening and Conveying (AP-42 Section 11.19.2)

To estimate potential fugitive dust emissions from raw material crushing, screening, and conveying, AP-42 emission factors for Crushed Stone Processing Operations, Section 11.19.2 (dated 8/04) are utilized.

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM10 (lbs/ton)*	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM10 (tons/yr) ¹
Crushing	0.0054	0.0024	8.99	3.99
Screening	0.025	0.0087	41.61	14.48
Conveying	0.003	0.0011	4.99	1.83
Unlimited Potential to Emit (tons/yr) =			55.59	20.31

Methodology

Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
 Limited Potential to Emit (tons/yr) = [Maximum Material Handling Throughput (tons/yr)] * [Emission Factor (lb/ton)] * [ton/2000 lbs]
 Raw materials may include stone/gravel, slag, and recycled asphalt pavement (RAP)
 Emission Factors from AP-42 Chapter 11.19.2 (dated 8/04), Table 11.19.2-2

*Uncontrolled emissions factors for PM/PM10 represent tertiary crushing of stone with moisture content ranging from 0.21 to 1.3 percent by weight (Table 11.19.2-2). The bulk moisture content of aggregate in the storage piles at a hot mix asphalt production plant typically stabilizes between 3 to 5 percent by weight (Source: AP-42 Section 11.1.1.1).

¹Assumes PM10 = PM2.5

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 μm)
 PM2.5 = Particulate matter (< 2.5 μm)
 PTE = Potential to Emit

**Appendix A: Emissions Calculations
Fugitive Dust Emissions - Unpaved Roads**

Company Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Permit Number: 063-27273-03154
Reviewer: Brian Williams

Unpaved Roads at Industrial Site

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).

Maximum Annual Asphalt Production	3,504,000	tons/yr
Percent Asphalt Cement/Binder (weight %)	5.0%	
Maximum Material Handling Throughput	3,328,800	tons/yr
Maximum Asphalt Cement/Binder Throughput	175,200	tons/yr
Maximum No. 2 Fuel Oil Usage	7,696,286	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.4	1.5E+05	5.9E+06	401	0.076	11294.1
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	1.5E+05	2.5E+06	401	0.076	11294.1
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	4.9E+03	2.3E+05	300	0.057	276.5
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	4.9E+03	5.8E+04	300	0.057	276.5
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	8.1E+02	3.6E+04	300	0.057	46.2
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	8.1E+02	9.8E+03	300	0.057	46.2
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	7.9E+05	1.5E+07	375	0.071	56272.6
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	7.9E+05	1.2E+07	375	0.071	56272.6
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.0	1.5E+05	6.0E+06	300	0.057	8295.5
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.0	1.5E+05	2.5E+06	300	0.057	8295.5
Total						4.4E+07			1.5E+05

Average Vehicle Weight Per Trip	20.3	tons/trip
Average Miles Per Trip	0.070	miles/trip

Unmitigated Emission Factor, $E_f = k \cdot [(s/12)^a] \cdot [(W/3)^b]$ (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
W =	20.3	20.3	20.3	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, $E_{ext} = E \cdot [(365 - P)/365]$

Mitigated Emission Factor, $E_{ext} = E \cdot [(365 - P)/365]$	
where P =	125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, E_f	6.09	1.55	0.16	lb/mile
Mitigated Emission Factor, E_{ext}	4.01	1.02	0.10	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	34.42	8.77	0.88	22.63	5.77	0.58	11.32	2.88	0.29
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	34.42	8.77	0.88	22.63	5.77	0.58	11.32	2.88	0.29
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.843	0.215	0.02	0.554	0.141	0.01	0.277	0.071	0.01
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.843	0.215	0.02	0.554	0.141	0.01	0.277	0.071	0.01
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.141	0.036	0.00	0.093	0.024	0.00	0.046	0.012	0.00
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.141	0.036	0.00	0.093	0.024	0.00	0.046	0.012	0.00
Aggregate/RAP Loader Full	Front-end loader (3 CY)	171.49	43.71	4.37	112.76	28.74	2.87	56.38	14.37	1.44
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	171.49	43.71	4.37	112.76	28.74	2.87	56.38	14.37	1.44
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	25.28	6.44	0.64	16.62	4.24	0.42	8.31	2.12	0.21
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	25.28	6.44	0.64	16.62	4.24	0.42	8.31	2.12	0.21
Totals		464.34	118.34	11.83	305.32	77.81	7.78	152.66	38.91	3.89

Methodology

Maximum Material Handling Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
 Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]
 Maximum Weight of Vehicle and Load (tons/trip) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip)]
 Maximum trips per year (trip/yr) = [Throughput (tons/yr)] / [Maximum Weight of Load (tons/trip)]
 Total Weight driven per year (ton/yr) = [Maximum Weight of Vehicle and Load (tons/trip)] * [Maximum trips per year (trip/yr)]
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]
 Maximum one-way miles (miles/yr) = [Maximum trips per year (trip/yr)] * [Maximum one-way distance (mi/trip)]
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]
 Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
 Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
 Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 PM2.5 = Particulate Matter (<2.5 um)
 PM2.5 = PM10
 PTE = Potential to Emit

**Appendix A: Emissions Calculations
Fugitive Dust Emissions - Paved Roads**

Company Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Permit Number: 063-27273-03154
Reviewer: Brian Williams

Paved Roads at Industrial Site

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (12/2003).

Maximum Annual Asphalt Production	= 3,504,000	tons/yr
Percent Asphalt Cement/Binder (weight %)	= 5.0%	
Maximum Material Handling Throughput	= 3,328,800	tons/yr
Maximum Asphalt Cement/Binder Throughput	= 175,200	tons/yr
Maximum No. 2 Fuel Oil Usage	= 7,696,288	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per day (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.40	1.5E+05	5.9E+06	300	0.057	8443.6
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.00	1.5E+05	2.5E+06	300	0.057	8443.6
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.00	4.9E+03	2.3E+05	300	0.057	276.5
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	4.9E+03	5.8E+04	300	0.057	276.5
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.00	8.1E+02	3.6E+04	300	0.057	46.2
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	8.1E+02	9.8E+03	300	0.057	46.2
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.20	7.9E+05	1.5E+07	300	0.057	45032.5
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	7.9E+05	1.2E+07	300	0.057	45032.5
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.00	1.5E+05	6.0E+06	300	0.057	8295.5
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.00	1.5E+05	2.5E+06	300	0.057	8295.5
Total					2.2E+06	4.4E+07			1.2E+05

Average Vehicle Weight Per Trip	= 20.3	tons/trip
Average Miles Per Trip	= 0.057	miles/trip

Unmitigated Emission Factor, Ef = [k * (sL/2)^0.65 * (W/3)^1.5 - C] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5
where k =	0.082	0.016	0.0024
W =	20.3	20.3	20.3
C =	0.00047	0.00047	0.00036
sL =	0.6	0.6	0.6

lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)

tons = average vehicle weight (provided by source)

lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)

g/m² = Ubiquitous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)]

Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]

where p =	125	days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N =	365	days per year

	PM	PM10	PM2.5	lb/mile
Unmitigated Emission Factor, Ef	0.66	0.13	0.02	lb/mile
Mitigated Emission Factor, Eext	0.60	0.12	0.02	lb/mile
Dust Control Efficiency	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	2.78	0.54	0.08	2.54	0.49	0.07	1.27	0.25	0.04
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	2.78	0.54	0.08	2.54	0.49	0.07	1.27	0.25	0.04
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.091	0.018	2.6E-03	0.083	0.016	2.4E-03	0.042	8.1E-03	1.2E-03
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.091	0.018	2.6E-03	0.083	0.016	2.4E-03	0.042	8.1E-03	1.2E-03
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	1.5E-02	3.0E-03	4.4E-04	1.4E-02	2.7E-03	4.0E-04	6.9E-03	1.4E-03	2.0E-04
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	1.5E-02	3.0E-03	4.4E-04	1.4E-02	2.7E-03	4.0E-04	6.9E-03	1.4E-03	2.0E-04
Aggregate/RAP Loader Full	Front-end loader (3 CY)	14.81	2.88	0.43	13.54	2.63	0.39	6.77	1.32	0.19
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	14.81	2.88	0.43	13.54	2.63	0.39	6.77	1.32	0.19
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	2.73	0.53	0.08	2.49	0.49	0.07	1.25	0.24	0.04
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	2.73	0.53	0.08	2.49	0.49	0.07	1.25	0.24	0.04
Totals		40.84	7.95	1.17	37.35	7.27	1.07	18.67	3.63	0.54

Methodology

Maximum Material Handling Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
 Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]
 Maximum Weight of Vehicle and Load (tons/trip) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip)]
 Maximum trips per year (trip/yr) = [Throughput (tons/yr)] / [Maximum Weight of Load (tons/trip)]
 Total Weight driven per year (ton/yr) = [Maximum Weight of Vehicle and Load (tons/trip)] * [Maximum trips per year (trip/yr)]
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]
 Maximum one-way miles (miles/yr) = [Maximum trips per year (trip/yr)] * [Maximum one-way distance (mi/trip)]
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]
 Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
 Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
 Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 PM2.5 = Particulate Matter (<2.5 um)
 PM2.5 = PM10
 PTE = Potential to Emit

**Appendix A: Emissions Calculations
Cold Mix Asphalt Production and Stockpiles**

Company Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Permit Number: 063-27273-03154
Reviewer: Brian Williams

The following calculations determine the amount of VOC and HAP emissions created from volatilization of solvent used as diluent in the liquid binder for cold mix asphalt production

Maximum Annual Asphalt Production = 3,504,000 tons/yr
 Percent Asphalt Cement/Binder (weight %) = 7.0%
 Maximum Asphalt Cement/Binder Throughput = 245,280 tons/yr

Volatile Organic Compounds

	Maximum weight % of VOC solvent in binder	Weight % VOC solvent in binder that evaporates	Maximum VOC Solvent Usage (tons/yr)	PTE of VOC (tons/yr)
Cut back asphalt rapid cure (assuming gasoline or naphtha solvent)	0.0%	0.0%	0.0	0.0
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	70150.1	49105.1
Cut back asphalt slow cure (assuming fuel oil solvent)	0.0%	0.0%	0.0	0.0
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	0.0%	0.0%	0.0	0.0
Other asphalt with solvent binder	0.0%	0.0%	0.0	0.0
Worst Case PTE of VOC =				49105.1

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0% Xylenes
PTE of Total HAPs (tons/yr) = 12808.42	
PTE of Single HAP (tons/yr) = 4419.46 Xylenes	

Hazardous Air Pollutant (HAP) Content (% by weight) For Various Petroleum Solvents*

	CAS#	Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents				
		Gasoline	Kerosene	Diesel (#2) Fuel Oil	No. 2 Fuel Oil	No. 6 Fuel Oil
Volatlie Organic HAP						
1,3-Butadiene	106-99-0	3.70E-5%				
2,2,4-Trimethylpentane	540-84-1	2.40%				
Acenaphthene	83-32-9		4.70E-5%		1.80E-4%	
Acenaphthylene	208-96-8		4.50E-5%		6.00E-5%	
Anthracene	120-12-7		1.20E-6%	5.80E-5%	2.80E-5%	5.00E-5%
Benzene	71-43-2	1.90%		2.90E-4%		
Benzo(a)anthracene	56-55-3			9.60E-7%	4.50E-7%	5.50E-4%
Benzo(a)pyrene	50-32-8			2.20E-6%	2.10E-7%	4.40E-5%
Benzo(g,h,i)perylene	191-24-2			1.20E-7%	5.70E-8%	
Biphenyl	92-52-4			6.30E-4%	7.20E-5%	
Chrysene	218-01-9			4.50E-7%	1.40E-6%	6.90E-4%
Ethylbenzene	100-41-4	1.70%		0.07%	3.40E-4%	
Fluoranthene	206-44-0		7.10E-6%	5.90E-5%	1.40E-5%	2.40E-4%
Fluorene	86-73-7		4.20E-5%	8.60E-4%	1.90E-4%	
Indeno(1,2,3-cd)pyrene	193-39-5			1.60E-7%		1.00E-4%
Methyl-tert-butylether	1634-04-4	0.33%				
Naphthalene	91-20-3	0.25%	0.31%	0.26%	0.22%	4.20E-5%
n-Hexane	110-54-3	2.40%				
Phenanthrene	85-01-8		8.60E-6%	8.80E-4%	7.90E-4%	2.10E-4%
Pyrene	129-00-0		2.40E-6%	4.60E-5%	2.90E-5%	2.30E-5%
Toluene	108-88-3	8.10%		0.18%	6.20E-4%	
Total Xylenes	1330-20-7	9.00%		0.50%	0.23%	
Total Organic HAPs		26.08%	0.33%	1.29%	0.68%	0.19%
Worst Single HAP		9.00%	0.31%	0.50%	0.23%	0.07%
		Xylenes	Naphthalene	Xylenes	Xylenes	Chrysene

Methodology

Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]
 Maximum VOC Solvent Usage (tons/yr) = [Maximum Asphalt Cement/Binder Throughput (tons/yr)] * [Maximum Weight % of VOC Solvent in Binder]
 PTE of VOC (tons/yr) = [Weight % VOC solvent in binder that evaporates] * [Maximum VOC Solvent Usage (tons/yr)]
 PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]
 PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]

*Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Composition of Petroleum Mixtures. The Association for Environmental Health and Science. Available on the Internet at: <http://www.aehs.com/publications/catalog/contents/tph.htm>

Abbreviations

VOC = Volatile Organic Compounds
 PTE = Potential to Emit

**Appendix A: Emissions Calculations
Limited Emission Summary**

Company Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Permit Number: 063-27273-03154
Reviewer: Brian Williams

Asphalt Plant Limitations

Annual Asphalt Production Limitation	=	995,000	ton/yr
Natural Gas Limitation	=	990.00	MMCF/yr
No. 2 Fuel Oil Limitation	=	2,148,790	gal/yr, and
Used/Waste Oil Limitation	=	1,400,000	gal/yr, and
		0.50	% sulfur
		0.75	% sulfur
		1.02	% ash
		0.200	% chlorine,
		0.010	% lead
PM Dryer/Mixer Limitation	=	0.380	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation	=	0.160	lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation	=	0.176	lb/ton of asphalt production
CO Dryer/Mixer Limitation	=	0.130	lb/ton of asphalt production
VOC Dryer/Mixer Limitation	=	0.032	lb/ton of asphalt production
Cold Mix Asphalt VOC Usage Limitation	=	53	tons/yr

Limited/Controlled Emissions

Process Description	Limited/Controlled Potential Emissions (tons/year)									
	Criteria Pollutants							Hazardous Air Pollutants		
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Case HAP	
Ducted Emissions										
Fuel Combustion (worst case)	45.70	36.41	36.41	84.34	94.05	2.72	41.58	10.78	9.24	(hydrogen chloride)
Dryer/Mixer	189.05	79.60	87.33	28.86	27.36	15.92	64.68	5.30	1.54	(formaldehyde)
Worst Case Emissions	189.05	79.60	87.33	84.34	94.05	15.92	64.68	10.78	9.24	(hydrogen chloride)
Fugitive Emissions										
Asphalt Load-Out, Silo Filling, On-Site Yard	0.55	0.55	0.55	0	0	8.52	1.43	0.14	0.04	(formaldehyde)
Hot Oil System	0	0	0	0	0	1.8E-03	0.09	1.8E-03	1.2E-03	(naphthalene)
Material Storage Piles	0.65	0.23	0.23	0	0	0	0	0	0	
Material Processing and Handling	3.21	1.52	0.23	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	15.79	5.77	5.77	0	0	0	0	0	0	
Paved and Unpaved Roads (worst case)	35.33	9.00	0.90	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	0	53.00	0	13.82	4.77	(xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	0.00	0	0.00	0.00	
Total Fugitive Emissions	55.53	17.07	7.67	0	0	61.52	1.52	13.97	4.77	(xylenes)
Totals Limited/Controlled Emissions	244.58	96.67	95.00	84.34	94.05	77.44	66.19	24.74	9.24	(hydrogen chloride)

Appendix A: Emissions Calculations
Limited Emissions
Dryer/Mixer Fuel Combustion with Maximum Capacity > 100 MMBtu/hr

Company Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Permit Number: 063-27273-03154
Reviewer: Brian Williams

The following calculations determine the limited emissions created from the combustion of natural gas, fuel oil, propane, butane, or used/waste oil in the dryer/mixer and all other fuel combustion sources at the source.

Production and Fuel Limitations

Annual Asphalt Production Limitation =	995,000	ton/yr
Natural Gas Limitation =	990	MMCF/yr
No. 2 Fuel Oil Limitation =	2,148,790	gal/yr, and
Used/Waste Oil Limitation =	1,400,000	gal/yr, and
	0.50	% sulfur
	0.75	% sulfur
	1.02	% ash
	0.200	% chlorine
	0.010	% lead

Limited Emissions

Criteria Pollutant	Emission Factor (units)								Limited Potential to Emit (tons/yr)								Worse Case Fuel (tons/yr)
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/Waste Oil (lb/kgal)	Diesel Engine (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/Waste Oil (tons/yr)	Diesel Engine (tons/yr)	
PM	1.9	2	7	3.22	0.6	0.6	65.28	43.4	0.94	2.15	0.00	0.00	0.000	0.000	45.70	0.00	45.696
PM10	7.6	3.3	8.3	4.72	0.6	0.6	52.02	43.4	3.76	3.55	0.00	0.00	0.000	0.000	36.41	0.00	36.41
SO2	0.6	78.5	0.0	0.0	0.000	0.000	110.3	40.6	0.30	84.34	0.00	0.00	0.000	0.000	77.18	0.00	84.34
NOx	190	24.0	47.0	47.0	19.0	21.0	19.0	617.4	94.05	25.79	0.00	0.00	0.00	0.00	13.30	0.00	94.05
VOC	5.5	0.20	0.20	0.28	0.50	0.60	1.0	49.00	2.72	0.21	0.00	0.00	0.00	0.00	0.70	0.00	2.72
CO	84	5.0	5.0	5.0	3.2	3.6	5.0	133.0	41.58	5.37	0.00	0.00	0.00	0.00	3.50	0.00	41.58
Hazardous Air Pollutant																	
HCl							13.2								9.24		9.24
Antimony			5.25E-03	5.25E-03							0.00E+00	0.00E+00			negl		0.0E+00
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03			1.7E-01		9.9E-05	6.02E-04	0.00E+00	0.00E+00			7.70E-02		7.7E-02
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05			negl		5.9E-06	4.51E-04	0.00E+00	0.00E+00			negl		4.5E-04
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04			9.3E-03		5.4E-04	4.51E-04	0.00E+00	0.00E+00			6.51E-03		6.5E-03
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02		6.9E-04	4.51E-04	0.00E+00	0.00E+00			1.40E-02		1.4E-02
Cobalt	8.4E-05		6.02E-03	6.02E-03			2.1E-04		4.2E-05		0.00E+00	0.00E+00			1.47E-04		1.5E-04
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03			0.55		2.5E-04	1.35E-03	0.00E+00	0.00E+00			3.9E-01		0.39
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03			6.8E-02		1.9E-04	9.02E-04	0.00E+00	0.00E+00			4.76E-02		0.05
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04					1.3E-04	4.51E-04	0.00E+00	0.00E+00					4.5E-04
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02		1.0E-03	4.51E-04	0.00E+00	0.00E+00			7.70E-03		0.008
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl		1.2E-05	2.26E-03	0.00E+00	0.00E+00			negl		2.3E-03
1,1,1-Trichloroethane			2.36E-04	2.36E-04							0.00E+00	0.00E+00					0.0E+00
1,3-Butadiene							5.47E-03								0.00E+00		0.0E+00
Acetaldehyde							1.07E-01								0.00E+00		0.0E+00
Acrolein							1.30E-02								0.00E+00		0.0E+00
Benzene	2.1E-03		2.14E-04	2.14E-04			2.2E-03		1.0E-03		0.00E+00	0.00E+00					1.5E-03
Bis(2-ethylhexyl)phthalate							1.31E-01								1.54E-03		1.5E-03
Dichlorobenzene	1.2E-03						8.0E-07		5.9E-04						5.60E-07		5.9E-04
Ethylbenzene			6.36E-05	6.36E-05							0.00E+00	0.00E+00					0.0E+00
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				1.65E-01	3.7E-02	6.55E-02	0.00E+00	0.00E+00					0.066
Hexane	1.8E+00								0.89								0.891
Phenol							2.4E-03								1.68E-03		1.7E-03
Toluene	3.4E-03		6.20E-03	6.20E-03				5.73E-02	1.7E-03		0.00E+00	0.00E+00					0.00E+00
Total PAH Haps	negl		1.13E-03	1.13E-03			3.9E-02	2.35E-02	negl		0.00E+00	0.00E+00			2.74E-02		0.00E+00
Polycyclic Organic Matter		3.30E-03								3.55E-03							3.5E-03
Xylene			1.09E-04	1.09E-04				3.99E-02			0.00E+00	0.00E+00					0.00E+00
Total HAPs									0.93	0.08	0.00	0.00	0	0	9.81	0.00	10.78

Methodology

Natural Gas: Limited Potential to Emit (tons/yr) = (Natural Gas Limitation (MMCF/yr)) * (Emission Factor (lb/MMCF)) * (ton/2000 lbs)
 All Other Fuels: Limited Potential to Emit (tons/yr) = (Fuel Limitation (gals/yr)) * (Emission Factor (lb/kgal)) * (kgal/1000 gal) * (ton/2000 lbs)
 Sources of AP-42 Emission Factors for fuel combustion:
 Natural Gas: AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
 No. 2, No. 4, and No. 6 Fuel Oil: AP-42 Chapter 1.3 (dated 9/98), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11
 Propane and Butane: AP-42 Chapter 1.5 (dated 10/96), Tables 1.5-1 (assuming PM = PM10)
 Waste Oil: AP-42 Chapter 1.11 (dated 10/96), Tables 1.11-1, 1.11-2, 1.11-3, 1.11-4, and 1.11-5
 Diesel Engine Oil: AP-42 Chapter 3.3 (dated 10/96), Tables 3.3-1 and 3.3-2

*Since there are no specific AP-42 HAP emission factors for combustion of No. 4 fuel oil, it was assumed that HAP emissions from combustion of No. 4 fuel oil were equal to combustion of residual or No. 6 fuel oil.

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 SO2 = Sulfur Dioxide
 NOx = Nitrous Oxides
 VOC = Volatile Organic Compounds
 CO = Carbon Monoxide
 HAP = Hazardous Air Pollutant
 HCl = Hydrogen Chloride
 PAH = Polyaromatic Hydrocarbon

Appendix A: Emissions Calculations
Limited Emissions
Dryer/Mixer
Volatile Organic Compounds and Hazardous Air Pollutants

Company Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Permit Number: 063-27273-03154
Reviewer: Brian Williams

The following calculations determine the limited emissions from the aggregate drying/mixing

Annual Asphalt Production Limitation =	995,000	ton/yr
PM Dryer/Mixer Limitation =	0.380	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation =	0.160	lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation =	0.176	lb/ton of asphalt production
CO Dryer/Mixer Limitation =	0.130	lb/ton of asphalt production
VOC Dryer/Mixer Limitation =	0.032	lb/ton of asphalt production

Criteria Pollutant	Emission Factor or Limitation (lb/ton)			Limited/Controlled Potential to Emit (tons/yr)			Worse Case PTE
	Drum-Mix Plant (dryer/mixer, controlled by fabric filter)			Drum-Mix Plant (dryer/mixer, controlled by fabric filter)			
	Natural Gas	No. 2 Fuel Oil	No. 6 Fuel Oil or Waste Oil	Natural Gas	No. 2 Fuel Oil	No. 6 Fuel Oil or Waste Oil	
PM	0.38	0.38	0.38	189.1	189.1	189.1	189.1
PM10	0.16	0.16	0.16	79.6	79.6	79.6	79.6
PM2.5	0.176	0.176	0.176	87.3	87.3	87.3	87.3
SO2	0.0034	0.011	0.058	1.7	5.5	28.9	28.9
NOx	0.026	0.055	0.055	12.9	27.4	27.4	27.4
VOC	0.032	0.032	0.032	15.9	15.9	15.9	15.9
CO	0.13	0.13	0.13	64.7	64.7	64.7	64.7
Hazardous Air Pollutant							
HCl			2.10E-04			0.10	0.10
Antimony	1.80E-07	1.80E-07	1.80E-07	8.96E-05	8.96E-05	8.96E-05	8.96E-05
Arsenic	5.60E-07	5.60E-07	5.60E-07	2.79E-04	2.79E-04	2.79E-04	2.79E-04
Beryllium	negl	negl	negl	negl	negl	negl	0.00E+00
Cadmium	4.10E-07	4.10E-07	4.10E-07	2.04E-04	2.04E-04	2.04E-04	2.04E-04
Chromium	5.50E-06	5.50E-06	5.50E-06	2.74E-03	2.74E-03	2.74E-03	2.74E-03
Cobalt	2.60E-08	2.60E-08	2.60E-08	1.29E-05	1.29E-05	1.29E-05	1.29E-05
Lead	6.20E-07	1.50E-05	1.50E-05	3.08E-04	7.46E-03	7.46E-03	7.46E-03
Manganese	7.70E-06	7.70E-06	7.70E-06	3.83E-03	3.83E-03	3.83E-03	3.83E-03
Mercury	2.40E-07	2.60E-06	2.60E-06	1.19E-04	1.29E-03	1.29E-03	1.29E-03
Nickel	6.30E-05	6.30E-05	6.30E-05	3.13E-02	3.13E-02	3.13E-02	3.13E-02
Selenium	3.50E-07	3.50E-07	3.50E-07	1.74E-04	1.74E-04	1.74E-04	1.74E-04
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	1.99E-02	1.99E-02	1.99E-02	1.99E-02
Acetaldehyde			1.30E-03			0.65	0.65
Acrolein			2.60E-05			1.29E-02	1.29E-02
Benzene	3.90E-04	3.90E-04	3.90E-04	0.19	0.19	0.19	0.19
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0.12	0.12	0.12	0.12
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	1.54	1.54	1.54	1.54
Hexane	9.20E-04	9.20E-04	9.20E-04	0.46	0.46	0.46	0.46
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0.02	0.02	0.02	0.02
MEK			2.00E-05			0.01	0.01
Propionaldehyde			1.30E-04			0.06	0.06
Quinone			1.60E-04			0.08	0.08
Toluene	1.50E-04	2.90E-03	2.90E-03	0.07	1.44	1.44	1.44
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0.09	0.44	0.44	0.44
Xylene	2.00E-04	2.00E-04	2.00E-04	0.10	0.10	0.10	0.10

Total HAPs 5.30

Methodology Worst Single HAP 1.54225 (formaldehyde)

Limited/Controlled Potential to Emit (tons/yr) = (Annual Asphalt Production Limitation (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-3, 11.1-7, 11.1-8, 11.1-10, and 11.1-12

Abbreviations

VOC - Volatile Organic Compounds

HCl = Hydrogen Chloride

SO2 = Sulfur Dioxide

HAP = Hazardous Air Pollutant

PAH = Polycyclic Aromatic Hydrocarbon

**Appendix A: Emissions Calculations
Limited Emissions
Load-Out, Silo Filling, and Yard Emissions**

Company Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Permit Number: 063-27273-03154
Reviewer: Brian Williams

The following calculations determine the limited fugitive emissions from hot asphalt mix load-out, silo filling, and on-site yard for a batch mix hot mix asphalt plant

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.5	
Annual Asphalt Production Limitation =	995,000	tons/yr

Pollutant	Emission Factor (lb/ton asphalt)			Limited Potential to Emit (tons/yr)			
	Load-Out	Silo Filling	On-Site Yard	Load-Out	Silo Filling	On-Site Yard	Total
Total PM	5.2E-04	5.9E-04	NA	0.26	0.29	NA	0.55
Organic PM	3.4E-04	2.5E-04	NA	0.17	0.126	NA	0.30
TOC	0.004	0.012	0.001	2.07	6.06	0.547	8.7
CO	0.001	0.001	3.5E-04	0.67	0.587	0.175	1.43

NA = Not Applicable (no AP-42 Emission Factor)

PM/HAPs	0.012	0.014	0	0.026
VOC/HAPs	0.031	0.077	0.008	0.116
non-VOC/HAPs	1.6E-04	1.6E-05	4.2E-05	2.2E-04
non-VOC/non-HAPs	0.15	0.09	0.04	0.28

Total VOCs	1.94	6.06	0.5	8.5
Total HAPs	0.04	0.09	0.008	0.14
Worst Single HAP				0.044
				(formaldehyde)

Methodology

Limited Potential to Emit (tons/yr) = (Annual Asphalt Production Limitation (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-14, 11.1-15, and 11.1-16

Plant Load-Out Emission Factor Equations (AP-42 Table 11.1-14)::

Total PM/PM10 Ef = 0.000181 + 0.00141(-V)e[^]((0.0251)(T+460)-20.43)

Organic PM Ef = 0.00141(-V)e[^]((0.0251)(T+460)-20.43)

TOC Ef = 0.0172(-V)e[^]((0.0251)(T+460)-20.43)

CO Ef = 0.00558(-V)e[^]((0.0251)(T+460)-20.43)

Silo Filling Emission Factor Equations (AP-42 Table 11.1-14):

PM/PM10 Ef = 0.000332 + 0.00105(-V)e[^]((0.0251)(T+460)-20.43)

Organic PM Ef = 0.00105(-V)e[^]((0.0251)(T+460)-20.43)

TOC Ef = 0.0504(-V)e[^]((0.0251)(T+460)-20.43)

CO Ef = 0.00488(-V)e[^]((0.0251)(T+460)-20.43)

On Site Yard CO emissions estimated by multiplying the TOC emissions by 0.32

Abbreviations

TOC = Total Organic Compounds

CO = Carbon Monoxide

PM = Particulate Matter

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

Appendix A: Emissions Calculations
Limited Emissions
Load-Out, Silo Filling, and Yard Emissions (continued)

Company Name: Milestone Contractors, L.P.
 Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
 Permit Number: 063-27273-03154
 Reviewer: Brian Williams

Organic Particulate-Based Compounds (Table 11.1-15)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Limited Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of Total Organic PM)	Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)	Load-out	Silo Filling	Onsite Yard	Total
PAH HAPs										
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	0.47%	4.4E-04	5.9E-04	NA	1.0E-03
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	4.7E-05	1.8E-05	NA	6.5E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	1.2E-04	1.6E-04	NA	2.8E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	3.2E-05	7.1E-05	NA	1.0E-04
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	1.3E-05	0	NA	1.3E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	3.7E-06	0	NA	3.7E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	3.2E-06	0	NA	3.2E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	3.9E-06	0	NA	3.9E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	1.3E-05	1.2E-05	NA	2.5E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	1.7E-04	2.7E-04	NA	4.4E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	6.3E-07	0	NA	6.3E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	8.5E-05	1.9E-04	NA	2.7E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	1.3E-03	1.3E-03	NA	2.6E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	8.0E-07	0	NA	8.0E-07
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	4.0E-03	6.7E-03	NA	0.011
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	2.1E-03	2.3E-03	NA	4.4E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	3.7E-05	3.8E-05	NA	7.5E-05
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	1.4E-03	2.3E-03	NA	3.6E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	2.5E-04	5.6E-04	NA	8.1E-04
Total PAH HAPs							0.010	0.014	NA	0.024
Other semi-volatile HAPs										
Phenol		PM/HAP	---	Organic PM	1.18%	0	2.0E-03	0	0	2.0E-03

NA = Not Applicable (no AP-42 Emission Factor)

Methodology

Limited Potential to Emit (tons/yr) = [Speciation Profile (%)] * [Organic PM (tons/yr)]

Speciation Profiles from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-15 and 11.1-16

Abbreviations

PM = Particulate Matter
 HAP = Hazardous Air Pollutant
 POM = Polycyclic Organic Matter

Appendix A: General Asphalt FESOP Emissions Calculations
Limited Emissions
Load-Out, Silo Filling, and Yard Emissions (continued)

Organic Volatile-Based Compounds (Table 11.1-16)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Limited Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of TOC)	Silo Filling and Asphalt Storage Tank (% by weight of TOC)	Load-out	Silo Filling	Onsite Yard	Total
VOC		VOC	---	TOC	94%	100%	1.94	6.06	0.51	8.52
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	1.3E-01	1.6E-02	3.6E-02	0.186
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	9.5E-04	3.3E-03	2.5E-04	0.005
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	1.5E-02	6.7E-02	3.9E-03	0.085
Total non-VOC/non-HAPS					7.30%	1.40%	0.151	0.085	0.040	0.28
Volatile organic HAPS										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	1.1E-03	1.9E-03	2.8E-04	3.3E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	2.0E-04	3.0E-04	5.3E-05	5.5E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	1.0E-03	2.4E-03	2.7E-04	3.6E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	2.7E-04	9.7E-04	7.1E-05	1.3E-03
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	4.3E-06	2.4E-04	1.1E-06	2.5E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	3.1E-04	1.4E-03	8.2E-05	1.8E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	2.3E-03	0	6.0E-04	2.9E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	5.8E-03	2.3E-03	1.5E-03	0.010
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	1.8E-03	4.2E-02	4.8E-04	0.044
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	3.1E-03	6.1E-03	8.2E-04	0.010
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	3.7E-05	1.9E-05	9.9E-06	6.6E-05
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	1.6E-05	0	1.6E-05
MTBE	1634-04-4	VOC/HAP	---	TOC	0	0	0	0	0	0
Styrene	100-42-5	VOC/HAP	---	TOC	0.0073%	0.0054%	1.5E-04	3.3E-04	4.0E-05	5.2E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	1.6E-04	0	4.2E-05	2.0E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	4.3E-03	3.8E-03	1.1E-03	0.009
1,1,1-Trichloroethane	71-55-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichloroethene	79-01-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichlorofluoromethane	75-69-4	VOC/HAP	---	TOC	0.0013%	0	2.7E-05	0	7.1E-06	3.4E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	8.5E-03	1.2E-02	2.2E-03	0.023
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	1.7E-03	3.5E-03	4.4E-04	5.5E-03
Total volatile organic HAPS					1.50%	1.30%	0.031	0.079	0.008	0.118

Methodology

Limited Potential to Emit (tons/yr) = [Speciation Profile (%)] * [TOC (tons/yr)]
 Speciation Profiles from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-15 and 11.1-16

Abbreviations

TOC = Total Organic Compounds
 HAP = Hazardous Air Pollutant
 VOC = Volatile Organic Compound
 MTBE = Methyl tert butyl ether

Appendix A: Emissions Calculations

**Limited Emissions
Fugitive Dust Emissions - Material Processing and Handling**

Company Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Permit Number: 063-27273-03154
Reviewer: Brian Williams

Batch or Continuous Drop Operations (AP-42 Section 13.2.4)

To estimate potential fugitive dust emissions from processing and handling of raw materials (batch or continuous drop operations), AP-42 emission factors for Aggregate Handling, Section 13.2.4 (fifth edition, 1/95) are utilized.

$$E_f = k \cdot (0.0032)^k \cdot (U/5)^{1.3} / (M/2)^{1.4}$$

where: E_f = Emission factor (lb/ton)

k (PM) =	0.74	= particle size multiplier (0.74 assumed for aerodynamic diameter <=100 um)
k (PM10) =	0.35	= particle size multiplier (0.35 assumed for aerodynamic diameter <=10 um)
k (PM2.5) =	0.053	= particle size multiplier (0.053 assumed for aerodynamic diameter <=2.5 um)
U =	10.2	= worst case annual mean wind speed (Source: NOAA, 2006*)
M =	4.0	= material % moisture content of aggregate (Source: AP-42 Section 11.1.1.1)
E_f (PM) =	2.27E-03	lb PM/ton of material handled
E_f (PM10) =	1.07E-03	lb PM10/ton of material handled
E_f (PM2.5) =	1.62E-04	lb PM2.5/ton of material handled

Annual Asphalt Production Limitation =	995,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	945,250	tons/yr

Type of Activity	Limited PTE of PM (tons/yr)	Limited PTE of PM10 (tons/yr)	Limited PTE of PM2.5 (tons/yr)
Truck unloading of materials into storage piles	1.07	0.51	0.08
Front-end loader dumping of materials into feeder bins	1.07	0.51	0.08
Conveyor dropping material into dryer/mixer or batch tower	1.07	0.51	0.08
Total (tons/yr)	3.21	1.52	0.23

Methodology

Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
 Limited Potential to Emit (tons/yr) = (Maximum Material Handling Throughput (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
 Raw materials may include limestone, sand, recycled asphalt pavement (RAP), gravel, slag, and other additives
 *Worst case annual mean wind speed (Indianapolis, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2006

Material Screening and Conveying (AP-42 Section 19.2.2)

To estimate potential fugitive dust emissions from raw material crushing, screening, and conveying, AP-42 emission factors for Crushed Stone Processing Operations, Section 19.2.2 (dated 8/04) are utilized.

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM10 (lbs/ton)*	Limited PTE of PM (tons/yr)	Limited PTE of PM10 (tons/yr)
Crushing	0.0054	0.0024	2.55	1.13
Screening	0.025	0.0087	11.82	4.11
Conveying	0.003	0.0011	1.42	0.52
Limited Potential to Emit (tons/yr) =			15.79	5.77

Methodology

Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
 Limited Potential to Emit (tons/yr) = [Maximum Material Handling Throughput (tons/yr)] * [Emission Factor (lb/ton)] * [ton/2000 lbs]
 Raw materials may include stone/gravel, slag, and recycled asphalt pavement (RAP)
 Emission Factors from AP-42 Chapter 11.19.2 (dated 8/04), Table 11.19.2-2
 *Uncontrolled emissions factors for PM/PM10 represent tertiary crushing of stone with moisture content ranging from 0.21 to 1.3 percent by weight (Table 11.19.2-2). The bulk moisture content of aggregate in the storage piles at a hot mix asphalt production plant typically stabilizes between 3 to 5 percent by weight (Source: AP-42 Section 11.1.1.1).

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 PM2.5 = Particulate Matter (<2.5 um)
 PTE = Potential to Emit

**Appendix A: Emissions Calculations
Limited Emissions
Fugitive Dust Emissions - Unpaved Roads**

Company Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Permit Number: 063-27273-03154
Reviewer: Brian Williams

Unpaved Roads at Industrial Site

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).

Annual Asphalt Production Limitation	995,000	tons/yr
Percent Asphalt Cement/Binder (weight %)	5.0%	
Maximum Material Handling Throughput	945,250	tons/yr
Maximum Asphalt Cement/Binder Throughput	49,750	tons/yr
No. 2 Fuel Oil Limitation	2,148,790	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.4	4.2E+04	1.7E+06	300	0.057	2397.7
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	4.2E+04	7.2E+05	300	0.057	2397.7
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	1.4E+03	6.6E+04	300	0.057	78.5
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	1.4E+03	1.7E+04	300	0.057	78.5
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	2.3E+02	1.0E+04	300	0.057	12.9
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	2.3E+02	2.7E+03	300	0.057	12.9
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	2.3E+05	4.3E+06	300	0.057	12787.5
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	2.3E+05	3.4E+06	300	0.057	12787.5
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.0	4.1E+04	1.7E+06	300	0.057	2355.6
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.0	4.1E+04	7.0E+05	300	0.057	2355.6
Total					6.2E+05	1.3E+07			3.5E+04

Average Vehicle Weight Per Trip = $\frac{20.3}{0.057}$ tons/trip
Average Miles Per Trip = $\frac{20.3}{0.057}$ miles/trip

Unmitigated Emission Factor, $E_f = k \cdot [(s/12)^a] \cdot [(W/3)^b]$ (Equation 1a from AP-42 13.2.2)

PM	PM10	PM2.5	lb/mi	= particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
4.9	1.5	0.15		
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
W =	20.3	20.3	20.3	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, $E_{ext} = E_f \cdot [(365 - P)/365]$

Mitigated Emission Factor, $E_{ext} = E_f \cdot [(365 - P)/365]$
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

PM	PM10	PM2.5	lb/mile
6.09	1.55	0.16	
Mitigated Emission Factor, E_{ext}	4.01	1.02	0.10
Dust Control Efficiency =	50%	50%	50%
			(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	7.31	1.86	0.19	4.80	1.22	0.12	2.40	0.61	0.06
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	7.31	1.86	0.19	4.80	1.22	0.12	2.40	0.61	0.06
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.239	0.061	0.01	0.157	0.040	4.0E-03	0.079	0.020	2.0E-03
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.239	0.061	0.01	0.157	0.040	4.0E-03	0.079	0.020	2.0E-03
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.039	0.010	1.0E-03	0.026	0.007	6.6E-04	0.013	0.003	3.3E-04
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.039	0.010	1.0E-03	0.026	0.007	6.6E-04	0.013	0.003	3.3E-04
Aggregate/RAP Loader Full	Front-end loader (3 CY)	38.97	9.93	0.99	25.62	6.53	0.65	12.81	3.27	0.33
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	38.97	9.93	0.99	25.62	6.53	0.65	12.81	3.27	0.33
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	7.18	1.83	0.18	4.72	1.20	0.12	2.36	0.60	0.06
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	7.18	1.83	0.18	4.72	1.20	0.12	2.36	0.60	0.06
Totals		107.47	27.39	2.74	70.66	18.01	1.80	35.33	9.00	0.90

Methodology

Maximum Material Handling Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
 Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]
 Maximum Weight of Vehicle and Load (tons/trip) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip)]
 Maximum trips per year (trip/yr) = [Throughput (tons/yr)] / [Maximum Weight of Load (tons/trip)]
 Total Weight driven per year (ton/yr) = [Maximum Weight of Vehicle and Load (tons/trip)] * [Maximum trips per year (trip/yr)]
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]
 Maximum one-way miles (miles/yr) = [Maximum trips per year (trip/yr)] * [Maximum one-way distance (mi/trip)]
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]
 Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
 Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
 Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 PM2.5 = Particulate Matter (<2.5 um)
 PM2.5 = PM10
 PTE = Potential to Emit

Appendix A: Emissions Calculations
Limited Emissions
Fugitive Dust Emissions - Paved Roads

Company Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Permit Number: 063-27273-03154
Reviewer: Brian Williams

Paved Roads at Industrial Site

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (12/2003).

Annual Asphalt Production Limitation =	995,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	945,250	tons/yr
Maximum Asphalt Cement/Binder Throughput =	49,750	tons/yr
No. 2 Fuel Oil Limitation =	2,148,790	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per day (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.40	4.2E+04	1.7E+06	300	0.057	2397.7
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.00	4.5E+04	7.2E+05	300	0.057	2397.7
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.00	1.4E+03	6.6E+04	300	0.057	78.5
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	1.4E+03	1.7E+04	300	0.057	78.5
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.00	2.3E+02	1.0E+04	300	0.057	12.9
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	2.3E+02	2.7E+03	300	0.057	12.9
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.20	2.3E+05	4.3E+06	300	0.057	12787.5
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	2.3E+05	3.4E+06	300	0.057	12787.5
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.00	4.1E+04	1.7E+06	300	0.057	2355.6
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.00	4.1E+04	7.0E+05	300	0.057	2355.6
Total					6.2E+05	1.3E+07			3.5E+04

Average Vehicle Weight Per Trip =	20.3	tons/trip
Average Miles Per Trip =	0.057	miles/trip

Unmitigated Emission Factor, $E_f = [k * (sl/2)^{0.65} * (W/3)^{1.5} * C]$ (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.082	0.016	0.024	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	20.3	20.3	20.3	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	0.00036	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)
sl =	0.6	0.6	0.6	g/m ² = Ubiquitous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, $E_{ext} = E_f * [1 - (p/4N)]$

Mitigated Emission Factor, $E_{ext} = E_f * [1 - (p/4N)]$
 where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
 N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, E_f =	0.66	0.13	0.02	lb/mile
Mitigated Emission Factor, E_{ext} =	0.60	0.12	0.02	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	0.79	0.15	0.02	0.72	0.14	0.02	0.36	0.07	0.01
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.79	0.15	0.02	0.72	0.14	0.02	0.36	0.07	0.01
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.026	0.005	7.4E-04	0.024	0.005	6.8E-04	0.012	2.3E-03	3.4E-04
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.026	0.005	7.4E-04	0.024	0.005	6.8E-04	0.012	2.3E-03	3.4E-04
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	4.2E-03	8.3E-04	1.2E-04	3.9E-03	7.5E-04	1.1E-04	1.9E-03	3.8E-04	5.6E-05
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	4.2E-03	8.3E-04	1.2E-04	3.9E-03	7.5E-04	1.1E-04	1.9E-03	3.8E-04	5.6E-05
Aggregate/RAP Loader Full	Front-end loader (3 CY)	4.21	0.82	0.12	3.85	0.75	0.11	1.92	0.37	0.06
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	4.21	0.82	0.12	3.85	0.75	0.11	1.92	0.37	0.06
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.77	0.15	0.02	0.71	0.14	0.02	0.35	0.07	0.01
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.77	0.15	0.02	0.71	0.14	0.02	0.35	0.07	0.01
Totals		11.60	2.26	0.33	10.60	2.06	0.30	5.30	1.03	0.15

Methodology

Maximum Material Handling Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
 Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]
 Maximum Weight of Vehicle and Load (tons/trip) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip)]
 Maximum trips per year (trip/yr) = [Throughput (tons/yr)] / [Maximum Weight of Load (tons/trip)]
 Total Weight driven per year (ton/yr) = [Maximum Weight of Vehicle and Load (tons/trip)] * [Maximum trips per year (trip/yr)]
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]
 Maximum one-way miles (miles/yr) = [Maximum trips per year (trip/yr)] * [Maximum one-way distance (mi/trip)]
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]
 Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
 Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
 Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 PM2.5 = Particulate Matter (<2.5 um)
 PM2.5 = PM10
 PTE = Potential to Emit

**Appendix A: Emissions Calculations
Cold Mix Asphalt Production and Stockpiles**

Company Name: Milestone Contractors, L.P.
Source Address: 7012 South County Road 750 East, Plainfield, Indiana 46168
Permit Number: 063-27273-03154
Reviewer: Brian Williams

The following calculations determine the amount of VOC and HAP emissions created from volatilization of solvent used as diluent in the liquid binder for cold mix asphalt production

Cold Mix Asphalt VOC Usage Limitation = 53 tons/yr

Volatile Organic Compounds

	Maximum weight % of VOC solvent in binder	Weight % VOC solvent in binder that evaporates	VOC Solvent Usage Limitation (tons/yr)	Limited PTE of VOC (tons/yr)
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	75.7	53.0
Worst Case Limited PTE of VOC =				53.0

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%	
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0%	Xylenes
Limited PTE of Total HAPs (tons/yr) =	13.82	
Limited PTE of Single HAP (tons/yr) =	4.77	Xylenes

Hazardous Air Pollutant (HAP) Content (% by weight) For Various Petroleum Solvents*

	CAS#	Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents				
		Gasoline	Kerosene	Diesel (#2) Fuel Oil	No. 2 Fuel Oil	No. 6 Fuel Oil
Volatile Organic HAP						
1,3-Butadiene	106-99-0	3.70E-5%				
2,2,4-Trimethylpentane	540-84-1	2.40%				
Acenaphthene	83-32-9		4.70E-5%		1.80E-4%	
Acenaphthylene	208-96-8		4.50E-5%		6.00E-5%	
Anthracene	120-12-7		1.20E-6%	5.80E-5%	2.80E-5%	5.00E-5%
Benzene	71-43-2	1.90%		2.90E-4%		
Benzo(a)anthracene	56-55-3			9.60E-7%	4.50E-7%	5.50E-4%
Benzo(a)pyrene	50-32-8			2.20E-6%	2.10E-7%	4.40E-5%
Benzo(g,h,i)perylene	191-24-2			1.20E-7%	5.70E-8%	
Biphenyl	92-52-4			6.30E-4%	7.20E-5%	
Chrysene	218-01-9			4.50E-7%	1.40E-6%	6.90E-4%
Ethylbenzene	100-41-4	1.70%		0.07%	3.40E-4%	
Fluoranthene	206-44-0		7.10E-6%	5.90E-5%	1.40E-5%	2.40E-4%
Fluorene	86-73-7		4.20E-5%	8.60E-4%	1.90E-4%	
Indeno(1,2,3-cd)pyrene	193-39-5			1.60E-7%		1.00E-4%
Methyl-tert-butylether	1634-04-4	0.33%				
Naphthalene	91-20-3	0.25%	0.31%	0.26%	0.22%	4.20E-5%
n-Hexane	110-54-3	2.40%				
Phenanthrene	85-01-8		8.60E-6%	8.80E-4%	7.90E-4%	2.10E-4%
Pyrene	129-00-0		2.40E-6%	4.60E-5%	2.90E-5%	2.30E-5%
Toluene	108-88-3	8.10%		0.18%	6.20E-4%	
Total Xylenes	1330-20-7	9.00%		0.50%	0.23%	
Total Organic HAPs		26.08%	0.33%	1.29%	0.68%	0.19%
Worst Single HAP		9.00%	0.31%	0.50%	0.23%	0.07%
		Xylenes	Naphthalene	Xylenes	Xylenes	Chrysene

Methodology

Limited PTE of VOC (tons/yr) = [Weight % VOC solvent in binder that evaporates] * [VOC Solvent Usage Limitation (tons/yr)]

Limited PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]

Limited PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]

*Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Composition of Petroleum Mixtures. The Association for Environmental Health and Science. Available on the Internet at:

Abbreviations

VOC = Volatile Organic Compounds

PTE = Potential to Emit

**Attachment A: Emissions Calculations
Fuel Equivalency Calculations
Fuel Combustion Units with Maximum Capacity > 100 MMBtu/hr**

**Company Name: Milestone Contractors, L.P.
Address City IN Zip: 7012 South County Road 750 East, Plainfield, Indiana 46168, Plainfield, Indiana 46168
Permit Number: 063-27273-03154
Reviewer: Brian Williams**

No. 2 Fuel Oil SO2 Equivalency						
Fuel Type	Limited Sulfur Content	Limited Sulfur Content Units	AP-42 Emission Factor	Emission Factor Units	Fuel Equivalency	Fuel Equivalency Units
Natural Gas	NA	NA	0.6	lb/MMCF	0.008	1000 gal No. 2 fuel oil / MMCF natural gas
No. 2 Fuel Oil	0.50	% by weight	78.50	lb/kgal	1.00	gal No. 2 fuel oil / gal No. 2 fuel oil
Waste Oil	0.75	% by weight	110.25	lb/kgal	1.40	gal waste oil / gal No. 2 fuel oil

Waste Oil SO2 Equivalency						
Fuel Type	Limited Sulfur Content	Limited Sulfur Content Units	AP-42 Emission Factor	Emission Factor Units	Fuel Equivalency	Fuel Equivalency Units
Natural Gas	NA	NA	0.6	lb/MMCF	0.005	1000 gal waste oil / MMCF natural gas
No. 2 Fuel Oil	0.50	% by weight	78.50	lb/kgal	0.71	gal waste oil / gal No. 2 fuel oil
Waste Oil	0.75	% by weight	110.25	lb/kgal	1.00	gal waste oil / gal waste oil

Methodology

Fuel Equivalency = [AP-42 Emission Factor for any fuel type (lb/kgal or lb/MMCF)] / [AP-42 Emission Factor for No. 2 fuel oil (lb/kgal)]

Fuel Equivalency = [AP-42 Emission Factor for any fuel type (lb/kgal or lb/MMCF)] / [AP-42 Emission Factor for waste oil (lb/kgal)]

Sources of AP-42 Emission Factors for fuel combustion:

- Natural Gas (boiler > 100 MMBtu/hr): AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1 and 1.4-2
- No. 2, No.4, and residual fuel oil (industrial boiler > 100 MMBtu/hr): AP-42 Chapter 1.3 (dated 9/98), Table 1.3-1
- Waste Oil (small boiler): AP-42 Chapter 1.11 (dated 10/96), Table 1.11-2

**Attachment A: Emissions Calculations
Fuel Equivalency Calculations
Fuel Combustion Units with Maximum Capacity > 100 MMBtu/hr**

**Company Name: Milestone Contractors, L.P.
Address City IN Zip: 7012 South County Road 750 East, Plainfield, Indiana 46168
Permit Number: 063-27273-03154
Reviewer: Brian Williams**

NOx Equivalency				
Fuel Type	AP-42 Emission Factor	Emission Factor Units	Fuel Equivalency	Fuel Equivalency Units
Natural Gas	190	lb/MMCF	1.0	MMCF natural gas / MMCF natural gas
No. 2 Fuel Oil	24.0	lb/kgal	0.1263	MMCF natural gas / 1000 gal No. 2 fuel oil
Waste Oil	19.0	lb/kgal	0.1000	MMCF natural gas / 1000 gal waste oil

Methodology

Fuel Equivalency = [AP-42 Emission Factor for any fuel type (lb/kgal)] / [AP-42 Emission Factor for Natural Gas (lb/MMCF)]

Sources of AP-42 Emission Factors for fuel combustion:

Natural Gas (boiler > 100 MMBtu/hr): AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1 and 1.4-2

No. 2, No.4, and residual fuel oil (industrial boiler > 100 MMBtu/hr): AP-42 Chapter 1.3 (dated 9/98), Table 1.3-1

Waste Oil (small boiler): AP-42 Chapter 1.11 (dated 10/96), Table 1.11-2