



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: June 17, 2009

RE: Milestone Contractors, LP / 005-27498-05323

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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**Federally Enforceable State Operating Permit
New Source Review and Construction
OFFICE OF AIR QUALITY**

**Milestone Contractors, L.P.
Portable**

(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.

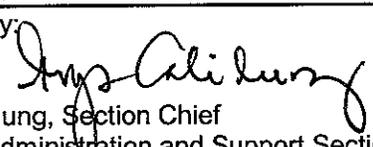
Operation Permit No: F005-27498-05323	
Issued by:  Iryn Caillung, Section Chief Permit Administration and Support Section Office of Air Quality	Issuance Date: June 17, 2009 Expiration Date: JUNE 17, 2014

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Certification Form

Emergency Occurrence Form

Quarterly Report Form(s)

Quarterly Deviation and Compliance Monitoring Report Form

Affidavit of Construction Form

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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 portable hot drum mix and cold mix asphalt plant.

Initial Source Address:	3415 South 650 East, Columbus, Indiana 47203
Mailing Address:	5950 South Belmont Avenue, Indianapolis, Indiana 46217
General Source Phone Number:	812-579-5248
SIC Code:	2951
County Location:	Bartholomew
Source Location Status:	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 portable 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 2009, identified as ES1, with dryer burner with a maximum heat input of 116 million (MM) British thermal units (Btu) per hour, primarily using waste oil and No. 2 distillate fuel oil, and using natural gas as a secondary fuel, and is controlled with a baghouse for particulate control, and exhausting at one (1) stack (ID No. EP-1). This asphalt plant does not use slag in its aggregate mix;
- (b) one (1) genset 1250kW burner, constructed in 2009, and identified as ES-2, with maximum heat input capacity of 12.2 million (MM) British thermal units (Btu) per hour, using diesel fuel, and an electronic ignition timing retard device that controls fuel injection, and hot oil heater, constructed in 2009, with maximum heat input capacity of 2.0 million (MM) British thermal units (Btu) per hour, and exhausting at one (1) stack (ID No. EP-2).
- (c) One (1) cold mix process, known as Cold Mix, with a maximum production level of, 5,000 tons per year.

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

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

This portable source also includes the following insignificant activities:

- (a) Fuel-oil fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour, and firing fuel containing less than five-tenths percent (0.5%) sulfur content by weight;
- (b) A petroleum fuel, other than gasoline, dispensing facility, having a storage tank

- capacity less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per day or less;
- (c) Three (3) 30,000-gallon liquid asphalt storage tanks, identified as ACT-1, ACT-2, and ACT-3;
 - (d) One (1) 100-ton capacity mix surge silo and truck loading system, identified as SB-1, with maximum throughput of 800,000 lb/hr.;
 - (e) One (1) cold feed system consisting of five (5) aggregate feed bins with conveyors and screen, identified as CF-1, with a maximum throughput rate of 570,000 tons per year;
 - (f) One (1) recycle feed system, identified as RF-1, and consisting of two (2) recycle feed bins with conveyors and screen, with a maximum throughput rate of 150,000 tons per year;
 - (g) cold-mix (stockpile mix) asphalt storage piles.
 - (h) Aggregate and recycle storage piles;
 - (i) One (1) heavy oil pre-heater (no combustion source), identified as PH-1, with closed-loop hot oil piping system for heating;
 - (j) One (1) ten thousand (10,000) gallon fuel oil tank, identified as FT-1.
 - (k) A laboratory as defined in 326 IAC 2-7-1(21)(D).
 - (l) Paved and unpaved roads and parking lots with public access.

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, F005-27498-05323, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.3 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.4 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4][326 IAC 2-8]

This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 and 326 IAC 2-8 when prior to the start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.
- (c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

B.5 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.6 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.7 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.8 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.9 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.10 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

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

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

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

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.12 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.13 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall 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.14 Emergency Provisions [326 IAC 2-8-12]

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

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that 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.15 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to F005-27498-05323 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.16 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.17 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.18 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.19 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.20 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.21 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.22 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.23 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.24 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.25 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.26 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]

(a) 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 when operating in areas not listed in 326 IAC 5-1-1(c), 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.

- (b) 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 when operating in areas listed in 326 IAC 5-1-1(c), unless otherwise stated in this permit:
- (1) Opacity shall not exceed an average of thirty percent (30%) 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.

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.

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.

Portable Source Requirement

C.21 Relocation of Portable Sources [326 IAC 2-14-4]

- (a) This permit is approved for operation in all areas of Indiana except in severe nonattainment areas for ozone, and Lake, Porter, and LaPorte Counties. This determination is based on the requirements of Prevention of Significant Deterioration in 326 IAC 2-2, and Emission Offset requirements in 326 IAC 2-3. Prior to locating in any severe nonattainment area, the Permittee must submit a request and obtain a permit modification.
- (b) A request to relocate shall be submitted to IDEM, OAQ at least thirty (30) days prior to the intended date of relocation. This submittal shall include the following:
 - (1) A list of governmental officials entitled to receive notice of application to relocate. IC 13-15-3-1
 - (2) A list of adjacent landowners that the Permittee will send written notice to not more than ten (10) days after submission of the request to relocate. IC 13-15-8
 - (3) The new location address of the portable source.
 - (4) Whether or not this portable source will be relocated to another source.
 - (5) If relocating to another source:

- (A) Name, location address, and permit number of the source this portable source is relocating to.
- (B) Whether or not the sources will be considered as one source. See Non Rule Policy (NRP) Air-005 and Air-006.
- (6) If the sources will be considered as one source, whether or not the source to be relocated to has received the necessary approvals from IDEM to allow the relocation.

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

- (c) A "Relocation Site Approval" letter shall be obtained prior to relocating.
- (d) A valid operation permit consists of this document and any subsequent "Relocation Site Approval" letter specifying the current location of the portable plant.

Stratospheric Ozone Protection

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

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

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

SECTION D.1 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 2009, identified as ES1, with dryer burner with a maximum heat input of 116 million (MM) British thermal units (Btu) per hour, primarily using waste oil and No. 2 distillate fuel oil, and using natural gas as a secondary fuel, and is controlled with a baghouse for particulate control, and exhausting at one (1) stack (ID No. EP-1). This asphalt plant does not use slag in its aggregate mix;
- (b) one (1) genset 1250kW burner, constructed in 2009, and identified as ES-2, with maximum heat input capacity of 12.2 million (MM) British thermal units (Btu) per hour, using diesel fuel, and an electronic ignition timing retard device that controls fuel injection, and hot oil heater, constructed in 2009, with maximum heat input capacity of 2.0 million (MM) British thermal units (Btu) per hour, and exhausting at one (1) stack (ID No. EP-2).

Under NSPS 40 CFR Part 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 FESOP and PSD Limits [326 IAC 2-8-4] [326 IAC 2-2]

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall not use slag as an aggregate additive in its hot mix asphalt operations.

Compliance with this requirement, combined with the SO₂ emissions from other units, limits the SO₂ emissions from the entire source to less than one hundred (100) tons per year. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program) and 326 IAC 2-2 (PSD) are not applicable.

D.1.2 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 950,000 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 0.383 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.1.3 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 950,000 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 0.162 pounds per ton of asphalt processed.
- (c) The PM2.5 emissions from the dryer/mixer shall not exceed 0.178 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.1.4 Genset Generator 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 NOx emissions from the generator shall not exceed 1.9 pounds per million Btu;
- (b) The fuel usage used by this generator shall not exceed 350,000 gallons of diesel fuel per consecutive twelve (12) month period, with compliance to be determined at the end of each month;

Compliance with these limitations, combined with the limited NOx from other emission units at this source, shall limit the source-wide total potential to emit 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.1.5 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the dryer/mixer shall not exceed 0.03 grain per dry standard cubic foot of exhaust air when the source is located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.

D.1.6 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) Waste Oil
For purposes of determining compliance, the following shall apply:
 - (1) The waste oil combusted in the dryer/mixer burner shall not exceed 1,418,321 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

- (2) every gallon of No. 2 fuel oil burned in the dryer/mixer burner shall be equivalent to 1.4 gallons of waste oil, based on SO₂ emissions, that the total gallons of waste oil and waste oil equivalent input does not exceed 1,418,321 gallons per twelve (12) consecutive month period;
 - (3) The sulfur content of the waste oil used in the dryer/mixer burner shall not exceed 0.75% by weight.
 - (4) The SO₂ emissions from the dryer/mixer burner shall not exceed 110.3 pounds per thousand gallons (lb/kgal) of waste oil.
 - (5) The NO_x emissions from the dryer/mixer burner shall not exceed than 19 pounds per thousand gallons (lb/kgal) of waste oil.
 - (6) The HCl emissions shall not exceed 13.2 pounds of HCl per 1,000 gallons of waste oil burned.
 - (7) The waste oil combusted in the dryer/mixer burner shall not contain more than 1.02 % ash, 0.20 % chlorine and 0.010% Lead.
- (b) No. 2 Fuel Oil
For purposes of determining compliance, the following shall apply:
- (1) The No. 2 fuel oil combusted in the dryer/mixer burner shall not exceed 1,991,973 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.
 - (2) every gallon of waste oil burned in the dryer/mixer burner shall be equivalent to 1.47 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 1,991,973 gallons per twelve (12) consecutive month period;
- (c) Natural Gas
- (1) The natural gas combusted in the dryer/mixer burner shall not exceed 995 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 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.
 - (2) The NO_x emissions from the dryer/mixer burner shall not exceed 190 pounds per MMcf of natural gas.

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.1.7 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 116.0 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.1.8 Volatile Organic Compound Rules for Asphalt Pavers [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:

- (a) penetrating prime coating
- (b) stockpile storage
- (c) application during the months of November, December, January, February and March.

D.1.9 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.1.10 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 as follows:

- (a) The Permittee shall perform PM testing for dryer/mixer (Baghouse CD1) within 180 days of startup of the dryer/mixer.
- (b) The Permittee shall perform PM₁₀ and PM_{2.5} testing within 180 days of the 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 180 days from startup, whichever is later;
- (c) All testing shall be conducted utilizing methods as approved by the Commissioner.
- (d) All tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration.
- (e) Testing shall be conducted in accordance with Section C - Performance Testing. PM₁₀ and PM_{2.5} includes filterable and condensable PM₁₀ and PM_{2.5}.

D.1.11 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.1.12 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.1.13 Hydrogen Chloride (HCl) Emissions and Chlorine Content

In order to comply with Conditions D.1.3 and D.1.6, the Permittee shall demonstrate that the chlorine content of the fuel used for the dryer/mixer burner and 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.1.14 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.1.15 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.1.16 Broken or Failed Bag Detection

- (a) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).
- (b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the 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.1.17 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 NO_x 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.1.14, 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.1.15, 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.1.18 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 process

(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] [326 IAC 2-8-4]

- (a) Pursuant to 326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving), the use of cutback asphalt or asphalt emulsion shall not contain more than seven percent (7%) oil distillate by volume of emulsion for any paving application except the following purposes:
- (1) penetrating prime coating
 - (2) stockpile storage
 - (3) application during the months of November, December, January, February and March.
- (b) The use of gelled asphalt with solvent liquid binder shall be limited to 5,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. This is equivalent to limiting the VOC emitted from solvent use to 6.25 tons per year, so that source-wide VOC emissions are limited to less than 100 tons per year, based on the following definition:
- (1) The VOC emissions of the cold mix process shall not exceed 6.25 tons per year;
 - (2) The VOC solvent used in the cold mix process shall not exceed 250 tons per year;
 - (3) The percent weight of VOC solvent in binder that evaporates shall not exceed 2.5%;
 - (4) The percent weight of VOC solvent in water shall not exceed 25.9%.

Compliance with this limitation makes 326 IAC 2-7 (Part 70 Permit Program) not applicable.

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

D.2.2 Record Keeping Requirements

To document compliance with Condition D.2.1(b), the Permittee shall maintain records in accordance with (a) through (d) below. Records maintained for (a) through (d) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.2.1(b).

- (a) Calendar dates covered in the compliance determination period;
- (b) Gelled asphalt binder usage per month since the last compliance determination period;
- (c) VOC solvent content by weight of the gelled asphalt binder used each month; and
- (d) Amount of VOC solvent used in the production of cold mix asphalt, and the amount of VOC emitted each month.

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

D.2.3 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.1(b) 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 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 2009, identified as ES1, with dryer burner with a maximum heat input of 116 million (MM) British thermal units (Btu) per hour, primarily using waste oil and No. 2 distillate fuel oil, and using natural gas as a secondary fuel, and is controlled with a baghouse for particulate control, and exhausting at one (1) stack (ID No. EP-1). This asphalt plant does not use slag in its aggregate mix;
- (b) one (1) genset 1250kW burner, constructed in 2009, and identified as ES-2, with maximum heat input capacity of 12.2 million (MM) British thermal units (Btu) per hour, using diesel fuel, and an electronic ignition timing retard device that controls fuel injection, and exhausting at one (1) stack (ID No. EP-2).

Under NSPS 40 CFR Part 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 in Attachment B of this permit.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY**

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

Source Name: Milestone Contractors, L.P.
Initial Source Address: 3415 South 650 East, Columbus, Indiana 47203
Mailing Address: 5950 South Belmont Avenue, Indianapolis, Indiana 46217
FESOP Permit No.: F005-27498-05323

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.
Initial Source Address: 3415 South 650 East, Columbus, Indiana 47203
Mailing Address: 5950 South Belmont Avenue, Indianapolis, Indiana 46217
FESOP Permit No.: F005-27498-05323

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- | |
|---|
| <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.
 Initial Source Address: 3415 South 650 East, Columbus, Indiana 47203
 Mailing Address: 5950 South Belmont Avenue, Indianapolis, Indiana 46217
 FESOP Permit No.: F005-27498-05323
 Facility: 116 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 995 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.1.6 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.
 Initial Source Address: 3415 South 650 East, Columbus, Indiana 47203
 Mailing Address: 5950 South Belmont Avenue, Indianapolis, Indiana 46217
 FESOP Permit No.: F005-27498-05323
 Facility: 116 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 1,991,973 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.1.6 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.
 Initial Source Address: 3415 South 650 East, Columbus, Indiana 47203
 Mailing Address: 5950 South Belmont Avenue, Indianapolis, Indiana 46217
 FESOP Permit No.: F005-27498-05323
 Facility: 116 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 1,418,321 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.1.6 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.
Initial Source Address: 3415 South 650 East, Columbus, Indiana 47203
Mailing Address: 5950 South Belmont Avenue, Indianapolis, Indiana 46217
FESOP Permit No.: F005-27498-05323
Facility: Cold Mix Asphalt Storage
Parameter: Cutback asphalt medium cure liquid binder usage
Limit: 250 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.
Initial Source Address: 3415 South 650 East, Columbus, Indiana 47203
Mailing Address: 5950 South Belmont Avenue, Indianapolis, Indiana 46217
FESOP Permit No.: F005-27498-05323
Facility: One (1) Asphalt Counterflow Drum Mix Dryer
Parameter: Asphalt processed
Limit: 950,000 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**

FESOP Quarterly Report

Source Name: Milestone Contractors, L.P.
Initial Source Address: 3415 South 650 East, Columbus, Indiana 47203
Mailing Address: 5950 South Belmont Avenue, Indianapolis, Indiana 46217
FESOP Permit No.: F005-27498-05323
Facility: One (1) Genset 1250kW Generator
Parameter: Diesel Fuel Usage
Limit: 350,000 gallons diesel fuel 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
	Diesel Fuel Used this month (gallons)	Diesel Fuel Used During Previous 11 Months (gallons)	Diesel Fuel Used 12 Month Total (gallons)

- 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.
Initial Source Address: 3415 South 650 East, Columbus, Indiana 47203
Mailing Address: 5950 South Belmont Avenue, Indianapolis, Indiana 46217
FESOP Permit No.: F005-27498-05323

Months: _____ to _____ Year: _____

<p>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".</p>	
<p><input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.</p>	
<p><input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD</p>	
<p>Permit Requirement (specify permit condition #)</p>	
<p>Date of Deviation:</p>	<p>Duration of Deviation:</p>
<p>Number of Deviations:</p>	
<p>Probable Cause of Deviation:</p>	
<p>Response Steps Taken:</p>	
<p>Permit Requirement (specify permit condition #)</p>	
<p>Date of Deviation:</p>	<p>Duration of Deviation:</p>
<p>Number of Deviations:</p>	
<p>Probable Cause of Deviation:</p>	
<p>Response Steps Taken:</p>	

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.

Mail to: Permit Administration & Support Section
Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Milestone Contractors, L.P.
3415 South 650 East,
Columbus, Indiana 47203

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____.
(Title) (Company Name)
3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____.
(Company Name)
4. I hereby certify that Milestone Contractors, L.P., 3415 South 650 East, Columbus, Indiana 47203, completed construction of the portable drum hot mix and cold mix asphalt plant on _____ in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on February 17, 2009 and as permitted pursuant to New Source Construction Permit and FESOP Operating Permit No. 005-27498-05323, Plant ID No. 005-05323 issued on _____.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature _____
Date _____

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana
on this _____ day of _____, 20 _____. My Commission expires: _____.

Signature _____
Name _____ (typed or printed)

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.

ATTACHMENT B

NEW SOURCE PERFORMANCE STANDARDS

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**

Addendum to the Technical Support Document (ATSD) for a
New Source Construction and Federally Enforceable State Operating
Permit (FESOP)

Source Background and Description

Source Name:	Milestone Contractors, L.P.
Initial Source Location:	3415 South 650 East, Columbus, Indiana 47203
Initial County:	Bartholomew
SIC Code:	2951
Operation Permit No.:	F 005-27498-05323
Permit Reviewer:	Jack Harmon

On May 15, 2009, the Office of Air Quality (OAQ) had a notice published in The Republic, 333 Second Street, Columbus, Indiana 47201, stating that Milestone Contractors, L.P. had applied for a Federally Enforceable State Operating Permit (FESOP) to construct and operate a new portable drum mix asphalt plant, capable of producing hot asphalt mix and cold asphalt mix. The notice also stated that the OAQ proposed to issue a FESOP for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

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**.

Change 1:

Upon further review, IDEM, OAQ has noticed that the support calculation sheet for Fuel Equivalency (Page 1 of 1, TSD, Appendix A.3) showed incorrect emission factors for fuel equivalencies. The emission factors, emissions calculations, and emission limits stated and shown in the Permit and in the Technical Support Document are correct; however the wrong supporting calculation sheet was inserted into the Permit. IDEM, OAQ has elected to insert a new sheet, showing the correct information.

- (a) A new Fuel Equivalency Calculations sheet is attached to this Addendum as Page 1 of 1, ATSD, Appendix A.3.

There are no other revisions to the permit.

IDEM Contact

- (a) Questions regarding this proposed Federally Enforceable State Operating Permit (FESOP) can be directed to Jack Harmon 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) 233-4228 or toll free at 1-800-451-6027 extension 3-4228.
- (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

Appendix 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: 3415 South 650 East, Columbus, Indiana 47203
 Permit Number: 005-27498-05323
 Plt ID: 005-05323
 Reviewer: Jack Harmon

*Note: these equivalencies are related back to Waste Oil (assumed to be the predominant fuel used at this source).

Fuel Type	SO2 Equivalency					NOx Equivalency				
	Limited Sulfur Content	Limited Sulfur Content Units	AP-42 Emission Factor	Emission Factor Units	Fuel Equivalency	Fuel Equivalency Units	AP-42 Emission Factor	Emission Factor Units	Fuel Equivalency	Fuel Equivalency Units
Natural Gas	NA	NA	0.6	lb/MMCF	183.8	MMCF natural gas / 1000 gal waste oil	190	lb/MMCF	0.100	MMCF natural gas / 1000 gal waste oil
No. 2 Fuel Oil	0.50	% by weight	78.50	lb/kgal	1.40	gal No. 2 fuel oil / gal waste oil	24.0	lb/kgal	0.792	gal No. 2 fuel oil / gal waste oil
Waste Oil	0.75	% by weight	110.25	lb/kgal	1.00	gal waste oil / gal waste oil	19.0	lb/kgal	1.00	gal waste oil / gal waste oil

*Note: these equivalencies are related back to the No. 2 Fuel Oil (assumed to be the predominant fuel used at this source).

Fuel Type	SO2 Equivalency					NOx Equivalency				
	Limited Sulfur Content	Limited Sulfur Content Units	AP-42 Emission Factor	Emission Factor Units	Fuel Equivalency	Fuel Equivalency Units	AP-42 Emission Factor	Emission Factor Units	Fuel Equivalency	Fuel Equivalency Units
Natural Gas	NA	NA	0.6	lb/MMCF	130.8	MMCF natural gas / 1000 gal No. 2 fuel oil	190	lb/MMCF	0.1263	MMCF natural gas / 1000 gal No. 2 fuel oil
No. 2 Fuel Oil	0.50	% by weight	78.50	lb/kgal	1.00	gal No. 2 fuel oil / gal No. 2 fuel oil	24.0	lb/kgal	1.00	gal No. 2 fuel oil / gal No. 2 fuel oil
Waste Oil	0.75	% by weight	110.25	lb/kgal	1.47	gal waste oil / gal No. 2 fuel oil	19.0	lb/kgal	1.26	gal waste oil / gal No. 2 fuel oil

*Note: these equivalencies are related back to natural gas (assumed to be the predominant fuel used at this source).

Fuel Type	SO2 Equivalency					NOx Equivalency				
	Limited Sulfur Content	Limited Sulfur Content Units	AP-42 Emission Factor	Emission Factor Units	Fuel Equivalency	Fuel Equivalency Units	AP-42 Emission Factor	Emission Factor Units	Fuel Equivalency	Fuel Equivalency Units
Natural Gas	NA	NA	0.6	lb/MMCF	1.0	MMCF natural gas / MMCF natural gas	190	lb/MMCF	1.0	MMCF natural gas / MMCF natural gas
No. 2 Fuel Oil	0.50	% by weight	78.50	lb/kgal	130.8	MMCF natural gas / 1000 gal No. 2 fuel oil	24.0	lb/kgal	0.1263	MMCF natural gas / 1000 gal No. 2 fuel oil
Waste Oil	0.75	% by weight	110.25	lb/kgal	183.8	MMCF natural gas / 1000 gal waste oil	19.0	lb/kgal	0.1000	MMCF natural gas / 1000 gal waste oil

Methodology

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

Indiana Department of Environmental Management Office of Air Quality

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

Source Description and Location

Source Name:	Milestone Contractors, L.P.
Initial Source Location:	3415 South 650 East, Columbus, Indiana 47203
Initial County:	Bartholomew
SIC Code:	2951
Operation Permit No.:	F 005-27498-05323
Permit Reviewer:	Jack Harmon

On February 17, 2009, the Office of Air Quality (OAQ) received an application from Milestone Contractors, L. P., related to the construction and operation of one (1) new portable drum mix asphalt plant, capable of producing both hot mix asphalt and cold mix asphalt.

Existing Approvals

There have been no previous approvals issued to this source.

County Attainment Status

The source is initially located in Bartholomew County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment effective June 15, 2004, 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.
¹ Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM2.5.	

(a) Ozone Standards

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

- (b) Bartholomew County has been classified as attainment for PM2.5. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, and the effective date of these rules was July 15th, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM2.5 emissions until 326 IAC 2-2 is revised.

(c) Other Criteria Pollutants

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

Fugitive Emissions

This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, however, there is an applicable New Source Performance Standard that was in effect on August 7, 1980 (NSPS 40 CFR 60, Subpart I), therefore fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Background and Description of New Source Construction
--

The Office of Air Quality (OAQ) has reviewed an application, submitted by Milestone Contractors, L.P. on February 17, 2009, relating to the construction and operation of one (1) new portable drum mix asphalt plant, capable of producing hot mix asphalt. On March 9, 2009, the OAQ received an additional request from Milestone Contractors, L.P. to add the capability to make cold mix asphalt, using gelled asphalt, and to increase the capacity of the genset unit, to its permit application. The source accepted voluntary limits in conjunction with those requests. This plant does not use slag in its aggregate mix.

1. This portable source has the following new emission units and/or pollution control devices:
 - (a) one (1) asphalt counterflow drum mix dryer capable of processing 400 tons per hour of raw material, constructed in 2009, identified as ES1, with dryer burner with a maximum heat input of 116 million (MM) British thermal units (Btu) per hour, primarily using waste oil and No. 2 distillate fuel oil, and using natural gas as a secondary fuel, and is controlled with a baghouse for particulate control, and exhausting at one (1) stack (ID No. EP-1). This asphalt plant does not use slag in its aggregate mix;
 - (b) one (1) genset 1250kW burner, constructed in 2009, and identified as ES-2, with maximum heat input capacity of 12.2 million (MM) British thermal units (Btu) per hour, using diesel fuel, and an emission control ignition timing retard device that controls fuel injection, and hot oil heater, constructed in 2009, with maximum heat input capacity of 2.0 million (MM) British thermal units (Btu) per hour, and exhausting at one (1) stack (ID No. EP-2).

Under NSPS 40 CFR Part 60, Subpart I, this source is considered an effected facility.
 - (c) One (1) cold mix process, known as Cold Mix, with a maximum production level of, 5,000 tons per year.

2. This portable source also includes the following insignificant activities:
 - (a) Fuel-oil fired combustion sources with heat input equal to or less than two million (2,000,000) Btu per hour, and firing fuel containing less than five-tenths percent (0.5%) sulfur content by weight;
 - (b) A petroleum fuel, other than gasoline, dispensing facility, having a storage tank capacity less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per day or less;
 - (c) Three (3) 30,000-gallon liquid asphalt storage tanks, identified as ACT-1, ACT-2,

and ACT-3;

- (d) One (1) 100-ton capacity mix surge silo and truck loading system, identified as SB-1, with maximum throughput of 800,000 lb/hr.;
- (e) One (1) cold feed system consisting of five (5) aggregate feed bins with conveyors and screen, identified as CF-1, with a maximum throughput rate of 570,000 tons per year;
- (f) One (1) recycle feed system, identified as RF-1, and consisting of two (2) recycle feed bins with conveyors and screen, with a maximum throughput rate of 150,000 tons per year;
- (g) cold-mix (stockpile mix) asphalt storage piles.
- (h) Aggregate and recycle storage piles;
- (i) One (1) heavy oil pre-heater (no combustion source), identified as PH-1, with closed-loop hot oil piping system for heating;
- (j) One (1) ten thousand (10,000) gallon fuel oil tank, identified as FT-1.
- (k) A laboratory as defined in 326 IAC 2-7-1(21)(D).
- (l) Paved and unpaved roads and parking lots with public access.

Enforcement Issues

There are no pending enforcement actions related to this source.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – FESOP

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	49,256
PM10 ⁽¹⁾	11,451
PM2.5	2,658
SO ₂	432
NO _x	269
VOC	93
CO	279

(1) 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".

HAPs	Potential To Emit (tons/year)
Hydrogen Chloride	47.9
Formaldehyde	5.4
Xylenes	.15
TOTAL HAPs	53.0

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of PM, PM10, PM2.5, SO₂, NO_x, and CO are greater than one hundred (100) tons per year. The PTE of VOC is less than one hundred (100) tons per year. The source would have been subject to the provisions of 326 IAC 2-7. However, the source will be issued a New Source Construction Permit (326 IAC 2-5.1-3) and a Federally Enforceable State Operating Permit (FESOP) (326 IAC 2-8), because the source will limit emissions to less than the Title V major source threshold levels.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of any single HAP is greater than ten (10) tons per year and the PTE of a combination of HAPs is greater than twenty-five (25) tons per year. Therefore, the source would have been subject to the provisions of 326 IAC 2-7. However, the source will be issued a New Source Construction Permit (326 IAC 2-5.1-3) and a FESOP (326 IAC 2-8), because the source will limit emissions of HAPs to less than the Title V major source threshold levels.
- (c) Portable Source
 - (1) Initial Location
 This is a portable source and its initial location is 3414 South 650 East, Columbus, IN 47203.
 - (2) PSD and Emission Offset Requirements
 This portable source is allowed to operate in all areas of Indiana except Lake County, Porter County, and in areas that are designated as extreme, severe, or serious non-attainment for any National Ambient Air Quality Standard. This determination is based on the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration), 326 IAC 2-3 (Emission Offset), 326 IAC 2-6 (Emission Reporting), 326 IAC 5-1 (Opacity Limitations), and 326 IAC 6.8-11 (Lake County: Particulate Matter Contingency Measures).

PTE of the Entire Source After Issuance of the FESOP

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

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)								
	PM	PM10*	PM2.5**	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Ducted Emissions									
Dryer/Mixer Fuel Combustion (worst case)	46.29	36.89	36.89	78.18	23.90	0.71	6.80	10.15	9.36 HCl

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)								
	PM	PM10*	PM2.5**	SO ₂	NOx	VOC	CO	Total HAPs	Worst Single HAP
Dryer/Mixer (Process)	181.93	76.95	84.55	27.55	26.13	15.20	61.75	5.06	1.47
Dryer/Mixer Slag Processing	0	0	0	0	0	0	0	0	0
Generator	5.31	3.06	3.06	12.37	46.55	2.21	20.83	.0386	0.019
Hot Oil Heater	0.13	0.21	0.21	4.44	1.25	0.01	0.31	0.00	0.004
Worst Case Emissions	187.36	80.22	87.82	95.00	73.93	17.42	82.89	10.15	9.36 HCl
Fugitive Emissions									
Asphalt Load-Out, Silo Filling, On-Site Yard	0.53	0.53	0.53	0	0	8.14	1.37	0.14	0.04
Material Storage Piles	1.43	0.50	0.50	0	0	0	0	0	0
Material Processing and Handling	3.07	1.45	0.22	0	0	0	0	0	0
Material Crushing, Screening, and Conveying	15.07	5.51	5.51	0	0	0	0	0	0
Paved and Unpaved Roads (worst case)	33.73	8.60	.86	0	0	0	0	0	0
Cold Mix Asphalt Production	0	0	0	0	0	6.25	0	1.62	0.56 xylene
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0	0	0.09	0
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	negl	negl
Total Fugitive Emissions	53.83	16.58	7.61	0	0	14.39	1.37	1.84	0.56 xylene
Total PTE of Entire Source	241.19	96.80	95.43	95.00	73.93	31.81	84.26	12.00	9.36 HCl
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	NA	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".									

(a) FESOP Status

This new source is not a Title V major portable source, because the potential to emit criteria pollutants from the entire source will be limited to less than the Title V major source threshold levels. In addition, this new source is not a major source of HAPs, as defined in 40 CFR 63.41, because the potential to emit HAPs is less than ten (10) tons per year for a single HAP and

twenty-five (25) tons per year of total HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act and is 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:

- (1) FESOP Limits
 - (a) The amount of asphalt produced shall not exceed 950,000 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 0.162 pounds per ton of asphalt processed;
 - (c) The PM2.5 emissions from the dryer/mixer shall not exceed 0.178 pounds per ton of asphalt processed;
 - (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;
- (2) Sulfur Dioxide (SO₂) Limits
 - (a) The sulfur content of the No. 2 fuel oil in the dryer/mixer shall not exceed 0.5% by weight, and 0.75% when using waste oil;
 - (b) The SO₂ emissions from the dryer/mixer shall not exceed 78.5 pounds per thousand gallons of No. 2 fuel oil and 110.3 pounds per thousand gallons of waste oil;
- (3) Nitrogen Oxide (NO_x) Limits
 - (a) NO_x emissions from the dryer/burner shall not exceed 24.0 pounds per thousand gallons of No.2 fuel oil, and 19.0 pounds per thousand gallons when using waste oil;
- (4) Contents Limits
 - (a) Waste oil combusted in the dryer/mixer shall contain no more than 1.02% ash, 0.20% chlorine, and 0.010% lead;
- (5) Hydrogen Chloride (HCl) Limits
 - (a) The HCl emissions shall not exceed 13.2 pounds of HCl per thousand gallons of waste oil burned;
- (6) Generator Limits
 - (a) The 1250kW genset generator diesel fuel usage shall not exceed 350,000 gallons per twelve (12) consecutive month period;
 - (b) NO_x emissions from the generator shall not exceed 1.9 pounds per million Btu.
- (7) Cold Mix Limits
 - (a) The VOC emissions of the cold mix process shall not exceed 6.25 tons per year;
 - (b) The VOC solvent used in the cold mix process shall not exceed 250 tons per year;
 - (c) The percent weight of VOC solvent in binder that evaporates shall not exceed 2.5%;
 - (d) The percent weight of VOC solvent in water shall not exceed 25.9%.

Compliance with these limits, combined with the potential to emit PM, PM10, PM2.5, VOC, CO, SO₂, and NO_x from all other emission units at this source, shall limit the source-wide total potential to emit of these pollutants to render 326 IAC 2-7 (Part 70), 326 IAC 8-1-6 (VOC Rules), and 326 IAC 2-2(PSD) not applicable.

- (8) In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the source shall comply with the following fuel equivalency ratios:
- (a) **Waste Oil**
For purposes of determining compliance, the following shall apply:
 - (1) every gallon of No. 2 fuel oil burned in the dryer/mixer burner shall be equivalent to 1.4 gallons of waste oil, based on SO₂ emissions, that the total gallons of waste oil and waste oil equivalent input does not exceed 1,418,321 gallons per twelve (12) consecutive month period;
 - (b) **No. 2 Fuel Oil**
For purposes of determining compliance, the following shall apply:
 - (1) every gallon of waste oil burned in the dryer/mixer burner shall be equivalent to 1.47 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 1,991,973 gallons per twelve (*12) consecutive month period;
 - (c) **Natural Gas**
 - (1) The natural gas combusted in the dryer/mixer burner shall not exceed 995 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 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.
 - (2) The NO_x emissions from the dryer/mixer burner shall not exceed 190 pounds per MMcf of natural gas.

Fuel Equivalency calculations are shown in Appendix 3 of this document.

- (b) **PSD Minor Source**
This new facility source is not a major portable source, under PSD (326 IAC 2-2), because the potential to emit Particulate Matter (PM) is limited to less than 250 tons per year and the potential to emit all other attainment regulated pollutants are less than 250 tons per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the source shall comply with the following:

- (1) The amount of asphalt processed shall not exceed 950,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

- (2) The PM emissions from the dryer/mixer shall not exceed 0.383 pounds per ton of asphalt processed.

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

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) This source is subject to the New Source Performance Standard, 326 IAC 12, (40 CFR 60.90, Subpart I) because it meets the definition of a hot mix asphalt facility pursuant to the rule and it was constructed after June 11, 1973. This rule limits particulate matter emissions to 0.04 grains per dry standard cubic foot (gr/dscf) and also limits visible emissions to 20% opacity.

The source will comply with this rule by using a baghouse to limit particulate matter emissions to less than 0.04 grains/dscf.

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

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

- (b) This source is not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60, Subpart IIII) because it does not meet the definition of a stationary compression ignition internal combustion engine. In this application, the unit is portable and not stationary; therefore, the requirements of NSPS 40 CFR Part 60, Subpart IIII do not apply.
- (c) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (a) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63, Subpart LLLLL (326 IAC 20-(number)), are not included in the permit, since the hot mix asphalt plant is not a major source of HAPs, is not located at and is not part of a major source of HAP emissions, and does not engage in the preparation of asphalt flux or asphalt roofing materials.
- (b) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

- (a) 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 source:

- (a) 326 IAC 2-8-4 (FESOP)
FESOP applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
PSD applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.
- (c) 326 IAC 2-3 (Emission Offset)
Emission Offset applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.
- (d) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The unlimited potential to emit of HAPs from the new units is greater than ten (10) tons per year for any single HAP and/or greater than twenty-five (25) tons per year of a combination of HAPs. However, the source shall limit the potential to emit of HAPs from the new units 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, the source is not subject to the requirements of 326 IAC 2-4.1. See PTE of the Entire Source After Issuance of the FESOP Section above.
- (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 allowed to locate 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, when the source is located in any County except Lake or the areas specified in 326 IAC 5-1-2(2)(a) through (c).
 - (2) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4, when the source is located in the following areas listed in 326 IAC 5-1-1(c):
 - (a) Clark County (Jefferson Township - Cities of Jeffersonville, Clarksville, Oak Park);
 - (b) Dearborn County (Lawrenceburg Township - Cities of Lawrenceburg and Greendale);
 - (c) Dubois County (Bainbridge Township - the City of Jasper);
 - (d) Marion County (except the area of Washington Township east of Fall Creek and the area of Franklin Township south of Thompson Road and east of Five Points Road);
 - (e) St. Joseph County (the area north of Kern Road and east of Pine Road);
 - (f) Vanderburgh County (the area included in the City of Evansville and Pigeon Township); and

- (g) Vigo County (Indiana State University campus, 0.5km radius around UTM Easting 464,519.00, Northing 4,369,208.00, Zone 16.
- (3) 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, when the source is located in any County.
- (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.
- (h) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is subject to the requirements of 326 IAC 6-5, because the fugitive dust sources at this source have potential fugitive particulate emissions greater than 25 tons per year. Pursuant to 326 IAC 6-5, fugitive particulate matter emissions shall be controlled according to the Fugitive Dust Control Plan, submitted on February 17, 2009, which is included as Attachment A to the permit.
- (i) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The unlimited VOC potential emissions from the dryer/mixer are greater than twenty-five (25) tons per year. However, the source shall limit the VOC potential emissions from the dryer/mixer to less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 do not apply.

In order to render the requirements of 326 IAC 8-1-6 not applicable, the dryer/mixer shall be limited as follows:
 - (1) The hot-mix asphalt production rate shall not exceed 950,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (2) The cold-mix asphalt production rate shall not exceed 5,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (3) VOC emissions from the dryer/mixer shall not exceed 0.032 pounds of VOC per ton of asphalt produced.
Compliance with these limits shall limit the potential to emit VOC from the dryer/mixer to less than twenty-five (25) tons per 12 consecutive month period and shall render 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities) not applicable.
- (j) 326 IAC 8-5-2 (Miscellaneous operations: asphalt paving)
Any paving application made after January 1, 1980, is subject to the requirements of 326 IAC 8-5-2. Pursuant to this rule, no person shall cause or allow the use of cutback asphalt or asphalt emulsion containing more than seven percent (7%) oil distillate by volume of emulsion for any paving application except the following purposes:
 - (a) penetrating prime coating
 - (b) stockpile storage
 - (c) application during the months of November, December, January, February and March.
- (k) 326 IAC 6.5-1-2(a) (Nonattainment Area PM Limitations)
This new portable asphalt plant has the potential to emit PM before controls greater than 100 tons

per year and may be relocated to Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties. Pursuant to 6.5-1-2(a), PM emissions from the dryer/mixer shall not exceed seven-hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)) when the source is located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.

In order to comply with the requirements of 326 IAC 6.5-1-2, particulate from the dryer/mixer shall be controlled by the baghouse at all times that the dryer/mixer is in operation.

- (l) 326 IAC 6.8 (Particulate Matter Limitations)
This portable source is not permitted to locate in Lake or Porter Counties; therefore, the requirements of 326 IAC 6.8 do not apply.
- (m) 326 IAC 7-1.1-2 (Sulfur Dioxide (SO₂) Emission Limitations)
Pursuant to 326 IAC 7-1.1-1, the dryer/mixer is subject to the requirements of 326 IAC 7-1.1-2, because it has potential sulfur dioxide emissions greater than twenty-five (25) tons per year. Pursuant to 7-1.1-2, sulfur dioxide emissions from the dryer/mixer shall not exceed five-tenths (0.5) pound per MMBtu when using No. 2 oil, and 1.6 pound per MMBtu when using waste oil for combustion.
- (n) 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)
The storage tanks are not subject to the requirements of 326 IAC 8-4-3 because they are not petroleum liquid storage vessels with capacities greater than thirty-nine thousand (39,000) gallons.
- (o) 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
This portable source can relocate to Clark or Floyd Counties and the two (2) storage tanks, identified as EU-5 and EU-7, each have a capacity of less than thirty-nine thousand (39,000) gallons. Pursuant to 326 IAC 8-9-1(b), the storage tanks (EU-5 and EU-7) are subject to reporting and recordkeeping provisions of section 6(a) and 6(b) of this rule and are exempt from all other provisions of this rule when the source is located in Clark or Floyd Counties. The two (2) storage tanks, identified as EU-4 and EU-6 are not subject to the requirements of 326 IAC 8-9 because they each have a maximum capacity greater than 39,000 gallons, but do not store volatile organic liquid with a maximum true vapor pressure equal to or greater than 0.5 psi.

Pursuant to 326 IAC 8-9-6(b), the Permittee shall maintain a record and submit to IDEM, OAQ a report containing the following information for the storage tanks (EU-5 and EU-7) when the source is located in Clark or Floyd Counties.

- (1) the tank identification number;
- (2) the tank dimensions; and
- (3) the tank capacity.

Pursuant to 326 IAC 8-9-6(a), these records shall be maintained for the life of the tank.

- (p) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.
- (q) 326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

Compliance Determination, Monitoring and Testing Requirements
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(a) The compliance determination and monitoring requirements applicable to this source are as follows:

Emission Unit/Control	Operating Parameters	Frequency
Baghouse	Pressure Drop	Once per day
Stack	Visual emission notation	Once per day

(b) Testing

The Permittee shall perform PM, PM10, and PM2.5 testing for dryer/mixer (Baghouse CD1) as follows:

- (1) The Permittee shall perform PM testing for dryer/mixer (Baghouse CD1) within 180 days of startup of the dryer/mixer.
- (2) The Permittee shall perform PM10 and PM2.5 testing within 180 days of the 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 (PM2.5), signed on May 8th, 2008, or 180 days from startup, whichever is later.
- (3) All testing shall be conducted utilizing methods as approved by the Commissioner.
- (4) All tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration.
- (5) Testing shall be conducted in accordance with Section C - Performance Testing. PM10 and PM2.5 includes filterable and condensable PM10 and PM2.5.

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 February 17, 2009.

The construction and operation of this source shall be subject to the conditions of the attached proposed New Source Construction and New Source Review FESOP No. 005-27498-05323. The staff recommends to the Commissioner that this New Source Construction and New Source Review FESOP be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Jack Harmon 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) 233-4228 or toll free at 1-800-451-6027 extension 3-4228.
- (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.1: Emissions Calculations
Unlimited Emission Summary**

Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

Asphalt Plant Maximum Capacity

Maximum Hourly Asphalt Production =	400	ton/hr									
Maximum Annual Asphalt Production =	3,504,000	ton/yr									
Maximum Annual Slag Usage =	0	ton/yr		0	% sulfur						
Maximum Dryer Fuel Input Rate =	116.0	MMBtu/hr									
Natural Gas Usage =	1,016	MMCF/yr									
No. 2 Fuel Oil Usage =	7,258,286	gal/yr, and		0.50	% sulfur						
No. 4 Fuel Oil Usage =	0	gal/yr, and		0.50	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and		0.50	% sulfur						
Propane Usage =	0	gal/yr, and		0.20	gr/100 ft3 sulfur						
Butane Usage =	0	gal/yr, and		0.22	gr/100 ft3 sulfur						
Used/Waste Oil Usage =	7,258,286	gal/yr, and		0.75	% sulfur	1.02	% ash	0.200	% chlorine,	0.010	% lead
Diesel Engine Oil Usage =	0	gal/yr, and									
Unlimited PM Dryer/Mixer Emission Factor =	28.0	lb/ton of asphalt production									
Unlimited PM10 Dryer/Mixer Emission Factor =	6.5	lb/ton of asphalt production									
Unlimited PM2.5 Dryer/Mixer Emission Factor =	1.5	lb/ton of asphalt production									
Unlimited VOC Dryer/Mixer Emission Factor =	0.032	lb/ton of asphalt production									
Unlimited CO Dryer/Mixer Emission Factor =	0.13	lb/ton of asphalt production									
Unlimited Slag SO2 Dryer/Mixer Emission Factor =	0.00	lb/ton of slag processed									

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										
Dryer Fuel Combustion (worst case)	236.91	188.79	188.79	400.11	96.54	3.63	42.68	52.01	47.90 (hydrogen chloride)	
Dryer/Mixer (Process)	49056.00	11388.00	2628.00	101.62	96.36	56.06	227.76	18.68	5.43 (formaldehyde)	
Dryer/Mixer Slag Processing	0	0	0	0.00	0	0	0	0	0	
Generator	5.3	3.1	3.1	27.0	171.0	4.8	45.4	8.41E-02	4.15E-02 (benzene)	
Hot Oil Heater Fuel Combustion (worst case)	0.13	0.21	0.21	4.44	1.25	0.01	0.31	0.004	0.004 (hexane)	
Worst Case Emissions*	49061.47	11391.27	2631.27	431.54	268.78	60.89	273.49	52.10	47.90 (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)	
Material Storage Piles	1.00	0.35	0.35	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 and Paved Roads (worst case)	124.42	31.71	3.17	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	0	1.62	0	0.42	0.15 (xylenes)	
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0.00	0	0.00	0.00 (xylenes)	
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	negl	0	
Total Fugitive Emissions	194.27	59.66	26.58	0	0	31.63	5.05	0.92	0.15 (xylenes)	
Totals Unlimited/Uncontrolled PTE	49255.74	11450.93	2657.85	431.54	268.78	92.52	278.54	53.03	47.90 (xylenes)	

negl = negligible

Worst Case Fuel Combustion is based on the fuel with the highest emissions for each specific pollutant.

*Worst Case Emissions (tons/yr) = Worst Case Emissions from Dryer Fuel Combustion and Dryer/Mixer + Dryer/Mixer Slag Processing + Generator + Worst Case Emissions from Hot Oil Heater Fuel Combustion

Fuel component percentages provided by the source.

**Appendix A.1: Emissions Calculations
Dryer/Mixer Fuel Combustion with Maximum Capacity > 100 MMBtu/hr
Unlimited Emissions**

Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

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 at the source.

Maximum Capacity

Maximum Hourly Asphalt Production =	400	ton/hr
Maximum Annual Asphalt Production =	3,504,000	ton/yr
Maximum Fuel Input Rate =	116	MMBtu/hr
Natural Gas Usage =	1,016	MMCF/yr
No. 2 Fuel Oil Usage =	7,258,286	gal/yr, and
No. 4 Fuel Oil Usage =	0	gal/yr, and
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and
Propane Usage =	0	gal/yr, and
Butane Usage =	0	gal/yr, and
Used/Waste Oil Usage =	7,258,286	gal/yr, and
Diesel Engine Oil Usage =	0	gal/yr, and

	0.50	% sulfur
	0.50	% sulfur
	0.50	% sulfur
	0.20	gr/100 ft3 sulfur
	0.22	gr/100 ft3 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 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	2.0	7.0	7.815	0.5	0.6	65.3	43.4	0.97	7.26	0.00	0.00	0.000	0.000	236.91	0.00	236.91
PM10/PM2.5	7.6	3.3	8.3	9.315	0.5	0.6	52.02	43.4	3.86	11.98	0.00	0.00	0.000	0.000	188.79	0.00	188.79
SO2	0.6	78.5	75.0	78.5	0.020	0.020	110.3	40.6	0.30	284.89	0.00	0.00	0.000	0.000	400.11	0.00	400.11
NOx	190	24.0	47.0	47.0	19.0	21.0	19.0	617.4	96.54	87.10	0.00	0.00	0.00	0.00	68.95	0.00	96.54
VOC	5.5	0.20	0.20	0.28	1.00	1.10	1.0	49.00	2.79	0.73	0.00	0.00	0.000	0.000	3.63	0.00	3.63
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	133.0	42.67872	18.15	0.00	0.00	0.00	0.00	18.15	0.00	42.68
Hazardous Air Pollutant																	
HCl							13.2								47.90		47.90
Antimony			5.25E-03	5.25E-03			negl				0.00E+00	0.00E+00					0.0E+00
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03			1.1E-01		1.0E-04	2.03E-03	0.00E+00	0.00E+00			3.99E-01		4.0E-01
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05			negl		6.1E-06	1.52E-03	0.00E+00	0.00E+00					1.5E-03
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04			9.3E-03		5.6E-04	1.52E-03	0.00E+00	0.00E+00			3.38E-02		3.4E-02
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02		7.1E-04	1.52E-03	0.00E+00	0.00E+00			7.26E-02		7.3E-02
Cobalt	8.4E-05	6.02E-03	6.02E-03	6.02E-03			2.1E-04		4.3E-05	0.00E+00	0.00E+00	0.00E+00			7.62E-04		7.6E-04
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03			0.55		2.5E-04	4.57E-03	0.00E+00	0.00E+00			2.0E+00		2.00
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03			6.8E-02		1.9E-04	3.05E-03	0.00E+00	0.00E+00			2.47E-01		0.25
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04					1.3E-04	1.52E-03	0.00E+00	0.00E+00					1.5E-03
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02		1.1E-03	1.52E-03	0.00E+00	0.00E+00			3.99E-02		0.040
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl		1.2E-05	7.62E-03	0.00E+00	0.00E+00			negl		7.6E-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					1.1E-03		0.00E+00	0.00E+00					1.1E-03
Bis(2-ethylhexyl)phthalate							2.2E-03								7.98E-03		8.0E-03
Dichlorobenzene	1.2E-03						8.0E-07		6.1E-04						2.90E-06		6.1E-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	3.8E-02	2.21E-01	0.00E+00	0.00E+00			0.00E+00	0.221
Hexane	1.8E+00								0.91								0.915
Phenol							2.4E-03								8.71E-03		8.7E-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	1.7E-03
Total PAH Haps	negl		1.13E-03	1.13E-03			3.9E-02	2.35E-02	negl			0.00E+00	0.00E+00		1.42E-01	0.00E+00	1.4E-01
Polycyclic Organic Matter		3.30E-03								1.20E-02							1.2E-02
Xylene			1.09E-04	1.09E-04				3.99E-02			0.00E+00	0.00E+00					0.0E+00
Total HAPs									0.96	0.26	0.00	0.00	0	0	50.85	0.00	52.01

Methodology

Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
 Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
 Propane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0905 MMBtu]
 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 (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 7/08), 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 = Polyaromatic Hydrocarbon
- PM2.5 = Particulate Matter (< 2.5 um)
- SO2 = Sulfur Dioxide
- NOx = Nitrous Oxides
- VOC = Volatile Organic Compounds
- CO = Carbon Monoxide
- HAP = Hazardous Air Pollutant

**Appendix A.1: Emissions Calculations
Dryer/Mixer
Unlimited Process Emissions**

**Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon**

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

Maximum Hourly Asphalt Production = 400 ton/hr
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*	6.5	6.5	6.5	11388	11388	11388	11388
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

Natural gas, No. 2 fuel oil, and waste oil represent the worst possible emissions scenario. AP-42 did not provide emission factors for any other fuels.

* PM, PM10, and PM2.5 AP-42 emission factors based on drum mix dryer fired with natural gas, propane, fuel oil, and waste oil. According to AP-42 fuel type does not significantly effect PM, PM10, and PM2.5 emissions.

** SO2, NOx, and VOC AP-42 emission factors are for natural gas, No. 2 fuel oil, and waste oil only.

*** CO AP-42 emission factor determined by combining data from drum mix dryer fired with natural gas, No. 6 fuel oil, and No. 2 fuel oil to develop single CO emission factor.

Abbreviations

VOC - Volatile Organic Compounds
HCl = Hydrogen Chloride
SO2 = Sulfur Dioxide

HAP = Hazardous Air Pollutant
PAH = Polyaromatic Hydrocarbon

**Appendix A.1: Emissions Calculations
 Dryer/Mixer Slag Processing
 Unlimited Emissions**

Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

The following calculations determine the unlimited emissions from the processing of slag in the aggregate drying/mixing

Maximum Annual Slag Usage* = ton/yr % sulfur

	Emission Factor (lb/ton)**	Unlimited Potential to Emit (tons/yr)
Criteria Pollutant	Slag Processing	Slag Processing
SO2	0.74	0.0

Methodology

* The maximum annual slag usage was provided by the source.

** Testing results for Slag, obtained January 9, 2009 from similar operations at Rieth-Riley Construction Co., Inc. facility located in Valparaiso, IN (permit #127-27075-05241), produced an Emission Factor of 0.54 lb/ton from slag containing 1.10% sulfur content. The source has requested a safety factor of 0.20 lb/ton be added to the tested value for use at this location to allow for a sulfur content up to 1.5%.

Unlimited Potential to Emit SO2 from Slag (tons/yr) = [(Maximum Annual Slag Usage (ton/yr)) * [Emission Factor (lb/ton))] * [ton/2000 lbs]

Abbreviations

SO2 = Sulfur Dioxide

Appendix A.1: Emission Calculations
Large Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (>600 HP)
Maximum Input Rate (>4.2 MMBtu/hr)
Unlimited Emissions

Company Name: Milestone Contractors, L.P.
Address City IN Zip: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

A. Emissions calculated based on heat input capacity (MMBtu/hr)

Heat Input Capacity (MMBtu/hr)	12.2
Maximum Hours Operated per Year	8760
Potential Throughput (MMBtu/yr)	106,872
Sulfur Content (S) of Fuel (% by weight)	0.500

	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.10	0.0573	0.0573	0.505 (1.01S)	3.2 **see below	0.09	0.85
Potential Emission in tons/yr	5.34	3.06	3.06	26.99	171.00	4.81	45.42

*No information was given regarding which method was used to determine the PM emission factor or whether condensable PM is included. The PM10 emission factor is filterable and condensable PM10 combined. The PM2.5 emissions were assumed to be equal to PM10.

**NOx emissions: uncontrolled = 3.2 lb/MMBtu, controlled with ignition timing retard = 1.9 lb/MMBtu

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/MMBtu	7.76E-04	2.81E-04	1.93E-04	7.89E-05	2.52E-05	7.88E-06	2.12E-04
Potential Emission in tons/yr	4.15E-02	1.50E-02	1.03E-02	4.22E-03	1.35E-03	4.21E-04	1.13E-02

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

Potential Emission of Total HAPs (tons/yr)	8.41E-02
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Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1, 3.4-2, 3.4-3, and 3.4-4

Potential Throughput (MMBtu/yr) = [Heat Input Capacity (MMBtu/hr)] * [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]

Appendix A.1: Emissions Calculations

**Hot Oil Heater
Fuel Combustion with Maximum Capacity < 100 MMBtu/hr
Unlimited Emissions**

Company Name: Milestone Contractors, L.P.
Source Location: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

Maximum Hot Oil Heater Fuel Input Rate = 2.00 MMBtu/hr
 Natural Gas Usage = 0 MMCF/yr
 No. 2 Fuel Oil Usage = 125,143 gal/yr, and 0.50 % sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
	Hot Oil Heater		Hot Oil Heater		Worse Case Fuel (tons/yr)
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	
PM	1.9	2.0	0.000	0.125	0.13
PM10/PM2.5	7.6	3.3	0.000	0.206	0.21
SO2	0.6	71.0	0.000	4.443	4.44
NOx	100	20.0	0.000	1.251	1.25
VOC	5.5	0.20	0.000	0.013	0.01
CO	84	5.0	0.000	0.313	0.31
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	0.0E+00	3.50E-05	3.5E-05
Beryllium	1.2E-05	4.2E-04	0.0E+00	2.63E-05	2.6E-05
Cadmium	1.1E-03	4.2E-04	0.0E+00	2.63E-05	2.6E-05
Chromium	1.4E-03	4.2E-04	0.0E+00	2.63E-05	2.6E-05
Cobalt	8.4E-05		0.0E+00		0.0E+00
Lead	5.0E-04	1.3E-03	0.0E+00	7.88E-05	7.9E-05
Manganese	3.8E-04	8.4E-04	0.0E+00	5.26E-05	5.3E-05
Mercury	2.6E-04	4.2E-04	0.0E+00	2.63E-05	2.6E-05
Nickel	2.1E-03	4.2E-04	0.0E+00	2.63E-05	2.6E-05
Selenium	2.4E-05	2.1E-03	0.0E+00	1.31E-04	1.3E-04
Benzene	2.1E-03		0.0E+00		0.0E+00
Dichlorobenzene	1.2E-03		0.0E+00		0.0E+00
Ethylbenzene					0.0E+00
Formaldehyde	7.5E-02	6.10E-02	0.0E+00	3.82E-03	3.8E-03
Hexane	1.8E+00		0.00		0.0E+00
Phenol					0.0E+00
Toluene	3.4E-03		0.0E+00		0.0E+00
Total PAH Haps	negl		negl		0.0E+00
Polycyclic Organic Matter		3.30E-03		2.06E-04	2.1E-04
Total HAPs =			0.0E+00	4.5E-03	0.004

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]
 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 (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 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

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.1: Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions
Unlimited Emissions

Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

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	0.050	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

The asphalt temperature and volatility factor were provided by the source.
 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/PM2.5 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
 *No emission factors available for PM10 or PM2.5, therefore IDEM assumes PM10 and PM2.5 are equivalent to Total PM.

Abbreviations

TOC = Total Organic Compounds
 CO = Carbon Monoxide
 PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 PM2.5 = Particulate Matter (<2.5 um)
 HAP = Hazardous Air Pollutant
 VOC = Volatile Organic Compound

Appendix A.1: Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)
Unlimited Emissions

Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

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	0	NA	3.0E-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	0.050	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

Appendix A.1: Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)
Unlimited Emissions

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.1: Emissions Calculations
Material Storage Piles
Unlimited Emissions**

Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

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.

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

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10/PM2.5 (tons/yr)
Sand	2.6	3.01	0.75	0.412	0.144
Limestone	1.6	1.85	0.75	0.253	0.089
RAP	0.5	0.58	0.75	0.079	0.028
Gravel	1.6	1.85	0.75	0.253	0.089
Slag	3.8	4.40	0.00	0.000	0.000
Totals				1.00	0.35

Methodology

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

PTE of PM10/PM2.5 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%

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

**Maximum anticipated pile size (acres) provided by the source.

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.1: Emissions Calculations
Material Processing, Handling, Crushing, Screening, and Conveying
Unlimited Emissions

Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

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.

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

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

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

The percent asphalt cement/binder provided by the source.

Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]

Unlimited 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/PM2.5 (tons/yr)**
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 %)]

Unlimited 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).

**Assumes PM10 = PM2.5

Abbreviations

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

**Appendix A.1: Emissions Calculations
Unpaved Roads
Unlimited Emissions**

**Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon**

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	=	7,258,286	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	300	0.057	8443.6
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	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	48.0	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	7.7E+02	3.4E+04	300	0.057	43.6
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	7.7E+02	9.2E+03	300	0.057	43.6
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	7.9E+05	1.5E+07	300	0.057	45032.5
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	7.9E+05	1.2E+07	300	0.057	45032.5
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.0	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						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, $E_f = k \cdot [(s/12)^a] \cdot [(W/3)^b]$ (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, $E_{ext} = E_f \cdot [(365 - P)/365]$
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	
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)	25.73	6.56	0.66	16.92	4.31	0.43	8.46	2.16	0.22
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	25.73	6.56	0.66	16.92	4.31	0.43	8.46	2.16	0.22
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)	0.133	0.034	0.00	0.087	0.022	0.00	0.044	0.011	0.00
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.133	0.034	0.00	0.087	0.022	0.00	0.044	0.011	0.00
Aggregate/RAP Loader Full	Front-end loader (3 CY)	137.23	34.98	3.50	90.24	23.00	2.30	45.12	11.50	1.15
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	137.23	34.98	3.50	90.24	23.00	2.30	45.12	11.50	1.15
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		378.44	96.45	9.65	248.84	63.42	6.34	124.42	31.71	3.17

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
Paved Roads
Unlimited Emissions**

Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

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	= 7,258,286	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 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	7.7E+02	3.4E+04	300	0.057	43.6
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	7.7E+02	9.2E+03	300	0.057	43.6
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

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)	1.4E-02	2.8E-03	4.1E-04	1.3E-02	2.5E-03	3.8E-04	6.5E-03	1.3E-03	1.9E-04
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	1.4E-02	2.8E-03	4.1E-04	1.3E-02	2.5E-03	3.8E-04	6.5E-03	1.3E-03	1.9E-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	37.34	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.1: Emissions Calculations
Cold Mix Asphalt Production and Stockpiles
Unlimited Emissions**

Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

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 = 5,000 tons/yr
 Percent Asphalt Cement/Binder (weight %) = 5.0%
 Maximum Asphalt Cement/Binder Throughput = 250 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)	25.3%	95.0%	0.0	0.0
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	0.0	0.0
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	0.0	0.0
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	0.0	0.0
Other asphalt with solvent binder	25.9%	2.5%	64.8	1.6
Worst Case PTE of VOC =				1.6

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) =	0.42
PTE of Single HAP (tons/yr) =	0.15 Xylenes

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

Volatile Organic HAP	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
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/tpb.htm>

Abbreviations

VOC = Volatile Organic Compounds
 PTE = Potential to Emit

**Appendix A.1: Emissions Calculations
Gasoline Fuel Transfer and Dispensing Operation
Unlimited Emissions**

Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

To calculate evaporative emissions from the gasoline dispensing fuel transfer and dispensing operation handling emission factors from AP-42 Table 5.2-7 were used. The total potential emission of VOC is as follows:

$$\begin{aligned} \text{Gasoline Throughput} &= \boxed{0} \text{ gallons/day} \\ &= \boxed{0.0} \text{ kgal/yr} \end{aligned}$$

Volatile Organic Compounds

Emission Source	Emission Factor (lb/kgal of throughput)	PTE of VOC (tons/yr)*
Filling storage tank (balanced submerged filling)	0.3	0.00
Tank breathing and emptying	1.0	0.00
Vehicle refueling (displaced losses - controlled)	1.1	0.00
Spillage	0.7	0.00
Total		0.00

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) =	0.00	
Limited PTE of Single HAP (tons/yr) =	0.00	Xylenes

Methodology

The gasoline throughput was provided by the source.

Gasoline Throughput (kgal/yr) = [Gasoline Throughput (lbs/day)] * [365 days/yr] * [kgal/1000 gal]

PTE of VOC (tons/yr) = [Gasoline Throughput (kgal/yr)] * [Emission Factor (lb/kgal)] * [ton/2000 lb]

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

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

Abbreviations

VOC = Volatile Organic Compounds

PTE = Potential to Emit

**Appendix A.2: Emissions Calculations
Limited Emission Summary**

Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

Asphalt Plant Limitations

Maximum Hourly Asphalt Production =	400	ton/hr								
Annual Asphalt Production Limitation =	950,000	ton/yr								
Slag Usage Limitation =	0	ton/yr	0.00	% sulfur						
Natural Gas Limitation =	496.83	MMCF/yr								
No. 2 Fuel Oil Limitation =	1,991,973	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Limitation =	0	gal/yr, and	0.50	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and	0.50	% sulfur						
Propane Limitation =	0	gal/yr, and	0.20	gr/100 ft3 sulfur						
Butane Limitation =	0	gal/yr, and	0.22	gr/100 ft3 sulfur						
Used/Waste Oil Limitation =	1,418,321	gal/yr, and	0.75	% sulfur	1.02	% ash	0.200	% chlorine,	0.010	% lead
Diesel Engine Oil Limitation =	350,000	gal/yr, and								
PM Dryer/Mixer Limitation =	0.383	lb/ton of asphalt production								
PM10 Dryer/Mixer Limitation =	0.162	lb/ton of asphalt production								
PM2.5 Dryer/Mixer Limitation =	0.178	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								
Slag SO2 Dryer/Mixer Limitation =	0.000	lb/ton of slag processed								
Cold Mix Asphalt VOC Usage Limitation =	6.25	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									
Dryer Fuel Combustion (worst case)	46.29	36.89	36.89	78.18	23.90	0.71	6.80	10.15	9.36 (HCl)
Dryer/Mixer (Process)	181.93	76.95	84.55	27.55	26.13	15.20	61.75	5.06	1.47 (formaldehyde)
Dryer/Mixer Slag Processing	0	0	0	0.00	0	0	0	0	0
Hot Oil Heater Fuel Combustion (worst case)	0.13	0.21	0.21	4.44	1.25	0.01	0.31	0.00	0.004 (hexane)
Generator	5.31	3.06	3.06	12.37	46.55	2.21	20.83		
Worst Case Emissions*	187.36	80.22	87.82	95.00	73.93	17.42	82.89	10.15	9.36 (HCl)
Fugitive Emissions									
Asphalt Load-Out, Silo Filling, On-Site Yard	0.53	0.53	0.53	0	0	8.14	1.37	0.14	0.04 (formaldehyde)
Material Storage Piles	1.43	0.50	0.50	0	0	0	0	0	0
Material Processing and Handling	3.07	1.45	0.22	0	0	0	0	0	0
Material Crushing, Screening, and Conveying	15.07	5.51	5.51	0	0	0	0	0	0
Unpaved and Paved Roads (worst case)	33.73	8.60	0.86	0	0	0	0	0	0
Cold Mix Asphalt Production	0	0	0	0	0	6.25	0	1.62	0.56 (xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0.00	0	0.09	0.00 (xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	negl	negl
Total Fugitive Emissions	53.83	16.58	7.61	0	0	14.39	1.37	1.84	0.56 (xylenes)
Totals Limited/Controlled Emissions	241.19	96.80	95.43	95.00	73.93	31.81	84.26	12.00	9.36 (HCl)

negl = negligible

Worst Case Fuel Combustion is based on the fuel with the highest emissions for each specific pollutant.

*Worst Case Emissions (tons/yr) = Worst Case Emissions from Dryer Fuel Combustion and Dryer/Mixer + Dryer/Mixer Slag Processing + Worst Case Emissions from Hot Oil Heater Fuel Combustion Fuel component percentages provided by the source.

Appendix A.2: Emissions Calculations
Dryer/Mixer Fuel Combustion with Maximum Capacity > 100 MMBtu/hr
Limited Emissions

Company Name: Milestone Contractors, L.P.
 Source Address: 3415 South 650 East, Columbus, Indiana 47203
 Permit Number: 005-27498-05323
 Reviewer: Jack Harmon

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

Maximum Hourly Asphalt Production =	400	ton/hr
Annual Asphalt Production Limitation =	950,000	ton/yr
Natural Gas Limitation =	162	MMCF/yr
No. 2 Fuel Oil Limitation =	1,991,973	gal/yr, and
No. 4 Fuel Oil Limitation =	0	gal/yr, and
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and
Propane Limitation =	0	gal/yr, and
Butane Limitation =	0	gal/yr, and
Used/Waste Oil Limitation =	1,418,321	gal/yr, and
Diesel Engine Oil Limitation =	0	gal/yr, and

	0.50	% sulfur
	0.50	% sulfur
	0.50	% sulfur
	0.20	gr/100 ft3 sulfur
	0.22	gr/100 ft3 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)								
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Residual 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 Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/Waste Oil (tons/yr)	Diesel Engine (tons/yr)	Worse Case Fuel (tons/yr)
PM	1.9	2	7	7.815	0.5	0.6	65.28	43.4	0.15	1.99	0.00	0.00	0.000	0.000	46.29	0.00	46.29
PM10	7.6	3.3	8.3	9.315	0.5	0.6	52.02	43.4	0.62	3.29	0.00	0.00	0.000	0.000	36.89	0.00	36.89
SO2	0.6	78.5	75.0	78.5	0.020	0.020	110.3	40.6	0.05	78.18	0.00	0.00	0.000	0.000	78.18	0.00	78.18
NOx	190	24.0	47.0	47.0	13.0	15.0	19.0	617.4	15.39	23.90	0.00	0.00	0.00	0.00	13.47	0.00	23.90
VOC	5.5	0.20	0.20	0.28	1.00	1.10	1.0	49.00	0.45	0.20	0.00	0.00	0.00	0.00	0.71	0.00	0.71
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	133.0	6.80	4.98	0.00	0.00	0.00	0.00	3.55	0.00	6.80
Hazardous Air Pollutant																	
HCl							13.2								9.36		9.36
Antimony			5.25E-03	5.25E-03			negl				0.00E+00	0.00E+00			negl		0.0E+00
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03			1.1E-01		1.6E-05	5.58E-04	0.00E+00	0.00E+00			7.80E-02		7.8E-02
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05			negl		9.7E-07	4.18E-04	0.00E+00	0.00E+00			negl		4.2E-04
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04			9.3E-03		8.9E-05	4.18E-04	0.00E+00	0.00E+00			6.60E-03		6.6E-03
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02		1.1E-04	4.18E-04	0.00E+00	0.00E+00			1.42E-02		1.4E-02
Cobalt	8.4E-05		6.02E-03	6.02E-03			2.1E-04		6.8E-06		0.00E+00	0.00E+00			1.49E-04		1.5E-04
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03		0.55			4.1E-05	1.25E-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		3.1E-05	8.37E-04	0.00E+00	0.00E+00			4.82E-02		0.05
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04					2.1E-05	4.18E-04	0.00E+00	0.00E+00					4.2E-04
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02		1.7E-04	4.18E-04	0.00E+00	0.00E+00			7.80E-03		0.008
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl		1.9E-06	2.08E-03	0.00E+00	0.00E+00			negl		2.1E-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		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							0.00E+00	0.00E+00			0.00E+00		1.7E-04
Bis(2-ethylhexyl)phthalate							2.2E-03								1.56E-03		1.6E-03
Dichlorobenzene	1.2E-03						8.0E-07		9.7E-05						5.67E-07		9.7E-05
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	6.1E-03	6.08E-02	0.00E+00	0.00E+00		0.00E+00		0.061
Hexane	1.8E+00								0.15								0.146
Phenol							2.4E-03								1.70E-03		1.7E-03
Toluene	3.4E-03		6.20E-03	6.20E-03					5.73E-02	2.8E-04	0.00E+00	0.00E+00			0.00E+00		2.8E-04
Total PAH Haps	negl		1.13E-03	1.13E-03			3.9E-02	2.36E-02	negl		0.00E+00	0.00E+00			2.77E-02	0.00E+00	2.8E-02
Polycyclic Organic Matter		3.30E-03								3.29E-03							3.3E-03
Xylene			1.09E-04	1.09E-04							0.00E+00	0.00E+00			0.00E+00		0.0E+00
Total HAPs							3.99E-02		0.15	0.07	0.00	0.00	0	0	9.94	0.00	10.15

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 7/08), 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 = Nitrogen Oxides
 VOC = Volatile Organic Compounds
 CO = Carbon Monoxide
 HAP = Hazardous Air Pollutant
 HCl = Hydrogen Chloride
 PAH = Polyaromatic Hydrocarbon

**Appendix A.2: Emissions Calculations
Dryer/Mixer
Limited Process Emissions**

Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

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

Maximum Hourly Asphalt Production =	400	ton/hr
Annual Asphalt Production Limitation =	950,000	ton/yr
PM Dryer/Mixer Limitation =	0.383	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation =	0.162	lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation =	0.178	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	Waste Oil	Natural Gas	No. 2 Fuel Oil	Waste Oil	
PM*	0.383	0.383	0.383	181.9	181.9	181.9	181.9
PM10*	0.162	0.162	0.162	77.0	77.0	77.0	77.0
PM2.5*	0.178	0.178	0.178	84.6	84.6	84.6	84.6
SO2**	0.003	0.011	0.058	1.6	5.2	27.6	27.6
NOx**	0.026	0.055	0.055	12.4	26.1	26.1	26.1
VOC**	0.032	0.032	0.032	15.2	15.2	15.2	15.2
CO**	0.130	0.130	0.130	61.8	61.8	61.8	61.8
Hazardous Air Pollutant							
HCl			2.10E-04			0.10	0.10
Antimony	1.80E-07	1.80E-07	1.80E-07	8.55E-05	8.55E-05	8.55E-05	8.55E-05
Arsenic	5.60E-07	5.60E-07	5.60E-07	2.66E-04	2.66E-04	2.66E-04	2.66E-04
Beryllium	negl	negl	negl	negl	negl	negl	0.00E+00
Cadmium	4.10E-07	4.10E-07	4.10E-07	1.95E-04	1.95E-04	1.95E-04	1.95E-04
Chromium	5.50E-06	5.50E-06	5.50E-06	2.61E-03	2.61E-03	2.61E-03	2.61E-03
Cobalt	2.60E-08	2.60E-08	2.60E-08	1.24E-05	1.24E-05	1.24E-05	1.24E-05
Lead	6.20E-07	1.50E-05	1.50E-05	2.95E-04	7.13E-03	7.13E-03	7.13E-03
Manganese	7.70E-06	7.70E-06	7.70E-06	3.66E-03	3.66E-03	3.66E-03	3.66E-03
Mercury	2.40E-07	2.60E-06	2.60E-06	1.14E-04	1.24E-03	1.24E-03	1.24E-03
Nickel	6.30E-05	6.30E-05	6.30E-05	2.99E-02	2.99E-02	2.99E-02	2.99E-02
Selenium	3.50E-07	3.50E-07	3.50E-07	1.66E-04	1.66E-04	1.66E-04	1.66E-04
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	1.90E-02	1.90E-02	1.90E-02	1.90E-02
Acetaldehyde			1.30E-03			0.62	0.62
Acrolein			2.60E-05			1.24E-02	1.24E-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	0.11	0.11	0.11	0.11
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	1.47	1.47	1.47	1.47
Hexane	9.20E-04	9.20E-04	9.20E-04	0.44	0.44	0.44	0.44
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	1.38	1.38	1.38
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0.09	0.42	0.42	0.42
Xylene	2.00E-04	2.00E-04	2.00E-04	0.10	0.10	0.10	0.10
Total HAPs							5.06
Worst Single HAP							1.4725 (formaldehyde)

Methodology

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, 11.1-4, 11.1-7, 11.1-8, 11.1-10, and 11.1-12

Natural gas, No. 2 fuel oil, and waste oil represent the worst possible emissions scenario. AP-42 did not provide emission factors for any other fuels.

* PM, PM10, and PM2.5 AP-42 emission factors based on drum mix dryer fired with natural gas, propane, fuel oil, and waste oil. According to AP-42 fuel type does not significantly effect PM, PM10, and PM2.5 emissions.

** SO2, NOx, and VOC AP-42 emission factors are for natural gas, No. 2 fuel oil, and waste oil only.

*** CO AP-42 emission factor determined by combining data from drum mix dryer fired with natural gas, No. 6 fuel oil, and No. 2 fuel oil to develop single CO emission factor.

Abbreviations

VOC - Volatile Organic Compounds

HAP = Hazardous Air Pollutant

HCl = Hydrogen Chloride

PAH = Polyaromatic Hydrocarbon

SO2 = Sulfur Dioxide

**Appendix A.2: Emissions Calculations
 Dryer/Mixer Slag Processing
 Limited Emissions**

Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

If slag not used enter value of 0, do not delete limited-dryer-mixer-slag worksheet.

The following calculations determine the limited emissions from the processing of slag in the aggregate drying/mixing

Slag Usage Limitation = ton/yr
 SO2 Slag Limitation = lb/ton of slag processed % sulfur

	Emission Factor or Limitation (lb/ton)*	Limited Potential to Emit (tons/yr)
Criteria Pollutant	Slag Processing	Slag Processing
SO2	0.000	0.0

Methodology

* Testing results for Slag, obtained January 9, 2009 from similar operations at Rieth-Riley Construction Co., Inc. facility located in Valparaiso, IN (permit #127-27075-05241), produced an Emission Factor of 0.54 lb/ton from slag containing 1.10% sulfur content. The source has requested a safety factor of 0.20 lb/ton be added to the tested value for use at this location to allow for a sulfur content up to 1.5%.

Limited Potential to Emit SO2 from Slag (tons/yr) = (Slag Usage Limitation (ton/yr)) * [Limited Emission Factor (lb/ton)] * [ton/2000 lbs]

Abbreviations

SO2 = Sulfur Dioxide

Appendix A.2: Emissions Calculations

**Hot Oil Heater
Fuel Combustion with Maximum Capacity < 100 MMBtu/hr
Limited Emissions**

Company Name: Milestone Contractors, L.P.
Source Location: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

Maximum Hot Oil Heater Fuel Input Rate = 2.00 MMBtu/hr
 Natural Gas Usage = 0 MMCF/yr *If fuel not used enter value of 0, do not delete.*
 No. 2 Fuel Oil Usage = 125,143 gal/yr, and 0.50 % sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
	Hot Oil Heater		Hot Oil Heater		
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	Worse Case Fuel (tons/yr)
PM	1.9	2.0	0.000	0.125	0.13
PM10/PM2.5	7.6	3.3	0.000	0.206	0.21
SO2	0.6	71.0	0.000	4.443	4.44
NOx	100	20.0	0.000	1.251	1.25
VOC	5.5	0.20	0.000	0.013	0.01
CO	84	5.0	0.000	0.313	0.31
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	0.0E+00	3.50E-05	3.5E-05
Beryllium	1.2E-05	4.2E-04	0.0E+00	2.63E-05	2.6E-05
Cadmium	1.1E-03	4.2E-04	0.0E+00	2.63E-05	2.6E-05
Chromium	1.4E-03	4.2E-04	0.0E+00	2.63E-05	2.6E-05
Cobalt	8.4E-05		0.0E+00		0.0E+00
Lead	5.0E-04	1.3E-03	0.0E+00	7.88E-05	7.9E-05
Manganese	3.8E-04	8.4E-04	0.0E+00	5.26E-05	5.3E-05
Mercury	2.6E-04	4.2E-04	0.0E+00	2.63E-05	2.6E-05
Nickel	2.1E-03	4.2E-04	0.0E+00	2.63E-05	2.6E-05
Selenium	2.4E-05	2.1E-03	0.0E+00	1.31E-04	1.3E-04
Benzene	2.1E-03		0.0E+00		0.0E+00
Dichlorobenzene	1.2E-03		0.0E+00		0.0E+00
Ethylbenzene					0
Formaldehyde	7.5E-02	6.10E-02	0.0E+00	3.82E-03	0.004
Hexane	1.8E+00		0.00		0.000
Phenol					0
Toluene	3.4E-03		0.0E+00		0.0E+00
Total PAH Haps	negl		negl		0
Polycyclic Organic Matter		3.30E-03		2.06E-04	2.1E-04
Total HAPs =			0.0E+00	4.5E-03	0.004

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]
 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 (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 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

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.2: Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions
Limited Emissions**

Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

The following calculations determine the limited 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	
Annual Asphalt Production Limitation =	950,000	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	0.25	0.28	NA	0.53
Organic PM	3.4E-04	2.5E-04	NA	0.16	0.121	NA	0.28
TOC	0.004	0.012	0.001	1.98	5.79	0.523	8.3
CO	0.001	0.001	3.5E-04	0.64	0.560	0.167	1.37

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

PM/HAPs	0.012	0.014	0	0.025
VOC/HAPs	0.029	0.074	0.008	0.111
non-VOC/HAPs	1.5E-04	1.6E-05	4.0E-05	2.1E-04
non-VOC/non-HAPs	0.14	0.08	0.04	0.26

Total VOCs	1.86	5.79	0.5	8.1
Total HAPs	0.04	0.09	0.008	0.14
		Worst Single HAP		0.042
				(formaldehyde)

Methodology

The asphalt temperature and volatility factor were provided by the source.

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)::

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

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

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

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

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

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

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

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

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

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

*No emission factors available for PM10 or PM2.5, therefore IDEM assumes PM10 and PM2.5 are equivalent to Total PM.

Abbreviations

TOC = Total Organic Compounds

CO = Carbon Monoxide

PM = Particulate

Matter

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

**Appendix A.2: Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)
Limited Emissions**

Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

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%	4.2E-04	5.7E-04	NA	9.9E-04
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	4.5E-05	1.7E-05	NA	6.2E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	1.1E-04	1.6E-04	NA	2.7E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	3.1E-05	6.8E-05	NA	9.8E-05
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	1.2E-05	0	NA	1.2E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	3.6E-06	0	NA	3.6E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	3.1E-06	0	NA	3.1E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	3.7E-06	0	NA	3.7E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	1.3E-05	1.1E-05	NA	2.4E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	1.7E-04	2.5E-04	NA	4.2E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	6.0E-07	0	NA	6.0E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	8.1E-05	1.8E-04	NA	2.6E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	1.2E-03	1.2E-03	NA	2.5E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	7.6E-07	0	NA	7.6E-07
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	3.9E-03	6.4E-03	NA	0.010
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	2.0E-03	2.2E-03	NA	4.2E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	3.6E-05	3.6E-05	NA	7.2E-05
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	1.3E-03	2.2E-03	NA	3.5E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	2.4E-04	5.3E-04	NA	7.7E-04
Total PAH HAPs							0.010	0.014	NA	0.023
Other semi-volatile HAPs										
Phenol		PM/HAP	---	Organic PM	1.18%	0	1.9E-03	0	0	1.9E-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.2: Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)
Limited Emissions

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%	1.86	5.79	0.49	8.14
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	1.3E-01	1.5E-02	3.4E-02	0.177
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	9.1E-04	3.2E-03	2.4E-04	0.004
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	1.4E-02	6.4E-02	3.7E-03	0.081
Total non-VOC/non-HAPS					7.30%	1.40%	0.144	0.081	0.038	0.26
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	1.0E-03	1.9E-03	2.7E-04	3.2E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	1.9E-04	2.8E-04	5.0E-05	5.2E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	9.7E-04	2.3E-03	2.6E-04	3.5E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	2.6E-04	9.3E-04	6.8E-05	1.3E-03
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	4.1E-06	2.3E-04	1.1E-06	2.4E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	3.0E-04	1.3E-03	7.8E-05	1.7E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	2.2E-03	0	5.7E-04	2.7E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	5.5E-03	2.2E-03	1.5E-03	0.009
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	1.7E-03	4.0E-02	4.6E-04	0.042
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	3.0E-03	5.8E-03	7.8E-04	0.010
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	3.6E-05	1.8E-05	9.4E-06	6.3E-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%	1.4E-04	3.1E-04	3.8E-05	4.9E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	1.5E-04	0	4.0E-05	1.9E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	4.1E-03	3.6E-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	2.6E-05	0	6.8E-06	3.2E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	8.1E-03	1.2E-02	2.1E-03	0.022
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	1.6E-03	3.3E-03	4.2E-04	5.3E-03
Total volatile organic HAPs					1.50%	1.30%	0.030	0.075	0.008	0.113

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.2: Emissions Calculations
Material Storage Piles
Limited Emissions**

Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Colur *Find the pile sizes from the source.*
Permit Number: 005-27498-05323 *Enter value of 0 is material not used.*
Reviewer: Jack Harmon *Add any additional materials used at the source.*

Note: Since the emissions from the storage piles are minimal, the limited emissions are equal to the unlimited emissions.

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.

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

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10/PM2.5 (tons/yr)
Sand	2.6	3.01	0.80	0.439	0.154
Limestone	1.6	1.85	1.30	0.439	0.154
RAP	0.5	0.58	1.40	0.148	0.052
Gravel	1.6	1.85	1.20	0.406	0.142
Slag	0	0.00	1.00	0.000	0.000
Totals				1.43	0.50

Methodology

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

PTE of PM10/PM2.5 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%

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

**Maximum anticipated pile size (acres) provided by the source.

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.2: Emissions Calculations
Material Processing, Handling, Crushing, Screening, and Conveying
Limited Emissions

Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

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 μ m)
 k (PM10) = 0.35 = particle size multiplier (0.35 assumed for aerodynamic diameter ≤ 10 μ m)
 k (PM2.5) = 0.053 = particle size multiplier (0.053 assumed for aerodynamic diameter ≤ 2.5 μ m)
 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 = 950,000 tons/yr
 Percent Asphalt Cement/Binder (weight %) = 5.0%
 Maximum Material Handling Throughput = 902,500 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	1.02	0.48	0.07
Front-end loader dumping of materials into feeder bins	1.02	0.48	0.07
Conveyor dropping material into dryer/mixer or batch tower	1.02	0.48	0.07
Total (tons/yr)	3.07	1.45	0.22

Methodology

The percent asphalt cement/binder provided by the source.
 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/PM2.5 (tons/yr)**
Crushing	0.0054	0.0024	2.44	1.08
Screening	0.025	0.0087	11.28	3.93
Conveying	0.003	0.0011	1.35	0.50
Limited Potential to Emit (tons/yr) =			15.07	5.51

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).
 **Assumes PM10 = PM2.5

Abbreviations

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

**Appendix A.2: Emissions Calculations
Unpaved Roads
Limited Emissions**

Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

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	950,000	tons/yr
Percent Asphalt Cement/Binder (weight %)	5.0%	
Maximum Material Handling Throughput	902,500	tons/yr
Maximum Asphalt Cement/Binder Throughput	47,500	tons/yr
No. 2 Fuel Oil Limitation	1,991,973	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	4.0E+04	1.6E+06	300	0.057	2289.2
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	4.0E+04	6.8E+05	300	0.057	2289.2
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	1.3E+03	6.3E+04	300	0.057	75.0
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	1.3E+03	1.6E+04	300	0.057	75.0
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	2.1E+02	9.3E+03	300	0.057	12.0
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	2.1E+02	2.5E+03	300	0.057	12.0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	2.1E+05	4.1E+06	300	0.057	12209.1
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	2.1E+05	3.2E+06	300	0.057	12209.1
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.0	4.0E+04	1.6E+06	300	0.057	2249.1
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.0	4.0E+04	6.7E+05	300	0.057	2249.1
Total						5.9E+05	1.2E+07		3.4E+04

Average Vehicle Weight Per Trip	20.3	tons/trip
Average Miles Per Trip	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	
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, $E_{ext} = E_f \cdot [(365 - P)/365]$

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	
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)	6.98	1.78	0.18	4.59	1.17	0.12	2.29	0.58	0.06
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	6.98	1.78	0.18	4.59	1.17	0.12	2.29	0.58	0.06
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.228	0.058	0.01	0.150	0.038	3.8E-03	0.075	0.019	1.9E-03
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.228	0.058	0.01	0.150	0.038	3.8E-03	0.075	0.019	1.9E-03
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.036	0.009	9.3E-04	0.024	0.006	6.1E-04	0.012	0.003	3.1E-04
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.036	0.009	9.3E-04	0.024	0.006	6.1E-04	0.012	0.003	3.1E-04
Aggregate/RAP Loader Full	Front-end loader (3 CY)	37.21	9.48	0.95	24.46	6.24	0.62	12.23	3.12	0.31
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	37.21	9.48	0.95	24.46	6.24	0.62	12.23	3.12	0.31
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	6.85	1.75	0.17	4.51	1.15	0.11	2.25	0.57	0.06
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	6.85	1.75	0.17	4.51	1.15	0.11	2.25	0.57	0.06
Totals		102.60	26.15	2.61	67.47	17.19	1.72	33.73	8.60	0.86

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.2: Emissions Calculations
Paved Roads
Limited Emissions**

**Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon**

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 =	950,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	902,500	tons/yr
Maximum Asphalt Cement/Binder Throughput =	47,500	tons/yr
No. 2 Fuel Oil Limitation =	1,991,973	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	4.0E+04	1.6E+06	300	0.057	2289.2
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.00	4.0E+04	6.8E+05	300	0.057	2289.2
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.00	1.3E+03	6.3E+04	300	0.057	75.0
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	1.3E+03	1.6E+04	300	0.057	75.0
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.00	2.1E+02	9.3E+03	300	0.057	12.0
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	2.1E+02	2.5E+03	300	0.057	12.0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.20	2.1E+05	4.1E+06	300	0.057	12209.1
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	2.1E+05	3.2E+06	300	0.057	12209.1
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.00	4.0E+04	1.6E+06	300	0.057	2249.1
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.00	4.0E+04	6.7E+05	300	0.057	2249.1
Total						5.9E+05	1.2E+07		3.4E+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, $E_f = [k * (sL/2)^{0.65} * (W/3)^{1.5} - C]$ (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.082	0.016	0.0024	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 = $\frac{125}{365}$ 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)	0.75	0.15	0.02	0.69	0.13	0.02	0.34	0.07	0.01
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.75	0.15	0.02	0.69	0.13	0.02	0.34	0.07	0.01
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.025	0.005	7.1E-04	0.023	0.004	6.5E-04	0.011	2.2E-03	3.2E-04
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.025	0.005	7.1E-04	0.023	0.004	6.5E-04	0.011	2.2E-03	3.2E-04
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	3.9E-03	7.6E-04	1.1E-04	3.6E-03	7.0E-04	1.0E-04	1.8E-03	3.5E-04	5.2E-05
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	3.9E-03	7.6E-04	1.1E-04	3.6E-03	7.0E-04	1.0E-04	1.8E-03	3.5E-04	5.2E-05
Aggregate/RAP Loader Full	Front-end loader (3 CY)	4.02	0.78	0.12	3.87	0.71	0.11	1.84	0.36	0.05
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	4.02	0.78	0.12	3.87	0.71	0.11	1.84	0.36	0.05
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.74	0.14	0.02	0.68	0.13	0.02	0.34	0.07	0.01
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.74	0.14	0.02	0.68	0.13	0.02	0.34	0.07	0.01
Totals		11.07	2.15	0.32	10.12	1.97	0.29	5.06	0.98	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.2: Emissions Calculations
Cold Mix Asphalt Production and Stockpiles
Limited Emissions

Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

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 = **6.25** tons/yr

If source does not produce cold mix asphalt enter a value of 0.

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 rapid cure (assuming gasoline or naphtha solvent)	25.3%	95.0%	0.0	0.0
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	0.0	0.0
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	0.0	0.0
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	0.0	0.0
Other asphalt with solvent binder	25.9%	2.5%	250.0	6.3
Worst Case Limited PTE of VOC =				6.25

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %) *	25.90%
Worst Case Single HAP Content of VOC solvent (weight %) *	9.0% Xylenes
Limited PTE of Total HAPs (tons/yr) =	1.62
Limited PTE of Single HAP (tons/yr) =	0.56 Xylenes

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

Volatile Organic HAP	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
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:

<http://www.aehs.com/publications/catalog/contents/tp.htm>

Abbreviations

VOC = Volatile Organic Compounds

PTE = Potential to Emit

**Appendix A.2: Emissions Calculations
Gasoline Fuel Transfer and Dispensing Operation
Limited Emissions**

Company Name: Milestone Contractors, L.P.
Source Address: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

Note: Since the emissions from the gasoline fuel transfer and dispensing operation are minimal, the limited emissions are equal to the unlimited emissions.

To calculate evaporative emissions from the gasoline dispensing fuel transfer and dispensing operation handling emission factors from AP-42 Table 5.2-7 were used. The total potential emission of VOC is as follows:

If source does not have a gasoline dispensing operation enter a value of 0.

Gasoline Throughput = gallons/day
 = kgal/yr

Volatile Organic Compounds

Emission Source	Emission Factor (lb/kgal of throughput)	PTE of VOC (tons/yr)*
Filling storage tank (balanced submerged filling)	0.3	0.00
Tank breathing and emptying	1.0	0.00
Vehicle refueling (displaced losses - controlled)	1.1	0.00
Spillage	0.7	0.00
Total		0.00

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) =	0.00	
Limited PTE of Single HAP (tons/yr) =	0.00	Xylenes

Methodology

The gasoline throughput was provided by the source.

Gasoline Throughput (kgal/yr) = [Gasoline Throughput (lbs/day)] * [365 days/yr] * [kgal/1000 gal]

PTE of VOC (tons/yr) = [Gasoline Throughput (kgal/yr)] * [Emission Factor (lb/kgal)] * [ton/2000 lb]

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

PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [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.2: Emission Calculations
Large Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (>600 HP)
Maximum Input Rate (>4.2 MMBtu/hr)
Limited Emissions

Company Name: Milestone Contractors, L.P.
Address City IN Zip: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Reviewer: Jack Harmon

A. Emissions calculated based on heat input capacity (MMBtu/hr)

Heat Input Capacity (MMBtu/hr)	12.2
Maximum Hours Operated per Year	8760
Potential Throughput (MMBtu/yr)	49,000
Sulfur Content (S) of Fuel (% by weight)	0.500

	Pollutant						
	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.100	0.0573	0.0573	0.505 (1.01S)	1.9 **see below	0.09	0.85
Potential Emission in tons/yr	5.31	3.06	3.06	12.37	46.55	2.21	20.83

*Emission factor from AP-42, Table 3.3-1. The PM10 emission factor is filterable and condensable PM10 combined. The PM2.5 emissions were assumed to be equal to PM10.

**NOx emissions: uncontrolled = 3.2 lb/MMBtu, controlled with ignition timing retard = 1.9 lb/MMBtu
 This source has ignition timing retard control device; therefore, emission factor of 1.9 was applied.

Hazardous Air Pollutants (HAPs)

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/MMBtu	7.76E-04	2.81E-04	1.93E-04	7.89E-05	2.52E-05	7.88E-06	2.12E-04
Potential Emission in tons/yr	1.90E-02	6.88E-03	4.73E-03	1.93E-03	6.17E-04	1.93E-04	5.19E-03

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

Potential Emission of Total HAPs (tons/yr)	3.86E-02
---	-----------------

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4

Potential Throughput (MMBtu/yr) = [Heat Input Capacity (MMBtu/hr)] * [Maximum Hours Operated per Year]

Potential Emission (tons/yr) = [Potential Throughput (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2,000 lb/ton]

**Appendix 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: 3415 South 650 East, Columbus, Indiana 47203
Permit Number: 005-27498-05323
Plt ID: 005-05323
Reviewer: Jack Harmon**

*Note: these equivalencies are related back to Waste Oil (assumed to be the predominant fuel used at this source).

Fuel Type	SO2 Equivalency						NOx Equivalency			
	Limited Sulfur Content	Limited Sulfur Content Units	AP-42 Emission Factor	Emission Factor Units	Fuel Equivalency	Fuel Equivalency Units	AP-42 Emission Factor	Emission Factor Units	Fuel Equivalency	Fuel Equivalency Units
Natural Gas	NA	NA	0.6	lb/MMCF	183.8	MMCF natural gas / 1000 gal waste oil	280	lb/MMCF	0.068	MMCF natural gas / 1000 gal waste oil
No. 2 Fuel Oil	0.50	% by weight	78.50	lb/kgal	1.40	gal No. 2 fuel oil / gal waste oil	24.0	lb/kgal	0.792	gal No. 2 fuel oil / gal waste oil
No. 4 Fuel Oil	0.50	% by weight	75.00	lb/kgal	1.47	gal No. 4 fuel oil / gal waste oil	47.0	lb/kgal	0.404	gal No. 4 fuel oil / gal waste oil
Residual (No. 5 or No. 6) Fuel Oil	0.50	% by weight	78.50	lb/kgal	1.40	gal residual (No. 5 or No. 6) fuel oil / gal waste oil	47.0	lb/kgal	0.404	gal residual (No. 5 or No. 6) fuel oil / gal waste oil
Propane	0.20	gr/100 ft3 sulfur	0.020	lb/kgal	5513	gal propane / gal waste oil	19.0	lb/kgal	1.00	gal propane / gal waste oil
Butane	0.22	gr/100 ft3 sulfur	0.0198	lb/kgal	5568	gal butane / gal waste oil	21.0	lb/kgal	0.905	gal butane / gal waste oil
Waste Oil	0.75	% by weight	110.25	lb/kgal	1.00	gal waste oil / gal waste oil	19.0	lb/kgal	1.00	gal waste oil / gal waste oil
Diesel Engine Oil	NA	NA	40.6	lb/kgal	2.72	gal diesel engine oil / gal waste oil	617.4	lb/kgal	0.031	gal diesel engine oil / gal waste oil

Methodology

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

Propane and Butane (industrial boiler 10 to 100 MMBtu/hr): AP-42 Chapter 1.5 (dated 10/96), Table 1.5-1

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

Diesel Engine Oil: AP-42 Chapter 3.3 (dated 10/96), Table 3.3-1



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

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Ron Terrell
Milestone Contractors, LP
3410 S. 650 E.
Columbus IN 46217

DATE: June 17, 2009

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
FESOP
005-27498-05323

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Robert J. Beyke Mgr. Reg. Affairs Milestone Contractors, LP
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
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Thomas W. Easterly
Commissioner

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Indianapolis, Indiana 46204
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Toll Free (800) 451-6027
www.idem.IN.gov

June 17, 2009

TO: Bartholomew Co. Public Library

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Milestone Contractors, LP
Permit Number: 005-27498-05323

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	BLOCCHET 6/17/2009 Milestone Contractors LP 005-27498-05323 (final)		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

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											Remarks
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2		Robert J Beyke Mgr - Reg Affairs Milestone Contractors LP 5950 S Belmont Ave Indianapolis IN 46217 (RO CAATS)									
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4		Mr. Elbert Held 734 Hutchins Columbus IN 47201 (Affected Party)									
5		Mr. Boris Ladwig 333 2nd St Columbus IN 47201 (Affected Party)									
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7		Mr. Lcnfc 1039 Sycamore St Columbus IN 47201 (Affected Party)									
8		Bartholomew Co Public Library 536 Fifth St. Columbus IN 47201-6225 (Library)									
9		Bartholomew County Commissioners 440 Third Street Columbus IN 47202 (Local Official)									
10		Mr. Jean Terpstra 3210 Grove Pkwy Columbus IN 47203 (Affected Party)									
11		August Tindell 31 Reo Street Columbus IN 47201 (Affected Party)									
12		Terry Lowe 1110 Central Ave. Columbus IN 47201 (Affected Party)									
13		Mr. Charles Mitch 3210 Grove Parkway Columbus IN 47203 (Affected Party)									
14		Bartholomew County Health Department 440 3rd Street, Suite 303 Columbus IN 47201 (Health Department)									
15		Harold & Janet Keller 3100 S. 650 East Columbus IN 47203 (Affected Party)									

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