



## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

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(800) 451-6027 • (317) 232-8603 • [www.idem.IN.gov](http://www.idem.IN.gov)

Eric J. Holcomb  
Governor

Bruno L. Pigott  
Commissioner

### NOTICE OF 30-DAY PERIOD FOR PUBLIC COMMENT

Preliminary Findings Regarding a  
Significant Revision to a  
Federally Enforceable State Operating Permit (FESOP)

for Milestone Contractors, L.P. in Fountain County

Significant Permit Revision No.: 045-40460-00019

The Indiana Department of Environmental Management (IDEM) has received an application from Milestone Contractors, L.P., located at 7770 South US Highway 41, Veedersburg, IN 47987, for a significant revision of its FESOP issued on April 24, 2017. If approved by IDEM's Office of Air Quality (OAQ), this proposed revision would allow Milestone Contractors, L.P. to make certain changes at its existing source. Milestone Contractors, L.P. has applied to replace a burner, construct new silos and bins, replace the drum mixer, and descriptive changes to the RAP crusher and screener.

The applicant intends to construct and operate new equipment that will emit air pollutants; therefore, the permit contains new or different permit conditions. In addition, some conditions from previously issued permits/approvals have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes (e.g., changes that add or modify synthetic minor emission limits). The potential to emit regulated air pollutants will continue to be limited to less than the Title V and PSD major threshold levels. IDEM has reviewed this application and has developed preliminary findings, consisting of a draft permit and several supporting documents, which would allow the applicant to make this change.

A copy of the permit application and IDEM's preliminary findings are available at:

Veedersburg Public Library  
408 N. Main Street  
Veedersburg, IN 47987

A copy of the preliminary findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>.

A copy of the preliminary findings is also available via IDEM's Virtual File Cabinet (VFC.) Please go to: <http://www.in.gov/idem/> and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria.

#### How can you participate in this process?

The date that this notice is published in a newspaper marks the beginning of a 30-day public comment period. If the 30<sup>th</sup> day of the comment period falls on a day when IDEM offices are closed for business, all comments must be postmarked or delivered in person on the next business day that IDEM is open.

You may request that IDEM hold a public hearing about this draft permit. If adverse comments concerning the **air pollution impact** of this draft permit are received, with a request for a public hearing, IDEM will decide whether or not to hold a public hearing. IDEM could also decide to hold a public meeting instead of, or in addition to, a public hearing. If a public hearing or meeting is held, IDEM will make a separate announcement of the date, time, and location of that hearing or meeting. At a hearing, you would have an opportunity to submit written comments and make verbal comments. At a meeting,

you would have an opportunity to submit written comments, ask questions, and discuss any air pollution concerns with IDEM staff.

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEM's mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEM at the address below. Please refer to permit number SPR 045-40460-00019 in all correspondence.

**Comments should be sent to:**

Deena P. Levering  
IDEM, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
(800) 451-6027, ask for Deena P. Levering or (317) 234-5400  
Or dial directly: (317) 234-5400  
Fax: (317) 232-6749 attn: Deena P. Levering  
E-mail: [dleverin@idem.IN.gov](mailto:dleverin@idem.IN.gov)

All comments will be considered by IDEM when we make a decision to issue or deny the permit. Comments that are most likely to affect final permit decisions are those based on the rules and laws governing this permitting process (326 IAC 2), air quality issues, and technical issues. IDEM does not have legal authority to regulate zoning, odor, or noise. For such issues, please contact your local officials.

For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: <http://www.in.gov/idem/airquality/2356.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

**What will happen after IDEM makes a decision?**

Following the end of the public comment period, IDEM will issue a Notice of Decision stating whether the permit has been issued or denied. If the permit is issued, it may be different than the draft permit because of comments that were received during the public comment period. If comments are received during the public notice period, the final decision will include a document that summarizes the comments and IDEM's response to those comments. If you have submitted comments or have asked to be added to the mailing list, you will receive a Notice of the Decision. The notice will provide details on how you may appeal IDEM's decision, if you disagree with that decision. The final decision will also be available on the Internet at the address indicated above, at the local library indicated above, and the IDEM public file room on the 12<sup>th</sup> floor of the Indiana Government Center North, 100 N. Senate Avenue, Indianapolis, Indiana 46204-2251.

If you have any questions, please contact Deena P. Levering or my staff at the above address.



Heath Hartley, Section Chief  
Permits Branch  
Office of Air Quality



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*Commissioner*

## DRAFT

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

Re: 045-40460-00019  
Significant Revision to  
FESOP Renewal No. F045-37360-00019

Dear Mr. Beyke:

Milestone Contractors, L.P. was issued a Federally Enforceable State Operating Permit (FESOP) Renewal No. 045-37360-00019 on April 24, 2017 for a stationary drum mix asphalt pavement production plant and cold-mix asphalt production operation located at 7770 South US Highway 41, Veedersburg, IN 47987. On September 11, 2018, the Office of Air Quality (OAQ) received an application from the source requesting to do the following:

- Replacement of the 120 MMBtu aggregate dryer burner with a 130 MMBtu aggregate dryer burner;
- The construction of an additional four (4) cold feed bins, bringing the total to ten (10);
- Replace the 400 ton/hr drum mixer;
- Replacement of existing hot mix asphalt silos with three (3) 200 ton hot mix asphalt silos; and
- Description changes to the RAP crusher and screener.

Pursuant to the provisions of 326 IAC 2-8-11.1, these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-8-11.1(f). Pursuant to the provisions of 326 IAC 2-8-11.1, a Significant Permit Revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

Pursuant to 326 IAC 2-8-11.1, the following emission units are approved for construction at the source:

- (a) One (1) aggregate drum mix dryer, identified as emission unit No. 2, approved in 2018 for construction, with a maximum throughput capacity of 400 tons of raw material per hour, processing blast furnace slag, steel slag, and asbestos-free recycled asphalt shingles in the aggregate mix, equipped with one (1) aggregate dryer burner with a maximum rated capacity of 130 million British thermal units (MMBtu) per hour, using natural gas as the primary fuel, using No. 2 distillate fuel oil and re-refined waste oil as a back-up fuel and one (1) baghouse for air pollution control, exhausting at one (1) stack, identified as S-1;
- (b) Four (4) cold feed bins, identified as CF-1, approved in 2018 for construction, each with a maximum storage capacity of 30 tons and a combined maximum throughput of 400,000 tons per year, using no controls, and exhausting to the atmosphere.
- (c) Three (3) hot mix asphalt silos, approved in 2018 for construction, each with a maximum storage capacity of 200 tons, using no controls, and exhausting to the atmosphere.
- (d) One (1) diesel fuel-fired RAP rushing/screening plant, not to exceed 500 horsepower, processing reclaimed asphalt pavement (RAP), with a maximum throughput not to exceed 500 tons of RAP per hour. Additional RAP plants may be located at the source for

storage and maintenance only. Only one (1) crushing/screening plant can be operable at any one time.

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this permit revision approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

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

Commenced Construction

4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the Significant Permit Revision into the permit.

All other conditions of the permit shall remain unchanged and in effect. Please find attached the entire FESOP as amended. The permit references the below listed attachment(s).

Attachment A: Fugitive Dust Control Plan

Attachment B: 40 CFR 60, Subpart I, Standards of Performance for Hot-mix Asphalt Facilities

Attachment C: 40 CFR 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants

Previously issued approvals for this source containing these attachments are available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>.

Previously issued approvals for this source are also available via IDEM's Virtual File Cabinet (VFC). Please go to: <http://www.in.gov/idem/> and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria.

Federal rules under Title 40 of United States Code of Federal Regulations may also be found on the U.S. Government Printing Office's Electronic Code of Federal Regulations (eCFR) website, located on the Internet at: [http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40tab\\_02.tpl](http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40tab_02.tpl).

A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. A copy of the permit is also available via IDEM's Virtual File Cabinet (VFC). Please go to: <http://www.in.gov/idem/> and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: <http://www.in.gov/idem/airquality/2356.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5.

If you have any questions regarding this matter, please contact Deena P. Levering, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 234-5400 or (800) 451-6027, and ask for Deena P. Levering or (317) 234-5400.

Sincerely,

Heath Hartley, Section Chief  
Permits Branch  
Office of Air Quality

Attachment(s): Updated Permit and Technical Support Document

cc: File - Fountain County  
Fountain County Health Department  
U.S. EPA, Region 5  
Compliance and Enforcement Branch



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DRAFT

**Federally Enforceable State Operating Permit Renewal**  
**OFFICE OF AIR QUALITY**

**Milestone Contractors, L.P.**  
**7770 South US Highway 41**  
**Veedersburg, Indiana 47987**

(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.: F045-37360-00019	
Master Agency Interest ID.: 36812	
Original Issued/Signed by: Jason R. Krawczyk, Section Chief Permits Branch Office of Air Quality	Issuance Date: April 24, 2017  Expiration Date: April 24, 2027

Significant Permit Revision No.: 045-40460-00019	
Issued by:  Heath Hartley, Section Chief Permits Branch Office of Air Quality	Issuance Date:  Expiration Date: April 24, 2027

## TABLE OF CONTENTS

<b>SECTION A</b>	<b>SOURCE SUMMARY .....</b>	<b>5</b>
A.1	General Information [326 IAC 2-8-3(b)]	
A.2	Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]	
A.3	Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(l)]	
A.4	FESOP Applicability [326 IAC 2-8-2]	
<b>SECTION B</b>	<b>GENERAL CONDITIONS .....</b>	<b>8</b>
B.1	Definitions [326 IAC 2-8-1]	
B.2	Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]	
B.3	Term of Conditions [326 IAC 2-1.1-9.5]	
B.4	Enforceability [326 IAC 2-8-6] [IC 13-17-12]	
B.5	Severability [326 IAC 2-8-4(4)]	
B.6	Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]	
B.7	Duty to Provide Information [326 IAC 2-8-4(5)(E)]	
B.8	Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]	
B.9	Annual Compliance Certification [326 IAC 2-8-5(a)(1)]	
B.10	Compliance Order Issuance [326 IAC 2-8-5(b)]	
B.11	Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]	
B.12	Emergency Provisions [326 IAC 2-8-12]	
B.13	Prior Permits Superseded [326 IAC 2-1.1-9.5]	
B.14	Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]	
B.15	Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]	
B.16	Permit Renewal [326 IAC 2-8-3(h)]	
B.17	Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]	
B.18	Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]	
B.19	Source Modification Requirement [326 IAC 2-8-11.1]	
B.20	Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]	
B.21	Transfer of Ownership or Operational Control [326 IAC 2-8-10]	
B.22	Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]	
B.23	Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]	
<b>SECTION C</b>	<b>SOURCE OPERATION CONDITIONS.....</b>	<b>18</b>
	<b>Emission Limitations and Standards [326 IAC 2-8-4(1)] .....</b>	<b>18</b>
C.1	Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]	
C.2	Overall Source Limit [326 IAC 2-8]	
C.3	Opacity [326 IAC 5-1]	
C.4	Open Burning [326 IAC 4-1] [IC 13-17-9]	
C.5	Incineration [326 IAC 4-2] [326 IAC 9-1-2]	
C.6	Fugitive Dust Emissions [326 IAC 6-4]	
C.7	Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]	
C.8	Stack Height [326 IAC 1-7]	
C.9	Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]	
	<b>Testing Requirements [326 IAC 2-8-4(3)].....</b>	<b>20</b>
C.10	Performance Testing [326 IAC 3-6]	
	<b>Compliance Requirements [326 IAC 2-1.1-11] .....</b>	<b>21</b>
C.11	Compliance Requirements [326 IAC 2-1.1-11]	
	<b>Compliance Monitoring Requirements [326 IAC 2-8-4(1)][326 IAC 2-8-5(a)(1)] .....</b>	<b>21</b>
C.12	Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]	

C.13	Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]	
	<b>Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]</b>	<b>22</b>
C.14	Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]	
C.15	Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]	
C.16	Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]	
C.17	Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]	
	<b>Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]</b>	<b>23</b>
C.18	General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]	
C.19	General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]	
	<b>Stratospheric Ozone Protection</b>	<b>24</b>
C.20	Compliance with 40 CFR 82 and 326 IAC 22-1	
<b>SECTION D.1</b>	<b>EMISSIONS UNIT OPERATION CONDITIONS</b>	<b>25</b>
	<b>Emission Limitations and Standards [326 IAC 2-8-4(1)]</b>	<b>26</b>
D.1.1	PSD Minor Limit [326 IAC 2-2]	
D.1.2	FESOP Limits: PM10, PM2.5, NOx, VOC, and CO [326 IAC 2-8-4][326 IAC 2-2][326 IAC 8-1-6]	
D.1.3	FESOP Limits: SO2, NOx and HAPs [326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-4.1]	
D.1.4	Particulate Emission Limits [326 IAC 6-2]	
D.1.5	Particulate Emission Limits [326 IAC 6-3]	
D.1.6	Sulfur Dioxide (SO2) [326 IAC 7-1.1-1] [326 IAC 7-2-1]	
D.1.7	Preventive Maintenance Plan [326 IAC 2-8-4(9)]	
	<b>Compliance Determination Requirements [326 IAC 2-8-4(1)]</b>	<b>29</b>
D.1.8	Particulate Control	
D.1.9	Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]	
D.1.10	Sulfur Dioxide (SO <sub>2</sub> ) Emissions and Sulfur Content	
D.1.11	Hydrogen Chloride (HCl) Emissions and Ash, Chlorine, and Lead Content	
D.1.12	Multiple Fuel and Slag Usage Limitations	
D.1.13	Shingle Asbestos Content	
	<b>Compliance Monitoring Requirements [326 IAC 2-8-4(1)][326 IAC 2-8-5(a)(1)]</b>	<b>32</b>
D.1.14	Visible Emissions Notations	
D.1.15	Broken or Failed Bag Detection	
	<b>Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]</b>	<b>32</b>
D.1.16	Record Keeping Requirements	
D.1.17	Reporting Requirements	
<b>SECTION D.2</b>	<b>EMISSIONS UNIT OPERATION CONDITIONS</b>	<b>35</b>
	<b>Emission Limitations and Standards [326 IAC 2-8-4(1)]</b>	<b>35</b>
D.2.1	Volatile Organic Compounds (VOC) [326 IAC 8-5-2]	
D.2.2	Volatile Organic Compounds (VOC) [326 IAC 2-8-4] [326 IAC 2-2]	
	<b>Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]</b>	<b>36</b>
D.2.3	Record Keeping Requirements	
D.2.4	Reporting Requirements	
<b>SECTION E.1</b>	<b>NSPS</b>	<b>38</b>
	<b>New Source Performance Standards (NSPS) Requirements [326 IAC 2-8-4(1)]</b>	<b>38</b>
E.1.1	General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]	
E.1.2	New Source Performance Standards for Hot-mix Asphalt Plants NSPS [326 IAC 12] [40 CFR Part 60, Subpart I]	



<b>Compliance Determination Requirements [326 IAC 2-8-4(1)]</b> .....	<b>39</b>
E.1.3 Testing Requirements [326 IAC 2-1.1-11] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]	
<b>SECTION E.2 NSPS</b> .....	<b>40</b>
<b>National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-8-4(1)]</b> .....	<b>40</b>
E.2.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]	
E.2.2 Standards of Performance for Nonmetallic Mineral Processing Plants NESHAP [326 IAC 12] [40 CFR Part 60, Subpart OOO]	
<b>Compliance Determination Requirements [326 IAC 2-8-4(1)]</b> .....	<b>41</b>
E.2.3 Testing Requirements [326 IAC 2-1.1-11] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]	
<b>CERTIFICATION</b> .....	<b>42</b>
<b>EMERGENCY OCCURRENCE REPORT</b> .....	<b>43</b>
<b>FESOP Quarterly Report</b> .....	<b>45</b>
<b>QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT</b> .....	<b>49</b>
<b>Attachment A: Fugitive Dust Control Plan</b>	
<b>Attachment B: NSPS Subpart I - Standards of Performance for Hot-mix Asphalt Facilities [40 CFR Part 60, Subpart I] [326 IAC 12-1]</b>	
<b>Attachment C: NSPS Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants [40 CFR Part 60, Subpart OOO] [326 IAC 12-1]</b>	

## SECTION A SOURCE SUMMARY

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

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

---

The Permittee owns and operates a stationary drum mix asphalt pavement production plant and cold-mix asphalt production operation.

Source Address:	7770 South US Highway 41, Veedersburg, Indiana 47987
General Source Phone Number:	317-788-6885
SIC Code:	2951 (Asphalt Paving Mixtures and Blocks)
County Location:	Fountain
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

---

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

- (a) One (1) aggregate drum mix dryer, identified as emission unit No. 2, approved in 2018 for construction, with a maximum throughput capacity of 400 tons of raw material per hour, processing blast furnace slag, steel slag, and asbestos-free recycled asphalt shingles in the aggregate mix, equipped with one (1) aggregate dryer burner with a maximum rated capacity of 130 million British thermal units (MMBtu) per hour, using natural gas as the primary fuel, using No. 2 distillate fuel oil and re-refined waste oil as a back-up fuel and one (1) baghouse for air pollution control, exhausting at one (1) stack, identified as S-1;
- (b) one (1) drag slat conveyor, three (3) feed conveyors, and one (1) screen;
- (c) Ten (10) cold feed bins, identified as CF-1, with four (4) approved in 2018 for construction, each with a maximum storage capacity of 30 tons and a combined maximum throughput of 400,000 tons per year, using no controls, and exhausting to the atmosphere.
- (d) Three (3) hot mix asphalt silos, approved in 2018 for construction, each with a maximum storage capacity of 200 tons, using no controls, and exhausting to the atmosphere.
- (e) one (1) Reclaimed Asphalt Pavement (RAP) feed system;
- (f) aggregate storage piles, with a total maximum storage capacity of 80,000 tons, including:
  - (1) Blast furnace and/or electric arc steel slag storage piles, with a maximum anticipated pile size of 0.02 acres.
  - (2) Supplier certified asbestos-free factory seconds and/or post consumer waste shingles storage piles, with a maximum anticipated pile size of 0.02 acres.

Under 40 CFR 60, Subpart I, New Source Performance Standards for Hot-mix Asphalt Plants, this asphalt plant is considered an affected source.

- (g) One (1) diesel fuel-fired portable crusher/screener, not to exceed 500 horsepower, processing reclaimed asphalt pavement (RAP), with a maximum throughput not to exceed 500 tons of RAP per hour. Additional RAP crusher/screeners may be located at the source for storage and maintenance only. Only one (1) crusher/screener can be operable at any one time.

Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.

Under 40 CFR 1068.30, General Compliance Provisions for Highway, Stationary, and Nonroad Programs - Definitions, this unit this is considered a nonroad engine.

- (h) cold-mix (stockpile mix) asphalt production operations and storage piles;

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

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This stationary source also includes the following insignificant activities:

- (a) one (1) No. 2 distillate fuel oil fired hot oil heater, identified as emission unit No. 12, rated at 2.2 MMBtu per hour, exhausting at one (1) stack, identified as S.
- (b) one (1) fuel oil storage tank, constructed in 1973, identified as Tank 13, with a maximum storage capacity of 10,200 gallons, exhausting at one (1) stack, identified as V-4;
- (c) one (1) fuel oil storage tank, identified as Tank 14, with a maximum storage capacity of 10,000 gallons, exhausting at one (1) stack, identified as V-5;
- (d) one (1) fuel oil storage tank, identified as Tank 16, with a maximum storage capacity of 9,400 gallons, exhausting at one (1) stack, identified as V-7;
- (e) one (1) liquid asphalt storage tank, constructed in 1978, identified as Tank 11, with a maximum storage capacity of 20,600 gallons, exhausting at one (1) stack, identified as V-3;
- (f) one (1) liquid asphalt storage tank, identified as Tank 15, with a maximum storage capacity of 20,000 gallons, exhausting at one (1) stack, identified as V-6;
- (g) combustion source flame safety purging on startup;
- (h) a petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month;
- (i) Volatile Organic Compound (VOC) and Hazardous Air Pollutant (HAP) storage tanks with capacity less than or equal to 1,000 gallons and annual throughput less than 12,000 gallons;
- (j) vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;
- (k) application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings;
- (l) degreasing operations that do not exceed 145 gallons per 12 months, except if subject to

- 326 IAC 20-6 (parts washer using non-HAP Safety Kleen or Crystal Clean solvent);
- (m) cleaners and solvents having a vapor pressure equal to or less than 2 kPa; 15mm Hg; or 0.3 psi measured at 38 degrees C (100°F) or; having a vapor pressure equal to or less than 0.7 kPa; 5 mm Hg; or 0.1 psi measured at 20°C (68°); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months;
  - (n) closed loop heating and cooling systems;
  - (o) paved and unpaved roads and parking lots with public access; and
  - (p) a laboratory as defined in 326 IAC 2-7-1(21)(D).

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]

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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)]

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- (a) This permit, F045-37360-00019, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

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

### B.4 Enforceability [326 IAC 2-8-6] [IC 13-17-12]

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

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

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

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

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

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

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- (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. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

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

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- (a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:

- (1) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and
  - (2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
  - (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

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

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

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

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

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

#### B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

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

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

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

- (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.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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

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- (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 and Enforcement Branch), or  
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)  
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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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.

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

- (a) All terms and conditions of permits established prior to F045-37360-00019 and issued pursuant to permitting programs approved into the state implementation plan have been either:
- (1) incorporated as originally stated,
- (2) revised, or

(3) deleted.

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

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

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

**B.15 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]**

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- (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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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.16 Permit Renewal [326 IAC 2-8-3(h)]**

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- (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(42). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
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 does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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.18 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) and (c) 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)(1) and (c). 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)(1) and (c).

- (b) Emission Trades [326 IAC 2-8-15(b)]  
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(b).
- (c) Alternative Operating Scenarios [326 IAC 2-8-15(c)]  
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

**B.19 Source Modification Requirement [326 IAC 2-8-11.1]**

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

**B.20 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]**

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

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

- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

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

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:  
  
Indiana Department of Environmental Management  
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 does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ no later than 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.23 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
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### 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) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period.

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

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

C.3 Opacity [326 IAC 5-1]

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

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

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

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

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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]

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The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

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

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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]

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Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the attached plan as in Attachment A.

C.8 Stack Height [326 IAC 1-7]

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

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

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- (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 61-53 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 that meets the requirements of 326 IAC 2-8-5(a)(1) 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]**

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- (a) For performance testing required by this permit, 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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]**

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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(1)][326 IAC 2-8-5(a)(1)]**

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

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- (a) For new units:  
Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.
  
- (b) For existing units:  
Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance to begin such monitoring. If, due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance, 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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- (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. The analog instrument shall be capable of measuring values outside of the normal range.
  
- (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.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]**

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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.15 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]**

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

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Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

- (a) The Permittee shall take reasonable response steps to 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 excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
  - (1) initial inspection and evaluation;
  - (2) recording that operations returned or are returning 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 normal or usual manner of operation.
- (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 record the reasonable response steps taken.

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

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) 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 a certification that meets the requirements of 326 IAC 2-8-5(a)(1) 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.18 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. Support information includes the following, where applicable:
  - (AA) All calibration and maintenance records.
  - (BB) All original strip chart recordings for continuous monitoring instrumentation.
  - (CC) Copies of all reports required by the FESOP.Records of required monitoring information include the following, where applicable:
  - (AA) The date, place, as defined in this permit, and time of sampling or measurements.
  - (BB) The dates analyses were performed.
  - (CC) The company or entity that performed the analyses.
  - (DD) The analytical techniques or methods used.
  - (EE) The results of such analyses.
  - (FF) The operating conditions as existing at the time of sampling or measurement.

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, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

**C.19 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. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response

steps taken must be reported except that 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. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

- (b) The address for report submittal is:

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) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

### **Stratospheric Ozone Protection**

#### **C.20 Compliance with 40 CFR 82 and 326 IAC 22-1**

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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 applicable standards for recycling and emissions reduction.

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

- (a) One (1) aggregate drum mix dryer, identified as emission unit No. 2, approved in 2018 for construction, with a maximum throughput capacity of 400 tons of raw material per hour, processing blast furnace slag, steel slag, and asbestos-free recycled asphalt shingles in the aggregate mix, equipped with one (1) aggregate dryer burner with a maximum rated capacity of 130 million British thermal units (MMBtu) per hour, using natural gas as the primary fuel, using No. 2 distillate fuel oil and re-refined waste oil as a back-up fuel and one (1) baghouse for air pollution control, exhausting at one (1) stack, identified as S-1;
- (b) one (1) drag slat conveyor, three (3) feed conveyors, and one (1) screen;
- (c) Ten (10) cold feed bins, identified as CF-1, approved in 2018 for construction, each with a maximum storage capacity of 30 tons and a combined maximum throughput of 400,000 tons per year, using no controls, and exhausting to the atmosphere.
- (d) Three (3) hot mix asphalt silos, approved in 2018 for construction, each with a maximum storage capacity of 200 tons, using no controls, and exhausting to the atmosphere.
- (e) one (1) Reclaimed Asphalt Pavement (RAP) feed system;
- (f) aggregate storage piles, with a total maximum storage capacity of 80,000 tons, including:
  - (1) Blast furnace and/or electric arc steel slag storage piles, with a maximum anticipated pile size of 0.02 acres.
  - (2) Supplier certified asbestos-free factory seconds and/or post consumer waste shingles storage piles, with a maximum anticipated pile size of 0.02 acres.

Under 40 CFR 60, Subpart I, New Source Performance Standards for Hot-mix Asphalt Plants, this asphalt plant is considered an affected source.

- (g) One (1) diesel fuel-fired portable crusher/screener, not to exceed 500 horsepower, processing reclaimed asphalt pavement (RAP), with a maximum throughput not to exceed 500 tons of RAP per hour. Additional RAP crusher/screeners may be located at the source for storage and maintenance only. Only one (1) crusher/screener can be operable at any one time.

Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.

Under 40 CFR 1068.30, General Compliance Provisions for Highway, Stationary, and Nonroad Programs - Definitions, this unit this is considered a nonroad engine.

### Insignificant Activities:

- (a) one (1) No. 2 distillate fuel oil fired hot oil heater, identified as emission unit No. 12, rated at 2.2 MMBtu per hour, exhausting at one (1) stack, identified as S.

(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 PSD Minor Limit [326 IAC 2-2]**

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

- (a) The amount of hot-mix asphalt processed shall not exceed 1,000,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) PM emissions from the dryer/mixer shall not exceed 0.356 pounds per ton of asphalt processed.
- (c) The Permittee shall control PM emissions from the paved and unpaved roads according to the fugitive dust plan, included as Attachment A to the permit.

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 twelve (12) consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

### **D.1.2 FESOP Limits: PM10, PM2.5, NOx, VOC, and CO [326 IAC 2-8-4][326 IAC 2-2][326 IAC 8-1-6]**

Pursuant to 326 IAC 2-8-4, and in order to render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), not applicable the Permittee shall comply with the following:

- (a) The amount of hot-mix asphalt processed shall not exceed 1,000,000 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 0.155 pounds per ton of asphalt processed.
- (c) The PM2.5 emissions from the dryer/mixer shall not exceed 0.181 pounds per ton of asphalt processed.
- (d) The NOx emissions from the dryer/mixer shall not exceed 0.055 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 CO emissions from the dryer/mixer shall not exceed 0.130 pounds per ton of asphalt processed.
- (g) The Permittee shall control PM10 and PM2.5 emissions from the paved and unpaved roads according to the fugitive dust plan, included as Attachment A to the permit.

Compliance with these limits, combined with the potential to emit PM10, PM2.5, NOx, VOC, and CO from all other emission units at this source, shall limit the source-wide total potential to emit of PM10, PM2.5, NOx, VOC, and CO to less than 100 tons per twelve (12) consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), not applicable.

Additionally, compliance with the limits in Conditions D.1.2(a) and D.1.2(e) shall limit the VOC emissions from the dryer/mixer to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) not applicable.

D.1.3 FESOP Limits: SO<sub>2</sub>, NO<sub>x</sub> and HAPs [326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-4.1]

Pursuant to 326 IAC 2-8-4, and in order to render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants) not applicable, the Permittee shall comply with the following:

(a) Fuel and Slag Specifications

- (1) The sulfur content of the No. 2 distillate fuel oil shall not exceed 0.50% by weight.
- (2) The sulfur content of the waste oil shall not exceed 0.75% by weight.
- (3) The waste oil combusted in the dryer burner shall not contain more than 1.00% ash, 0.20% chlorine, and 0.01% lead.
- (4) The HCl emissions shall not exceed 13.2 pounds of HCl per 1,000 gallons of waste oil burned.
- (5) The sulfur content of the Blast Furnace slag shall not exceed 1.50% by weight.
- (6) The SO<sub>2</sub> emissions from the dryer/mixer shall not exceed 0.740 pounds per ton of Blast Furnace slag processed in the aggregate mix.
- (7) The sulfur content of the Steel slag shall not exceed 0.66% by weight.
- (8) The SO<sub>2</sub> emissions from the dryer/mixer shall not exceed 0.0014 pounds per ton of Steel slag processed in the aggregate mix.

(b) Single Fuel and Slag Usage Limitations:

When combusting only one type of fuel per twelve (12) consecutive month period in the dryer/mixer burner, the usage of fuel and slag shall be limited as follows:

- (1) The total amount of natural gas burned shall not exceed 1,028 million cubic feet (MMcf) per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (2) No. 2 fuel oil usage shall not exceed 2,129,948 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (3) Waste oil usage shall not exceed 1,315,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month; and
- (4) The Blast Furnace slag usage shall not exceed 50,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (5) The Steel slag usage shall not exceed 1,000,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(c) Multiple Fuel and Slag Usage Limitation:

When combusting any single fuel or more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, in conjunction with the use of slag in the aggregate mix, emissions from the dryer/mixer burner as follows:

- (1) SO<sub>2</sub> emissions from the dryer/mixer shall not exceed 75.61 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (2) NO<sub>x</sub> emissions from the dryer/mixer shall not exceed 97.62 tons per twelve (12)



consecutive month period, with compliance determined at the end of each month.

(d) Asphalt Shingle Usage Limitation

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to ensure the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration), 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAPs)), and 40 CFR 61, Subpart M are not applicable, the Permittee shall not grind recycled asphalt shingles on-site and shall only use the following as an additive in its aggregate mix:

- (1) Certified asbestos-free factory second asphalt shingles;
- (2) Post consumer waste shingles generated at single family homes and/or residential buildings containing four or fewer dwelling units; and/or
- (3) Factory second shingles and/or post consumer waste shingles that have sampled negative for asbestos.

Compliance with these limits, combined with the potential to emit SO<sub>2</sub>, NO<sub>x</sub>, and HAPs from all other emission units at this source, shall limit the source-wide total potential to emit of SO<sub>2</sub> and NO<sub>x</sub> to less than 100 tons per twelve (12) consecutive month period, any single HAP to less than ten (10) tons per twelve (12) consecutive month period, and total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants), and 40 CFR 61, Subpart M not applicable and shall render the source minor under Section 112 of the Clean Air Act.

D.1.4 Particulate Emission Limits [326 IAC 6-2]

Pursuant to 326 IAC 6-2-4, the particulate emissions from the hot oil heater, identified as emission unit No. 12, shall not exceed six tenths (0.6) pounds of particulate matter per MMBtu heat input.

D.1.5 Particulate Emission Limits [326 IAC 6-3]

- (a) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the diesel fuel-fired portable RAP crusher and screener shall not exceed 68.96 pounds per hour when operating at a process weight rate of 500 tons (or 1,000,000 pounds) per hour.

The pound per hour limitation was calculated with the following equation:  
Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where} \quad E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (b) Pursuant to 326 IAC 6-3-2(e)(3), when the process weight exceeds 200 tons per hour, the maximum allowable emission may exceed the emission limit listed above, provided the concentration of particulate matter in the gas discharged to the atmosphere is less than 0.10 pounds per 1,000 pounds of gases.

D.1.6 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1-1] [326 IAC 7-2-1]

- (a) Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), the Permittee shall comply with the following:

- (1) The sulfur dioxide (SO<sub>2</sub>) emissions from the dryer/mixer burner shall not exceed five tenths (0.5) pounds per MMBtu when using distillate oil.

- (2) The sulfur dioxide (SO<sub>2</sub>) emissions from the dryer/mixer burner shall not exceed one and six tenths (1.6) pounds per MMBtu heat input when using residual oil.
- (b) Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

**D.1.7 Preventive Maintenance Plan [326 IAC 2-8-4(9)]**

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A Preventive Maintenance Plan is required for these facilities and any associated control devices. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

**Compliance Determination Requirements [326 IAC 2-8-4(1)]**

**D.1.8 Particulate Control**

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- (a) In order to assure compliance with Conditions D.1.1(b), D.1.2(b), and D.1.2(c), the baghouse for particulate control 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.1.9 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]**

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Not later than 180 days after startup of the new dryer/mixer, the Permittee shall perform PM, PM<sub>10</sub>, and PM<sub>2.5</sub> testing of the dryer/mixer not later than five (5) years from the most recent valid compliance demonstration, utilizing methods approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM<sub>10</sub> and PM<sub>2.5</sub> includes filterable and condensable particulate matter.

**D.1.10 Sulfur Dioxide (SO<sub>2</sub>) Emissions and Sulfur Content**

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***Fuel Oil***

- (a) Pursuant to 326 IAC 2-8-4 and 326 IAC 3-7-4, compliance with the fuel limitations established in Conditions D.1.3(a)(1) through D.1.3(a)(3), D.1.3(a)(5), and D.1.6, shall be determined utilizing one of the following options. Pursuant to 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements), compliance shall be demonstrated on a thirty (30) day calendar-month average.
  - (1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
  - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
    - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
    - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

- (3) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 120 MMBtu/hr burner, 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 (1) or (2) above shall not be refuted by evidence of compliance pursuant to the other method.

### ***Blast Furnace Slag***

- (b) Pursuant to 326 IAC 2-8-4, compliance with the Blast Furnace slag limitation established in Condition D.1.3(a)(6) shall be determined utilizing one of the following options. Compliance shall be demonstrated on a thirty (30) day calendar-month average.

- (1) Maintaining all records of vendor analyses, if accompanied by a vendor certification, or certifications of Blast Furnace slag delivered; or
- (2) Analyzing a sample of each Blast Furnace slag delivery, if no vendor analyses or certifications are available, to determine the sulfur content of the Blast Furnace slag, 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.
- (3) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 120 MMBtu/hr burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, or other procedures approved by IDEM, OAQ.

A determination of noncompliance pursuant to any of the methods specified in (1) or (2) above shall not be refuted by evidence of compliance pursuant to the other method.

Use of blast furnace slag with a sulfur content of less than or equal to 1.5% demonstrates compliance with the dryer/mixer limit in D.1.3(a)(5).

### ***Steel Slag***

- (c) Pursuant to 326 IAC 2-8-4, compliance with the Steel slag limitations established in Condition D.1.3(a)(8) shall be determined utilizing one of the following options. Compliance shall be demonstrated on a thirty (30) day calendar-month average.

- (1) Maintaining all records of vendor analyses, if accompanied by a vendor certification, or certifications of slag delivered; or
- (2) Analyzing a sample of the Steel slag delivery if no vendor analyses or certifications are available, at least once per quarter, to determine the sulfur content of the Steel slag, 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.
- (3) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 120 MMBtu/hr burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, or other procedures approved by IDEM, OAQ.

A determination of noncompliance pursuant to any of the methods specified in (1) or (2) above shall not be refuted by evidence of compliance pursuant to the other method.

Use of steel slag with a sulfur content of less than or equal to 0.66% demonstrates compliance with the dryer/mixer limit in D.1.3(a)(7).

#### D.1.11 Hydrogen Chloride (HCl) Emissions and Ash, Chlorine, and Lead Content

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The Permittee shall demonstrate compliance with the waste oil ash, chlorine, and lead content limits established in Condition D.1.3(a)(3), by providing a vendor analysis of each fuel delivery accompanied by a vendor certification.

#### D.1.12 Multiple Fuel and Slag Usage Limitations

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In order to determine compliance with the Condition D.1.3(c) when combusting any single fuel or more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, in conjunction with the use of slag in the aggregate mix, the Permittee shall limit fuel usage according to the following formulas:

(a) Sulfur Dioxide (SO<sub>2</sub>) Emission Calculation

$$S = \frac{G(E_G) + O(E_O) + W(E_W) + B(E_B) + T(E_T)}{2,000 \text{ lbs/ton}}$$

*where:*

S = tons of sulfur dioxide emissions for a 12-month consecutive period  
G = million cubic feet of natural gas used in the in the dryer/mixer last 12 months;  
O = kilogallons of No. 2 fuel oil used in the last 12 months  
W = kilogallons of Waste oil used in the last 12 months  
B = tons of Blast Furnace slag used in the last 12 months  
T = tons of Steel slag used in the last 12 months  
E<sub>G</sub> = 0.6 lb/MMCF of natural gas  
E<sub>O</sub> = 71.0 lb/1000 gallons of No. 2 fuel oil  
E<sub>W</sub> = 147 lb/1000 gallons of Waste oil  
E<sub>B</sub> = 0.74 lb/ton of Blast Furnace slag used  
E<sub>T</sub> = 0.0014 lb/ton of Steel slag used

(b) Nitrogen Oxides (NO<sub>x</sub>) Emission Calculation

$$N = \frac{G(E_G) + O(E_O) + W(E_W)}{2,000 \text{ lbs/ton}}$$

*where:*

N = tons of nitrogen oxide emissions for a 12-month consecutive period;  
G = million cubic feet of natural gas used in the last 12 months;  
O = kilogallons of No. 2 fuel oil used in the last 12 months;  
W = kilogallons of reclaimed/waste oil used in the last 12 months.  
E<sub>G</sub> = 190 lb/million cubic feet of natural gas;  
E<sub>O</sub> = 24.0 lb/1000 gallons of No. 2 fuel oil;  
E<sub>W</sub> = 19.0 lb/1000 gallons of waste oil.

#### D.1.13 Shingle Asbestos Content

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Compliance with Condition D.1.3(d) shall be determined utilizing one of the following options:

- (a) Providing a shingle supplier certification that the factory second shingles do not contain asbestos;
- (b) Obtaining from the post consumer waste shingle supplier a signed certification that the post consumer waste shingles were generated at single family homes and/or residential buildings containing four or fewer dwelling units; and/or

- (c) Analyzing a sample of the factory second shingles and/or post consumer waste shingles delivery to determine the asbestos content of the shingles, 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 determination of noncompliance pursuant to any of the methods specified above shall not be refuted by evidence of compliance pursuant to the other method.

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

#### **D.1.14 Visible Emissions Notations**

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- (a) Visible emission notations from the 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. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. An abnormal visible emission notation is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

#### **D.1.15 Broken or Failed Bag Detection**

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In the event that bag failure has been observed:

- (a) For a single compartment baghouses 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, dust traces, or triboflows.

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

#### **D.1.16 Record Keeping Requirements**

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- (a) To document the compliance status with Conditions D.1.1(a), and D.1.2(a), the Permittee

shall keep monthly records of the amount of asphalt processed through the dryer/mixer.

- (b) To document the compliance status with Conditions D.1.3, D.1.6, D.1.10, D.1.11, D.1.12, and D.1.13, the Permittee shall maintain records in accordance with (1) through (10) below. Records maintained for (1) through (10) below shall be taken monthly and shall be complete and sufficient to establish compliance with the limits established in Conditions D.1.3, D.1.6, D.1.10, D.1.11, D.1.12, and D.1.13.
- (1) Calendar dates covered in the compliance determination period;
  - (2) Actual fuel usage, sulfur content, heat content, and equivalent sulfur dioxide, emission rates for each fuel used at the source since the last compliance determination period;
  - (3) Actual waste oil usage, ash, chlorine, and lead content, and equivalent hydrogen chloride emission rate for waste oil used at the source since the last compliance determination period;
  - (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
  - (5) If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:
    - (i) Fuel supplier certifications;
    - (ii) The name of the fuel supplier; and
    - (iii) A statement from the fuel supplier that certifies the sulfur content of the No. 2 and waste oil, and the chlorine content of waste oil.
  - (6) Actual blast furnace and steel slag usage, sulfur content and equivalent sulfur dioxide emission rates for all blast furnace and steel slag used at the source since the last compliance determination period;
  - (7) A certification, signed by the owner or operator, that the records of the blast furnace and steel slag supplier certifications represent all of the blast furnace and steel slag used during the period; and
  - (8) If the slag supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:
    - (i) Blast furnace and steel slag supplier certifications;
    - (ii) The name of the blast furnace and steel slag supplier; and
    - (iii) A statement from the blast furnace and steel slag supplier that certifies the sulfur content of the blast furnace and steel slag.
  - (9) If the factory second shingle supplier certification is used to demonstrate compliance, the following, as a minimum, shall be maintained:
    - (A) Factory second shingle supplier certifications;
    - (B) The name of the factory second shingle supplier(s); and

- (C) A statement from the factory second shingle supplier(s) that certifies the shingles from their company do not contain asbestos.
- (10) If the post consumer waste shingle supplier certification is used to demonstrate compliance, the following as a minimum, shall be maintained:
- (A) Post consumer waste shingle supplier certifications;
  - (B) The name of the post consumer waste shingle supplier(s); and
  - (C) A statement from the post consumer shingle supplier(s) that certifies the shingles were generated at single family homes and/or residential buildings containing four or fewer dwelling units.
- (11) If the factory second shingles and/or post consumer waste shingles are analyzed to determine the asbestos content, the following, as a minimum, shall be maintained:
- (A) The name of the shingle supplier(s);
  - (B) The name of the certified lab or certified personnel that performed the shingle asbestos content analysis; and
  - (C) The shingle asbestos content analysis results.
- (c) To document the compliance status with Condition D.1.14, the Permittee shall maintain records once per day of the visible emission notations. 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 process did not operate that day).
- (d) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

#### D.1.17 Reporting Requirements

Quarterly summaries of the information to document the compliance status with Conditions D.1.1(a), D.1.2(a), and D.1.3, shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

## SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

### Emissions Unit Description:

(d) Cold-mix (stockpile mix) asphalt manufacturing operations and storage piles.

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

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

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

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

- (a) Pursuant to 326 IAC 2-8-4, the VOC emissions from the sum of the liquid binders (asphalt emulsions) shall not exceed 55.62 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) Liquid binders used in the production of cold mix asphalt shall be defined as follows:
  - (1) Cut back asphalt rapid cure, containing a maximum of 25.3% of the liquid binder by weight of VOC solvent and 95.0% by weight of VOC solvent evaporating.
  - (2) Cut back asphalt medium cure, containing a maximum of 28.6% of the liquid binder by weight of VOC solvent and 70.0% by weight of VOC solvent evaporating.
  - (3) Cut back asphalt slow cure, containing a maximum of 20.0% of the liquid binder by weight of VOC solvent and 25.0% by weight of VOC solvent evaporating.
  - (4) Emulsified asphalt with solvent, containing a maximum of 15.0% of liquid binder by weight of VOC solvent and 46.4% by weight of the VOC solvent in the liquid blend evaporating. The percent oil distillate in emulsified asphalt with solvent liquid, as determined by ASTM, must be seven percent (7%) or less of the total emulsion by volume.
  - (5) Other asphalt with solvent binder, containing a maximum 25.9% of the liquid binder of VOC solvent and 2.5% by weight of the VOC solvent evaporating.
- (c) When using only one type of liquid binder (asphalt emulsion) per twelve (12) consecutive month period, the usage of liquid binder shall be limited as follows:
  - (1) The amount of VOC solvent used in rapid cure cutback asphalt shall not exceed 58.55 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.



- (2) The amount of VOC solvent used in medium cure cutback asphalt shall not exceed 79.46 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (3) The amount of VOC solvent used in slow cure cutback asphalt shall not exceed 222.48 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (4) The amount of VOC solvent used in emulsified asphalt shall not exceed 119.87 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
  - (5) The amount of VOC solvent used in all other asphalt shall not exceed 2,224.80 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (d) When using more than one liquid binder (asphalt emulsion) per twelve (12) consecutive month period, VOC emissions shall be limited as follows:
- (1) The VOC solvent allotments in (1) through (5) above shall be adjusted when more than one type of binder is used per twelve (12) consecutive month period with compliance determined at the end of each month. In order to determine the tons of VOC emitted per each type of binder, use the following formula and divide the tons of VOC solvent used for each type of binder by the corresponding adjustment factor listed in the table that follows.

$$\text{VOC emitted (tons/yr)} = \frac{\text{VOC solvent used for each binder (tons/yr)}}{\text{Adjustment factor}}$$

Type of binder	adjustment factor
cutback asphalt rapid cure	1.053
cutback asphalt medium cure	1.429
cutback asphalt slow cure	4.000
emulsified asphalt	2.155
other asphalt	40.0

Compliance with these limits, combined with the potential to emit VOC and HAPs from all other emission units at this source, will limit source-wide VOC emissions to less than one hundred (100) tons per twelve (12) consecutive month period, any single HAP to less than ten (10) tons per twelve (12) consecutive month period, and any combination of HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable and shall render the source minor under Section 112 of the Clean Air Act.

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

**D.2.3 Record Keeping Requirements**

- (a) To document the compliance status with Condition D.2.2(c)(1) through (5), the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained shall be taken monthly and shall be complete and sufficient to establish compliance with

the VOC emission limits established in Condition D.2.2(c)(1) through (5).

- (1) Calendar dates covered in the compliance determination period;
- (2) Actual asphalt binder usage in the production of cold mix asphalt since the last compliance determination period;
- (3) Actual VOC solvent content by weight of the cutback asphalt binder used in the production of cold mix asphalt since the last compliance determination period;  
and
- (4) Actual amount of VOC solvent used in the production of cold mix asphalt, and the amount of VOC emitted since the last compliance determination period.

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

- (b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

#### D.2.4 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.2.2 shall be submitted no later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

**SECTION E.1**

**NSPS**

**Emissions Unit Description:**

- (a) One (1) aggregate drum mix dryer, identified as emission unit No. 2, approved in 2018 for construction, with a maximum throughput capacity of 400 tons of raw material per hour, processing blast furnace slag, steel slag, and asbestos-free recycled asphalt shingles in the aggregate mix, equipped with one (1) aggregate dryer burner with a maximum rated capacity of 130 million British thermal units (MMBtu) per hour, using natural gas as the primary fuel, using No. 2 distillate fuel oil and re-refined waste oil as a back-up fuel and one (1) baghouse for air pollution control, exhausting at one (1) stack, identified as S-1;
- (b) one (1) drag slat conveyor, three (3) feed conveyors, and one (1) screen;
- (c) Ten (10) cold feed bins, identified as CF-1, approved in 2018 for construction, each with a maximum storage capacity of 30 tons and a combined maximum throughput of 400,000 tons per year, using no controls, and exhausting to the atmosphere.
- (d) Three (3) hot mix asphalt silos, approved in 2018 for construction, each with a maximum storage capacity of 200 tons, using no controls, and exhausting to the atmosphere.
- (e) one (1) Reclaimed Asphalt Pavement (RAP) feed system;
- (f) aggregate storage piles, with a total maximum storage capacity of 80,000 tons, including:
  - (1) Blast furnace and/or electric arc steel slag storage piles, with a maximum anticipated pile size of 0.02 acres.
  - (2) Supplier certified asbestos-free factory seconds and/or post consumer waste shingles storage piles, with a maximum anticipated pile size of 0.02 acres.

Under 40 CFR 60, Subpart I, New Source Performance Standards for Hot-mix Asphalt Plants, this asphalt plant is considered an affected source.

(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 New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]**

- (a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission units listed above, except as otherwise specified in 40 CFR Part 60, Subpart I.
- (b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports 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

E.1.2 New Source Performance Standards for Hot-mix Asphalt Plants NSPS [326 IAC 12] [40 CFR Part 60, Subpart I]

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The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart I (included as Attachment B to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission units listed above:

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

**Compliance Determination Requirements [326 IAC 2-8-4(1)]**

E.1.3 Testing Requirements [326 IAC 2-1.1-11] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

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In order to document the compliance status with Condition E.1.2, the Permittee shall perform the testing required under 40 CFR 60, Subpart I, utilizing methods as approved by the Commissioner, at least once every five (5) years from the date of the most recent valid compliance demonstration. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

**SECTION E.2**

**NSPS**

**Emissions Unit Description:**

- (g) One (1) diesel fuel-fired portable crusher/screener, not to exceed 500 horsepower, processing reclaimed asphalt pavement (RAP), with a maximum throughput not to exceed 500 tons of RAP per hour. Additional RAP crusher/screeners may be located at the source for storage and maintenance only. Only one (1) crusher/screener can be operable at any one time.

Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.

Under 40 CFR 1068.30, General Compliance Provisions for Highway, Stationary, and Nonroad Programs - Definitions, this unit this is considered a nonroad engine.

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

**National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements  
[326 IAC 2-8-4(1)]**

**E.2.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]**

- (a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 12-1, for the emission unit listed above, except as otherwise specified in 40 CFR Part 60, Subpart OOO.

- (b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports 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

**E.2.2 Standards of Performance for Nonmetallic Mineral Processing Plants NESHAP [326 IAC 12] [40 CFR Part 60, Subpart OOO]**

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart OOO (included as Attachment C to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit listed above:

- (1) 40 CFR 60.670(a), (d), (e), and (f)
- (2) 40 CFR 60.671
- (3) 40 CFR 60.672(b), (d), and (e)
- (4) 40 CFR 60.673
- (5) 40 CFR 60.674(b)
- (6) 40 CFR 60.675(a), (c)(1)(i), (ii), (iii), (c)(3), (d), (e), (g), and (i)
- (7) 40 CFR 60.676(a), (b)(1), (f), (h), (i), (j), and (k)
- (8) Table 1 and Table 3

### **Compliance Determination Requirements [326 IAC 2-8-4(1)]**

#### **E.2.3 Testing Requirements [326 IAC 2-1.1-11] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

In order to document the compliance status with Condition E.2.2, the Permittee shall perform testing for fugitive emissions from affected facilities without water sprays, as required under 40 CFR 63, Subpart OOO, utilizing methods as approved by the Commissioner, at least once every five (5) years from the date of the most recent valid compliance demonstration. Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

Note: Pursuant to §60.674(b)(1), affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in §60.674(b) and §60.676(b) are exempt from this 5-year repeat testing requirement.

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

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

Source Name: Milestone Contractors, L.P.  
Source Address: 7770 South US Highway 41, Veedersburg, Indiana 47987  
FESOP Permit No.: F045-37360-00019

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Date:

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

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

Source Name: Milestone Contractors, L.P.  
Source Address: 7770 South US Highway 41, Veedersburg, Indiana 47987  
FESOP Permit No.: F045-37360-00019

**This form consists of 2 pages**

**Page 1 of 2**

- |  |
|--|
| <p><input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <ul style="list-style-type: none"><li>• The Permittee must notify the Office of Air Quality (OAQ), within four (4) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and</li><li>• 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 2-8-12</li></ul> |
|--|

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 <sub>2</sub> , VOC, NO <sub>x</sub> , 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: \_\_\_\_\_

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

**FESOP Quarterly Report**

Source Name: Milestone Contractors, L.P.  
Source Address: 7770 South US Highway 41, Veedersburg, Indiana 47987  
FESOP Permit No.: F045-37360-00019  
Facility: Dryer/Mixer Burner (S-1)  
Parameter: Hot-mix Asphalt Production  
Limit: The amount of hot-mix asphalt produced in the dryer/burner shall not exceed 1,000,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER : \_\_\_\_\_ YEAR: \_\_\_\_\_

Month	Column 1	Column 2	Column 1 + Column 2
	Hot-mix Asphalt Produced This Month (tons)	Hot-mix Asphalt Produced Previous 11 Months (tons)	12 Month Total Hot-mix Asphalt Produced (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: \_\_\_\_\_

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

**FESOP Quarterly Report**

Page 1 of 3

Source Name: Milestone Contractors, L.P.  
 Source Address: 7770 South US Highway 41, Veedersburg, Indiana 47987  
 FESOP Permit No.: F045-37360-00019  
 Facility: Dryer/Mixer (Unit No. 2)  
 Parameter: **Fuel & Slag Usage / SO<sub>2</sub> emissions**  
 Emission Limits: Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 75.61 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.12(a).  
  
Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 97.62 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.12(b).

Fuel & Slag Limits: When combusting only one type of fuel per twelve (12) consecutive month period in the dryer/mixer burner, in conjunction with the use of slag in the aggregate mix, fuel and slag usage shall not exceed the following:

Fuel Type (Units)	Fuel Usage Limit (per 12 consecutive month period)
Natural Gas (million cubic feet (MMcf))	1,028
No. 2 Distillate Fuel Oil (gallons)	2,129,948
Waste Oil (gallons)	1,315,000
Blast Furnace Slag (tons)	50,000
Steel Slag (tons)	1,000,000

Facility: Cold-mix Asphalt Production  
 Parameter: **Binder Usage / VOC Emissions**  
 Emission Limits: Volatile Organic Compound (VOC) emissions from the sum of the binders shall not exceed 55.62 tons per twelve (12) consecutive month period with compliance determined at the end of each month, using the equation found in Condition D.2.2(d).  
 Binder Limits: When using only one type of liquid binder (asphalt emulsion) per twelve (12) consecutive month period in the production of cold-mix asphalt, liquid binder (asphalt emulsion) usage shall not exceed the following:

Type of Binder	Binder Usage Limit (tons per 12 consecutive month period)
Cutback Asphalt Rapid Cure	58.55
Cutback Asphalt Medium Cure	79.46
Cutback Asphalt Slow Cure	222.48
Emulsified Asphalt	119.87
Other Asphalt	2,224.80

**FESOP Quarterly Report - Fuel & Slag Usage / SO2 emissions**

QUARTER: \_\_\_\_\_ YEAR: \_\_\_\_\_

Month	Fuel Types / Slag (units)	Column 1	Column 2	Column 1 + Column 2	Equation Results	
		Usage This Month	Usage Previous 11 Months	Usage 12 Month Total	Sulfur Dioxide (SO2) Emissions (tons per 12 months)	Nitrogen Oxides (NOx) Emissions (tons per 12 months)
	Natural Gas (MMcf)					
	No. 2 Fuel Oil (gallons)					
	Waste Fuel Oil (gallons)					
	Blast Furnace Slag (tons)					
	Steel Slag Usage (tons)					
	Natural Gas (MMcf)					
	No. 2 Fuel Oil (gallons)					
	Waste Fuel Oil (gallons)					
	Blast Furnace Slag (tons)					
	Steel Slag Usage (tons)					
	Natural Gas (MMcf)					
	No. 2 Fuel Oil (gallons)					
	Waste Fuel Oil (gallons)					
	Blast Furnace Slag (tons)					
	Steel Slag Usage (tons)					

No deviation occurred in this reporting period.

Submitted by: \_\_\_\_\_ Date: \_\_\_\_\_

Deviation/s occurred in this reporting period.

Title / Position: \_\_\_\_\_ Phone: \_\_\_\_\_

Deviation has been reported on:

Signature:

**FESOP Quarterly Report - Liquid Binder (Asphalt Emulsion) Usage / VOC Emissions**

QUARTER: \_\_\_\_\_ YEAR: \_\_\_\_\_

Month	Binder/Emulsion Types (tons)	Column 1	Column 2	Column 1 + Column 2	Equation Results
		Usage This Month	Usage Previous 11 Months	Usage 12 Month Total	VOC Emissions (tons per 12 months)
	Cutback asphalt rapid cure liquid binder				
	Cutback asphalt medium cure liquid binder				
	Cutback asphalt slow cure liquid binder				
	Emulsified asphalt with solvent liquid binder				
	Other asphalt with solvent liquid binder				
	Cutback asphalt rapid cure liquid binder				
	Cutback asphalt medium cure liquid binder				
	Cutback asphalt slow cure liquid binder				
	Emulsified asphalt with solvent liquid binder				
	Other asphalt with solvent liquid binder				
	Cutback asphalt rapid cure liquid binder				
	Cutback asphalt medium cure liquid binder				
	Cutback asphalt slow cure liquid binder				
	Emulsified asphalt with solvent liquid binder				
	Other asphalt with solvent liquid binder				

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

Submitted by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Title/Position: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Signature: \_\_\_\_\_

Type of Binder	Adjustment Factor
Cutback Asphalt Rapid Cure	1.053
Cutback Asphalt Medium Cure	1.429
Cutback Asphalt Slow Cure	4.0
Emulsified Asphalt	2.155
Other Asphalt	40.0

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

Source Name: Milestone Contractors, L.P.  
Source Address: 7770 South US Highway 41, Veedersburg, Indiana 47987  
FESOP Permit No.: F045-37360-00019

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

Page 1 of 2

<p>This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C- General Reporting. Any deviation from the requirements of this permit, 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>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

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

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

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

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

**Source Description and Location**

<b>Source Name:</b>	<b>Milestone Contractors, L.P.</b>
<b>Source Location:</b>	<b>7770 South US Highway 41, Veedersburg, IN 47987</b>
<b>County:</b>	<b>Fountain</b>
<b>SIC Code:</b>	<b>2951 (Asphalt Paving Mixtures and Blocks)</b>
<b>Operation Permit No.:</b>	<b>F 045-37360-00019</b>
<b>Operation Permit Issuance Date:</b>	<b>April 24, 2017</b>
<b>Significant Permit Revision No.:</b>	<b>045-40460-00019</b>
<b>Permit Reviewer:</b>	<b>Deena P. Levering</b>

**Existing Approvals**

The source was issued FESOP Renewal No. 045-37360-00019 on April 24, 2017. There have been no subsequent approvals issued.

**County Attainment Status**

The source is located in Fountain County.

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard. <sup>1</sup>
PM <sub>2.5</sub>	Unclassifiable or attainment effective April 5, 2005, for the annual PM <sub>2.5</sub> standard.
PM <sub>2.5</sub>	Unclassifiable or attainment effective December 13, 2009, for the 24-hour PM <sub>2.5</sub> standard.
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

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

- (a) **Ozone Standards**  
Volatile organic compounds (VOC) and Nitrogen Oxides (NO<sub>x</sub>) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO<sub>x</sub> emissions are considered when evaluating the rule applicability relating to ozone. Fountain County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) **PM<sub>2.5</sub>**  
Fountain County has been classified as attainment for PM<sub>2.5</sub>. Therefore, direct PM<sub>2.5</sub>, SO<sub>2</sub>, and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.



- (c) Other Criteria Pollutants  
 Fountain County has been classified as attainment or unclassifiable in Indiana for all the 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 (1) of the twenty-eight (28) listed source categories under 326 IAC 2-2-1(ff)(1), 326 IAC 2-3-2(g), or 326 IAC 2-7-1(22)(B). However, there is an applicable New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants that was in effect on August 7, 1980 (NSPS Subpart I for (Standards of Performance for Hot-Mix Asphalt Facilities)); therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

**Greenhouse Gas (GHG) Emissions**

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146 (available at [http://www.supremecourt.gov/opinions/13pdf/12-1146\\_4g18.pdf](http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf)), the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court’s decision. U.S. EPA’s guidance states that U.S. EPA will no longer require PSD or Title V permits for sources “previously classified as ‘Major’ based solely on greenhouse gas emissions.”

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHG emissions to determine operating permit applicability or PSD applicability to a source or modification.

**Source Status - Existing Source**

The table below summarizes the potential to emit of the entire source, prior to the proposed revision, after consideration of all enforceable limits established in the effective permits:

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)								
	PM <sup>1</sup>	PM <sub>10</sub> <sup>1</sup>	PM <sub>2.5</sub> <sup>1, 2</sup>	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Single HAP <sup>3</sup>	Combined HAPs
Dryer Fuel Combustion (worst case)	42.08	33.53	33.53	75.61	97.62	2.83	43.16	8.68 (HCl)	<b>10.21</b>
Dryer/Mixer (Process)	177.86	77.70	90.52	29.00	27.50	16.00	65.00	1.55 (Formaldehyde)	5.33
Dryer/Mixer Slag Processing	0	0	0	18.50	0	0	0	0	0
Hot Oil Heater Fuel Combustion (worst case)	0.14	0.23	0.23	4.89	1.38	0.01	0.34	0.004 (Hexane)	0.005
Fugitive Emissions	71.00	21.07	8.25	0	0	64.67	1.44	5.01 (Xylenes)	14.65
<b>Total PTE of Entire Source</b>	<b>249.00</b>	<b>99.00</b>	<b>99.00</b>	<b>99.00</b>	<b>99.00</b>	<b>80.68</b>	<b>66.78</b>	<b>8.68 (HCl)</b>	<b>24.87</b>

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)								
	PM <sup>1</sup>	PM <sub>10</sub> <sup>1</sup>	PM <sub>2.5</sub> <sup>1, 2</sup>	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Single HAP <sup>3</sup>	Combined HAPs
Title V Major Source Thresholds**	-	100	100	100	100	100	100	10	25
PSD Major Source Thresholds	250	250	250	250	250	250	250	-	-

<sup>1</sup>Under the Part 70 Permit program (40 CFR 70), PM<sub>10</sub> and PM<sub>2.5</sub>, not particulate matter (PM), are each considered as a "regulated air pollutant."  
<sup>2</sup>PM<sub>2.5</sub> listed is direct PM<sub>2.5</sub>.  
<sup>3</sup>Single highest source-wide HAP.

- (a) This existing source is not a major stationary source under PSD (326 IAC 2-2), because no PSD regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories as specified in 326 IAC 2-2-1(ff)(1).
- (b) This existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the unlimited potential to emit HAPs is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).
- (c) These emissions are based on the TSD of FESOP Renewal No.: 045-37360-00019, issued on April 24, 2017.

**Description of Proposed Revision**

The Office of Air Quality (OAQ) has reviewed an application, submitted by Milestone Contractors, L.P. on September 11, 2018 relating to the following changes:

- Replacement of the 120 MMBtu aggregate dryer burner with a 130 MMBtu aggregate dryer burner;
- The construction of an additional four (4) cold feed bins, bringing the total to ten (10);
- Replace the 400 ton/hr drum mixer;
- Replacement of existing hot mix asphalt silos with three (3) 200 ton hot mix asphalt silos; and
- Description changes to the RAP crusher and screener.

The following is a list of the new emission units and pollution control devices:

- (a) One (1) aggregate drum mix dryer, identified as emission unit No. 2, approved in 2018 for construction, with a maximum throughput capacity of 400 tons of raw material per hour, processing blast furnace slag, steel slag, and asbestos-free recycled asphalt shingles in the aggregate mix, equipped with one (1) aggregate dryer burner with a maximum rated capacity of 130 million British thermal units (MMBtu) per hour, using natural gas as the primary fuel, using No. 2 distillate fuel oil and re-refined waste oil as a back-up fuel and one (1) baghouse for air pollution control, exhausting at one (1) stack, identified as S-1;
- (b) Four (4) cold feed bins, identified as CF-1, approved in 2018 for construction, each with a maximum storage capacity of 30 tons and a combined maximum throughput of 400,000 tons per year, using no controls, and exhausting to the atmosphere.
- (c) Three (3) hot mix asphalt silos, approved in 2018 for construction, each with a maximum storage capacity of 200 tons, using no controls, and exhausting to the atmosphere.

The following is a list of the modified emission units:

- (a) One (1) diesel fuel-fired portable crusher/screener, not to exceed 500 horsepower, processing reclaimed asphalt pavement (RAP), with a maximum throughput not to exceed 500 tons of RAP per hour. Additional RAP crusher/screeners may be located at the source for storage and maintenance only. Only one (1) crusher/screener can be operable at any one time.

Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.

Under 40 CFR 1068.30, General Compliance Provisions for Highway, Stationary, and Nonroad Programs -Definitions, this unit this is considered a nonroad engine.

**Enforcement Issues**

There are no pending enforcement actions related to this revision.

**Emission Calculations**

See Appendix A of this TSD for detailed emission calculations.

**Permit Level Determination – FESOP Significant Permit Revision**

The following table is used to determine the appropriate permit level under 326 IAC 2-8-11.1 (Permit Revisions). This table reflects the PTE before controls of the proposed revision. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	PTE of Proposed Revision (tons/year)								
	PM <sup>1</sup>	PM <sub>10</sub> <sup>1</sup>	PM <sub>2.5</sub> <sup>1,2</sup>	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Single HAP <sup>3</sup>	Combined HAPs
Dryer Fuel Combustion (worst case)	260.30	207.42	207.42	448.40	108.19	4.07	47.83	53.69 (HCl)	58.29
Dryer/Mixer (Process)	49,056	11,388	2,628	101.62	96.36	56.06	227.76	5.43 (Formaldehyde)	18.68
Dryer/Mixer Slag Processing (worst case)	0	0	0	545	0	0	0	0	0
<b>Total PTE of Revision</b>	<b>49,124.85</b>	<b>11,415.60</b>	<b>2,651.06</b>	<b>992.92</b>	<b>108.19</b>	<b>42,195.40</b>	<b>232.81</b>	<b>3,789.84 (Xylenes)</b>	<b>11,042.46</b>

<sup>1</sup>Under the Part 70 Permit program (40 CFR 70), PM<sub>10</sub> and PM<sub>2.5</sub>, not particulate matter (PM), are each considered as a "regulated air pollutant."  
<sup>2</sup>PM<sub>2.5</sub> listed is direct PM<sub>2.5</sub>.  
<sup>3</sup>Single highest source-wide HAP.

Appendix A of this TSD reflects the potential emissions of the proposed revision in detail.

Pursuant to 326 IAC 2-8-11.1(f)(1)(E), this FESOP is being revised through a FESOP Significant Permit Revision because the proposed revision is not an Administrative Amendment or Minor Permit revision and the proposed revision involves the construction of new emission units with potential to emit greater than or equal to twenty-five (25) tons per year of the following pollutants:

- (i) PM, PM<sub>10</sub>, or direct PM<sub>2.5</sub>.
- (ii) Sulfur dioxide (SO<sub>2</sub>).
- (iii) Nitrogen oxides (NO<sub>x</sub>).
- (iv) Volatile Organic Compounds (VOC).

**PTE of the Entire Source After Issuance of the FESOP Revision**

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

Due to this modification, the potential to emit of the entire source to accommodate the proposed revision will not change.

Process/ Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)								
	PM <sup>1</sup>	PM <sub>10</sub> <sup>1</sup>	PM <sub>2.5</sub> <sup>1,2</sup>	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Single HAP <sup>3</sup>	Combined HAPs
Dryer Fuel Combustion (worst case)	42.08	33.53	33.53	75.61	97.62	2.83	43.16	8.68 (HCl)	10.21
Dryer/Mixer (Process)	177.86	77.70	90.52	29.00	27.50	16.00	65.00	0.11 (HCl)	5.33
Dryer/Mixer Slag Processing	0	0	0	18.50	0	0	0	0	0
Hot Oil Heater Fuel Combustion (worst case)	0.14	0.23	0.23	4.89	1.38	0.01	0.34	0.004 (Hexane)	0.005
Fugitive Emissions	71.00	21.07	8.25	0	0	64.67	1.44	5.01 (Hexane)	14.65
Total PTE of Entire Source	249.00	99.00	99.00	99.00	99.00	80.68	66.78	8.68 (HCl)	14.65
Title V Major Source Thresholds	-	100	100	100	100	100	100	10	25
PSD Major Source Thresholds	250	250	250	250	250	250	250	-	-

<sup>1</sup>Under the Part 70 Permit program (40 CFR 70), PM<sub>10</sub> and PM<sub>2.5</sub>, not particulate matter (PM), are each considered as a "regulated air pollutant."  
<sup>2</sup>PM<sub>2.5</sub> listed is direct PM<sub>2.5</sub>.  
<sup>3</sup>Single highest source-wide HAP.

(a) FESOP Status

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

(1) Criteria Pollutants

In order to comply with the requirements of 326 IAC 2-8-4 (FESOP) and render the requirements of 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the source shall comply with the following:

- (A) The amount of hot-mix asphalt processed shall not exceed 1,000,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (B) The PM<sub>10</sub> emissions from the dryer/mixer shall not exceed 0.155 pounds per ton of asphalt processed.

- (C) The PM<sub>2.5</sub> emissions from the dryer/mixer shall not exceed 0.181 pounds per ton of asphalt processed.
- (D) The NO<sub>x</sub> emissions from the dryer/mixer shall not exceed 0.055 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 CO emissions from the dryer/mixer shall not exceed 0.130 pounds per ton of asphalt processed.
- (G) The Permittee shall control PM<sub>10</sub> and PM<sub>2.5</sub> emissions from the paved and unpaved roads according to the fugitive dust plan, included as Attachment A to the permit.
- (H) Fuel and Slag Specifications
  - (1) The sulfur content of the No. 2 distillate fuel oil shall not exceed 0.50% by weight.
  - (2) The sulfur content of the waste oil shall not exceed 0.75% by weight.
  - (3) The waste oil combusted in the dryer burner shall not contain more than 1.00% ash, 0.20% chlorine, and 0.01% lead.
  - (4) The sulfur content of the Blast Furnace slag shall not exceed 1.50% by weight.
  - (5) The SO<sub>2</sub> emissions from the dryer/mixer shall not exceed 0.740 pounds per ton of Blast Furnace slag processed in the aggregate mix.
  - (6) The sulfur content of the Steel slag shall not exceed 0.66% by weight.
  - (7) The SO<sub>2</sub> emissions from the dryer/mixer shall not exceed 0.0014 pounds per ton of Steel slag processed in the aggregate mix.
- (I) Single Fuel and Slag Usage Limitations:

When combusting only one type of fuel per twelve (12) consecutive month period in the dryer/mixer burner, the usage of fuel and slag shall be limited as follows:

  - (1) The total amount of natural gas burned shall not exceed 1,028 million cubic feet (MMcf) per twelve (12) consecutive month period, with compliance determined at the end of each month;
  - (2) No. 2 fuel oil usage shall not exceed 2,129,948 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;
  - (3) Waste oil usage shall not exceed 1,315,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month; and
  - (4) The Blast Furnace slag usage shall not exceed 50,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

- (5) The Steel slag usage shall not exceed 1,000,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(J) Multiple Fuel and Slag Usage Limitation:

When combusting any single fuel or more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, in conjunction with the use of slag in the aggregate mix, emissions from the dryer/mixer burner as follows:

- (1) SO<sub>2</sub> emissions from the dryer/mixer shall not exceed 75.61 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (2) NO<sub>x</sub> emissions from the dryer/mixer shall not exceed 97.62 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(K) Asphalt Shingle Usage Limitation

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to ensure the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration), 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAPs)), and 40 CFR 61, Subpart M are not applicable, the Permittee shall not grind recycled asphalt shingles on-site and shall only use the following as an additive in its aggregate mix:

- (1) Certified asbestos-free factory second asphalt shingles;
- (2) Post consumer waste shingles generated at single family homes and/or residential buildings containing four or fewer dwelling units; and/or
- (3) Factory second shingles and/or post consumer waste shingles that have sampled negative for asbestos.

Compliance with these limits, combined with the potential to emit PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, VOC, and CO from all other emission units at this source, shall limit the source-wide total potential to emit of emit PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, VOC, and CO to less than 100 tons per twelve (12) consecutive month period, each, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

(2) HAPs

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

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

Compliance with these limits, combined with the potential to emit HAP from all other emission units at this source, shall limit the source-wide total potential to emit of any single HAP to less than ten (10) tons per twelve (12) consecutive month period, total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period shall render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable.

(b) PSD Minor Source – PM

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

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 hot-mix asphalt processed shall not exceed 1,000,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (2) PM emissions from the dryer/mixer shall not exceed 0.356 pounds per ton of asphalt processed.
- (3) The Permittee shall control PM emissions from the paved and unpaved roads according to the fugitive dust plan, included as Attachment A to the permit.

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 twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

<b>Federal Rule Applicability Determination</b>
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Due to this proposed revision, federal rule applicability has been reviewed as follows:

**New Source Performance Standards (NSPS):**

- (a) The new aggregate drum mixer dryer, is subject to the New Source Performance Standards for Hot Mix Asphalt Facilities, 40 CFR 60, Subpart I and 326 IAC 12, because this emission unit mixes hot mix asphalt as described in 40 CFR 60.90(a).

The units subject to this rule include the following:

One (1) aggregate drum mix dryer, identified as emission unit No. 2, approved in 2018 for construction, with a maximum throughput capacity of 400 tons of raw material per hour, processing blast furnace slag, steel slag, and asbestos-free recycled asphalt shingles in the aggregate mix, equipped with one (1) aggregate dryer burner with a maximum rated capacity of 130 million British thermal units (MMBtu) per hour, using natural gas as the primary fuel, using No. 2 distillate fuel oil and re-refined waste oil as a back-up fuel and one (1) baghouse for air pollution control, exhausting at one (1) stack, identified as S-1;

Applicable portions of the NSPS are the following:

- (A) 40 CFR 60.90;
- (B) 40 CFR 60.91;
- (C) 40 CFR 60.92; and
- (D) 40 CFR 60.93.

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the aggregate drum mix dryer except as otherwise specified in 40 CFR 60, Subpart I.

- (b) The RAP crusher and screener is subject to the New Source Performance Standards for Nonmetallic Mineral Processing Plants, 40 CFR 60, Subpart OOO and 326 IAC 12, because RAP

crusher is a crusher at a hot mix asphalt facility that reduces the size of nonmetallic minerals embedded in recycled asphalt pavement.

The units subject to this rule include the following:

One (1) diesel fuel-fired portable crusher/screener, not to exceed 500 horsepower, processing reclaimed asphalt pavement (RAP), with a maximum throughput not to exceed 500 tons of RAP per hour. Additional RAP crusher/screeners may be located at the source for storage and maintenance only. Only one (1) crusher/screeners can be operable at any one time.

Applicable portions of the NSPS are the following:

- (A) 40 CFR 60.670(a), (d), (e), and (f)
- (B) 40 CFR 60.671
- (C) 40 CFR 60.672(b), (d), and (e)
- (D) 40 CFR 60.673
- (E) 40 CFR 60.674(b)
- (F) 40 CFR 60.675(a), (c)(1)(i), (ii), (iii), (c)(3), (d), (e), (g), and (i)
- (G) 40 CFR 60.676(a), (b)(1), (f), (h), (i), (j), and (k)
- (H) Table 1 and Table 3

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the portable crusher/screener except as otherwise specified in 40 CFR 60, Subpart OOO.

- (c) The requirements of the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60.4200, Subpart IIII, are not included in the permit for the diesel fuel-fired RAP crushing/screening plant. The RAP crushing/screening plant is considered a non-road engine as defined under 40 CFR 1068.30, and does not meet the definition of a stationary internal combustion engine in 40 CFR 60.4219, Subpart IIII. A nonroad engine as defined in 40 CFR 1068.30, is an internal combustion engine that meets any of the following criteria:
  - (i) It is (or will be) used in or on a piece of equipment that is self-propelled or serves a dual purpose by both propelling itself and performing another function (such as garden tractors, off-highway mobile cranes and bulldozers).
  - (ii) It is (or will be) used in or on a piece of equipment that is intended to be propelled while performing its function (such as lawnmowers and string trimmers).
  - (iii) By itself or in or on a piece of equipment, it is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform.
  - (iv) The engine otherwise included in this definition will not remain at a location for more than 12 consecutive months at a source.
- (d) There are no other New Source Performance Standards (40 CFR Part 60) and 326 IAC 12 included for this proposed revision.

**National Emission Standards for Hazardous Air Pollutants (NESHAP):**

- (a) The requirements of 40 CFR 63, Subpart ZZZZ, the National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines, are not included in this permit for the diesel fuel-fired RAP crushing/screening plant because it is considered a non-road engine, as defined by 40 CFR 1068.30, and not considered a stationary RICE.



- (b) The requirements of the National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63.7480, Subpart DDDDD and 326 IAC 20-95, are not included for this proposed revision because the new burner is not located or part of a major source of HAPs. Furthermore, the burner is not an industrial, commercial, or institutional boiler.
- (c) The requirements of the National Emission Standards for Hazardous Air Pollutants: Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63.8680, Subpart LLLLL and 326 IAC 20-71, are not included for this proposed revision because the aggregate drum mixer, is not part of or located at a major source of HAPs as described in Section 60.8680.
- (d) The requirements of the National Emission Standards for Hazardous Air Pollutants for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63.11559, Subpart AAAAAA (7A), because this source applies hot mix asphalt to roads and pursuant to 40 CFR 63.11559(c) is not subject to the requirements of this subpart.
- (e) The requirements of the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters Area Sources, 40 CFR 63.11193, Subpart JJJJJ, though the new burner is located at an area source of HAPs, the burner is not an industrial, commercial, or institutional boiler as defined in Section 63.11237.
- (f) There are no National Emission Standards for Hazardous Air Pollutants (40 CFR Part 63), 326 IAC 14 and 326 IAC 20 included for this proposed revision.

**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.

<b>State Rule Applicability Determination</b>
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- (a) 326 IAC 2-8-4 (FESOP)  
This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP). See PTE of the Entire Source After Issuance of the FESOP Revision Section above.
- (b) 326 IAC 2-2 (PSD) and 2-3 (Emission Offset)  
PSD and Emission Offset applicability is discussed under the Permit Level Determination – PSD and Emission Offset section.
- (c) 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 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 proposed revision is not subject to the requirements of 326 IAC 2-4.1. See PTE of the Entire Source After Issuance of the FESOP Revision Section above.
- (d) 326 IAC 2-6 (Emission Reporting)  
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, LaPorte, or

Lawrenceburg Township, Dearborn 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.

- (e) 326 IAC 5-1 (Opacity Limitations)  
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
  - (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
  - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- (f) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)  
Due to this revision, the source is subject to the requirements of 326 IAC 6-4, because they have the potential to emit fugitive particulate emissions. 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.
- (g) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)  
Due to this revision, the source is subject to the requirements of 326 IAC 6-5, because the material crushing, screening, and conveying 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, which is included as Attachment A to the permit.
- (h) 326 IAC 12 (New Source Performance Standards)  
See Federal Rule Applicability Section of this TSD.
- (i) 326 IAC 20 (Hazardous Air Pollutants)  
See Federal Rule Applicability Section of this TSD.

#### Drum Hot-Mix Asphalt Plant

- (j) 326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating)  
Pursuant to 326 IAC 6-2-1, the requirements of 326 IAC 6-2-4 are not subject to the natural gas fired aggregate dryer/burner, since it is not a source of indirect heating.
- (k) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)  
Pursuant to 326 IAC 6-3-1(c)(5), the requirements of 326 IAC 6-3-2 are not applicable to the aggregate drum mixer, because it is subject to a more stringent rule under 40 CFR 60, Subpart I (Standards of Performance for Hot-mix Asphalt Facilities), incorporated by reference through 326 IAC 12.
- (l) 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)  
Pursuant to 326 IAC 7-1.1, the dryer/burner is subject to the requirements of 326 IAC 7-1.2 and 326 IAC 7-1.3, because the potential to emit SO<sub>2</sub> is equal to or greater than twenty-five (25) tons per year, or ten (10) pounds per hour.

Sulfur Dioxide emissions from the dryer/burner shall be limited to the following:

- (1) Five-tenths (0.5) pounds per million Btu heat input for distillate oil combustion.

- (2) One and six-tenths (1.6) pounds per million Btu heat input for residual oils.

Note: No. 2 fuel oil is considered distillate oils and waste oil is considered residual oil.

- (m) 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements)  
Pursuant to 326 IAC 7-2-1(c), the source shall submit reports of calendar month average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate (pounds SO<sub>2</sub> per MMBtu), to IDEM OAQ upon request.
- (n) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)  
The unlimited VOC potential emissions from the new dryer/mixer is 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 proposed revision is not subject to the requirements of 326 IAC 8-1-6.

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 product rate shall not exceed 1,000,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (2) 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 the requirements of 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities) not applicable.

- (o) 326 IAC 9-1 (Carbon Monoxide Emission Limits)  
The drum hot-mix asphalt plant is not one of the source types listed in 326 IAC 9-1-2. Therefore, the requirements of 326 IAC 9-1 do not apply.
- (p) 326 IAC 10-1 (Nitrogen Oxides Control in Clark and Floyd Counties)  
Pursuant to 326 IAC 10-1-1(a)(3), the drum hot-mix asphalt plant is not subject to the requirements of 326 IAC 10-1-3, because this source is not located in Clark or Floyd County.
- (q) 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category)  
Pursuant to 326 IAC 10-3-1(a), the dryer burner is not subject to the requirements of 326 IAC 10-3-3, because the dryer burner is not one of the types listed in 326 IAC 10-3-1(a)(1) through (3).

#### Crusher

- (r) 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)  
Pursuant to 326 IAC 6-2-1, the requirements of 326 IAC 6-2-4 are not subject to diesel fuel-fired crusher and screener, since it is not a source of indirect heating.
- (s) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)  
Pursuant to 326 IAC 6-3-1(a), the requirements of 326 IAC 6-3-2 are applicable to the RAP crushing and screening operation, since it is a manufacturing process not exempted from this rule under 326 IAC 6-3-1(b) and is not subject to a particulate matter limitation that is as stringent as or more stringent than the particulate limitation established in this rule as specified in 326 IAC 6-3-1(c). Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the RAP crushing and screening operation shall not exceed 68.96 pounds per hour when operating at a process weight rate of 500 tons per hour. The pound per hour limitation was calculated with the following equation:

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

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

Furthermore, pursuant to 326 IAC 6-3-2(e)(3), when the process weight exceeds 200 tons per hour, the maximum allowable emission may exceed the emission limit listed above, provided the concentration of particulate matter in the gas discharged to the atmosphere is less than 0.10 pounds per 1,000 pounds of gases.

The source shall use wet suppression at all times the crusher, screens, and associated conveyors are in operation in order to comply with this limit.

- (t) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)  
 The RAP crushing and screening operation is not subject to the requirements of 326 IAC 8-1-6, because the unlimited VOC potential emissions from the RAP crushing and screening operation are less than twenty-five (25) tons per year.
- (u) 326 IAC 9-1 (Carbon Monoxide Emission Limits)  
 The diesel fuel-fired crusher and screener is not one of the source types listed in 326 IAC 9-1-2. Therefore, the requirements of 326 IAC 9-1 (Carbon Monoxide Emission Limits) do not apply and are not included in the permit.
- (v) 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category)  
 The diesel fuel-fired crusher and screener does not meet the definition of an affected facility, as defined in 326 IAC 10-3-1(a), because it has a maximum heat input of less than two hundred fifty million (250,000,000) British thermal units per hour (MMBtu/hr). Therefore, the requirements of 326 IAC 10-3 are not applicable to the crusher and screener.

**Compliance Determination and Monitoring Requirements**

- (a) The Compliance Determination Requirements applicable to this proposed revision are as follows:

<b>Summary of Testing Requirements</b>					
<b>Emission Unit</b>	<b>Control Device</b>	<b>Timeframe for Testing or Date of Last Valid Demonstration)</b>	<b>Pollutant</b>	<b>Frequency of Testing</b>	<b>Authority</b>
Dryer/Mixer	Baghouse	180*	PM/PM10/PM2.5	Every 5 Years	40 CFR 60, Subpart i and 326 IAC 2-8 (FESOP)

\*180 days is 180 days after startup

- (b) The Compliance Monitoring Requirements applicable to this proposed revision are as follows:

These monitoring conditions are necessary because the baghouse for the drum mixer dryer/burner must operate properly to assure compliance with 40 CFR 60, Subpart I and 326 IAC 2-8 (FESOP), and the limits that render 326 IAC 2-2 (PSD), and 326 IAC 2-7 (Part 70 Permit Program) not applicable.

Control	Parameter	Frequency	Range	Excursions and Exceedances
Dryer/Mixer Baghouse Stack Exhaust	Visible Emissions	Daily	Normal-Abnormal	Response Steps

**Proposed Changes**

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

- (1) The emission unit descriptions in sections A.2, A.3, D.1, E.1, and E.2 have been updated to include the new emission units and address the modified emission unit.
- (2) The testing condition under D.1.9 was updated since the crusher is new.

**Additional Changes**

IDEM, OAQ made additional changes to the permit as described below in order to update the language to match the most current version of the applicable rule, to eliminate redundancy within the permit, and to provide clarification regarding the requirements of these conditions.

- (1) For this revision, IDEM, OAQ has included IDEM's Master Agency Interest Identification (ID) number of 103433 in the FESOP cover page signature box.
- (2) IDEM, OAQ updated the permit language in Conditions D.1.1, D.1.10, and D.1.12 to make it consistent with the current language used by IDEM OAQ.
- (3) IDEM, OAQ updated the limits in Conditions D.1.1, D.1.2, and D.1.3 and to the reporting form to match the limited calculations found in Appendix A.2.
- (4) IDEM, OAQ added the Steel slag limit under Condition D.1.3(b)(5), it appeared to have been inadvertently left out.
- (5) The testing condition under D.1.9(b), was removed since this test was completed at another Milestone facility.
- (6) IDEM, OAQ updated the reporting form to include the Steel Slag limitation.

Operation Permit No.: F045-37360-00019	
<b>Master Agency Interest ID.: 36812</b>	
Original Issued/Signed by: Jason R. Krawczyk, Section Chief Permits Branch Office of Air Quality	Issuance Date: April 24, 2017  Expiration Date: April 24, 2027

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

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

- (a) ~~one (1) aggregate drum mix dryer, identified as emission unit No. 2, approved for modification in 2012, with a maximum throughput capacity of 400 tons of raw material per hour, processing blast furnace slag, steel slag, and asbestos-free recycled asphalt shingles in the aggregate mix, equipped with one (1) aggregate dryer burner with a maximum rated capacity of 120 million (MM) British thermal units (Btu) per hour, using~~

natural gas as the primary fuel, using No. 2 distillate fuel oil and re-refined waste oil as a back-up fuel and one (1) baghouse for air pollution control, exhausting at one (1) stack, identified as S-1; **One (1) aggregate drum mix dryer, identified as emission unit No. 2, approved in 2018 for construction, with a maximum throughput capacity of 400 tons of raw material per hour, processing blast furnace slag, steel slag, and asbestos-free recycled asphalt shingles in the aggregate mix, equipped with one (1) aggregate dryer burner with a maximum rated capacity of 130 million British thermal units (MMBtu) per hour, using natural gas as the primary fuel, using No. 2 distillate fuel oil and re-refined waste oil as a back-up fuel and one (1) baghouse for air pollution control, exhausting at one (1) stack, identified as S-1;**

\*\*\*

(c) ~~one (1) cold feed system consisting of six (6) compartments;~~ **Ten (10) cold feed bins, identified as CF-1, with four (4) approved in 2018 for construction, each with a maximum storage capacity of 30 tons and a combined maximum throughput of 400,000 tons per year, using no controls, and exhausting to the atmosphere.**

(d) ~~three (3) hot mix asphalt cement storage silos;~~ **Three (3) hot mix asphalt silos, approved in 2018 for construction, each with a maximum storage capacity of 200 tons, using no controls, and exhausting to the atmosphere.**

\*\*\*

(g) **One (1) diesel fuel-fired portable crusher/screener, not to exceed 500 horsepower, processing reclaimed asphalt pavement (RAP), with a maximum throughput not to exceed 500 tons of RAP per hour. Additional RAP crusher/screeners may be located at the source for storage and maintenance only. Only one (1) crusher/screener can be operable at any one time.**

~~One (1) 430 horsepower, diesel fuel-fired portable RAP crusher and screener for processing reclaimed asphalt pavement (RAP), identified as EU002, approved for construction in 2012, with a maximum throughput capacity of 500 tons of RAP per hour.; and~~

Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.

Under 40 CFR 1068.30, General Compliance Provisions for Highway, Stationary, and Nonroad Programs - Definitions, this unit this is considered a nonroad engine.

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#### SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

##### Emissions Unit Description:

- (a) ~~one (1) aggregate drum mix dryer, identified as emission unit No. 2, approved for modification in 2012, with a maximum throughput capacity of 400 tons of raw material per hour, processing blast furnace slag, steel slag, and asbestos-free recycled asphalt shingles in the aggregate mix, equipped with one (1) aggregate dryer burner with a maximum rated capacity of 120 million (MM) British thermal units (Btu) per hour, using natural gas as the primary fuel, using No. 2 distillate fuel oil and re-refined waste oil as a back-up fuel and one (1) baghouse for air pollution control, exhausting at one (1) stack, identified as S-1;~~ **One (1) aggregate drum mix dryer, identified as emission unit No. 2, approved in 2018 for construction, with a maximum throughput capacity of 400 tons of raw material per hour, processing blast furnace slag, steel slag, and asbestos-free recycled asphalt shingles in the aggregate mix, equipped with one (1) aggregate dryer burner with a maximum rated capacity of 130 million British thermal units (MMBtu) per hour, using natural gas as the primary fuel, using No. 2 distillate fuel oil and re-refined waste oil as a back-up fuel and one (1)**

**baghouse for air pollution control, exhausting at one (1) stack, identified as S-1;**

(b) \*\*\*

(c) ~~one (1) cold feed system consisting of six (6) compartments;~~ **Ten (10) cold feed bins, identified as CF-1, with four (4) approved in 2018 for construction, each with a maximum storage capacity of 30 tons and a combined maximum throughput of 400,000 tons per year, using no controls, and exhausting to the atmosphere.**

(d) ~~three (3) hot mix asphalt cement storage silos;~~ **Three (3) hot mix asphalt silos, approved in 2018 for construction, each with a maximum storage capacity of 200 tons, using no controls, and exhausting to the atmosphere.**

Under 40 CFR 60, Subpart I, New Source Performance Standards for Hot-mix Asphalt Plants, this asphalt plant is considered an affected source.

(g) ~~One (1) 430 horsepower, diesel fuel-fired portable RAP crusher and screener for processing reclaimed asphalt pavement (RAP), identified as EU002, approved for construction in 2012, with a maximum throughput capacity of 500 tons of RAP per hour.; and~~  
**One (1) diesel fuel-fired portable crusher/screener, not to exceed 500 horsepower, processing reclaimed asphalt pavement (RAP), with a maximum throughput not to exceed 500 tons of RAP per hour. Additional RAP crusher/screeners may be located at the source for storage and maintenance only. Only one (1) crusher/screener can be operable at any one time.**

Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.

Under 40 CFR 1068.30, General Compliance Provisions for Highway, Stationary, and Nonroad Programs - Definitions, this unit this is considered a nonroad engine.

Insignificant Activities:

(a) one (1) No. 2 distillate fuel oil fired hot oil heater, identified as emission unit No. 12, rated at 2.2 MMBtu per hour, exhausting at one (1) stack, identified as S.

(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 PSD Minor Limit [326 IAC 2-2]

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

- (a) The amount of hot-mix asphalt processed shall not exceed 1,000,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) PM emissions from the dryer/mixer shall not exceed ~~0.3480~~**0.356** pounds per ton of asphalt processed.
- (c) \*\*\*

D.1.2 FESOP Limits: PM10, PM2.5, NOx, VOC, and CO [326 IAC 2-8-4][326 IAC 2-2][326 IAC 8-1-6]

Pursuant to 326 IAC 2-8-4, and in order to render the requirements of 326 IAC 2-7 (Part 70

Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), not applicable the Permittee shall comply with the following:

- (a) The amount of hot-mix asphalt processed shall not exceed 1,000,000 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 ~~0.1470~~**0.155** pounds per ton of asphalt processed.
- (c) The PM2.5 emissions from the dryer/mixer shall not exceed ~~0.1730~~**0.181** pounds per ton of asphalt processed.
- (d) \*\*\*

D.1.3 FESOP Limits: SO<sub>2</sub>, NO<sub>x</sub> and HAPs [326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-4.1]

Pursuant to 326 IAC 2-8-4, and in order to render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants) not applicable, the Permittee shall comply with the following:

(a) Fuel and Slag Specifications

\*\*\*

(b) Single Fuel and Slag Usage Limitations:

When combusting only one type of fuel per twelve (12) consecutive month period in the dryer/mixer burner, the usage of fuel and slag shall be limited as follows:

- (1) The total amount of natural gas burned shall not exceed 1,028 million cubic feet (MMcf) per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (2) No. 2 fuel oil usage shall not exceed ~~2,022,250~~**2,129,948** gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (3) Waste oil usage shall not exceed ~~4,302,344~~**1,315,000** gallons per twelve (12) consecutive month period, with compliance determined at the end of each month; and
- (4) The Blast Furnace slag usage shall not exceed 50,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (5) The Steel slag usage shall not exceed 1,000,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.**

(c) Multiple Fuel and Slag Usage Limitation:

When combusting any single fuel or more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, in conjunction with the use of slag in the aggregate mix, emissions from the dryer/mixer burner as follows:

- (1) SO<sub>2</sub> emissions from the dryer/mixer shall not exceed ~~90.2975~~**0.61** tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (2) NO<sub>x</sub> emissions from the dryer/mixer shall not exceed 97.62 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.



D.1.9 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

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~~(a) In order to demonstrate compliance with Conditions D.1.1(b), D.1.2(b), and D.1.2(c), the Permittee shall perform PM, PM10, and PM2.5 testing of the dryer/mixer not later than one hundred and eighty (180) days after initial startup of the new baghouse, utilizing methods approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable particulate matter.~~

**Not later than 180 days after startup of the dryer/mixer, the Permittee shall perform PM, PM10, and PM2.5 testing of the dryer/mixer not later than five (5) years from the most recent valid compliance demonstration, utilizing methods approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable particulate matter.**

~~(b) In order to demonstrate compliance with Condition D.1.3(a)(6), when using Blast Furnace slag, the Permittee shall perform SO<sub>2</sub> testing for the aggregate dryer within one hundred eighty (180) days of initial use of Blast Furnace slag in the aggregate mix, utilizing methods as approved by the Commissioner. Testing shall only be performed if the company has not previously performed SO<sub>2</sub> testing while using Blast Furnace slag in the aggregate mix at one of their other Indiana facilities. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition.~~

D.1.10 Sulfur Dioxide (SO<sub>2</sub>) Emissions and Sulfur Content

---

*Fuel Oil*

(a) \*\*\*

*Blast Furnace Slag*

(b) Pursuant to 326 IAC 2-8-4, compliance with the Blast Furnace slag limitation established in Condition D.1.3(a)(6) shall be determined utilizing one of the following options. Compliance shall be demonstrated on a thirty (30) day calendar-month average.

- (1) Maintaining all records of vendor analyses, **if accompanied by a vendor certification**, or certifications of Blast Furnace slag delivered; or
- (2) Analyzing a sample of each Blast Furnace slag delivery, if no vendor analyses or certifications are available, to determine the sulfur content of the Blast Furnace slag, 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.
- (3) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the ~~420~~**130** MMBtu/hr burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, or other procedures approved by IDEM, OAQ.

A determination of noncompliance pursuant to any of the methods specified in (1) or (2) above shall not be refuted by evidence of compliance pursuant to the other method.

**Use of blast furnace slag with a sulfur content of less than or equal to 1.5% demonstrates compliance with the dryer/mixer limit in D.1.3(a)(5).**

*Steel Slag*

- (c) Pursuant to 326 IAC 2-8-4, compliance with the Steel slag limitations established in Condition D.1.3(a)(8) shall be determined utilizing one of the following options. Compliance shall be demonstrated on a thirty (30) day calendar-month average.
- (1) Maintaining all records of vendor analyses, **if accompanied by a vendor certification**, or certifications of slag delivered; or
  - (2) Analyzing a sample of the Steel slag delivery if no vendor analyses or certifications are available, at least once per quarter, to determine the sulfur content of the Steel slag, 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.
  - (3) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the ~~420~~**130** MMBtu/hr burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, or other procedures approved by IDEM, OAQ.

A determination of noncompliance pursuant to any of the methods specified in (1) or (2) above shall not be refuted by evidence of compliance pursuant to the other method.

**Use of steel slag with a sulfur content of less than or equal to 0.66% demonstrates compliance with the dryer/mixer limit in D.1.3(a)(7).**

\*\*\*

D.1.12 Multiple Fuel and Slag Usage Limitations

In order to determine compliance with the Condition D.1.3(c) when combusting any single fuel or more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, in conjunction with the use of slag in the aggregate mix, the Permittee shall limit fuel usage according to the following formulas:

(a) Sulfur Dioxide (SO<sub>2</sub>) Emission Calculation

$$S = \frac{G(E_G) + O(E_O) + W(E_W) + B(E_B) + T(E_T)}{2,000 \text{ lbs/ton}}$$

*where:*

- S = tons of sulfur dioxide emissions for a 12-month consecutive period  
G = million cubic feet of natural gas used in the in the dryer/mixer last 12 months;  
O = **kilo**gallons of No. 2 fuel oil used in the last 12 months  
W = **kilo**gallons of Waste oil used in the last 12 months  
B = tons of Blast Furnace slag used in the last 12 months  
T = tons of Steel slag used in the last 12 months  
E<sub>G</sub> = 0.6 lb/MMCF of natural gas  
E<sub>O</sub> = 71.0 lb/1000 gallons of No. 2 fuel oil  
E<sub>W</sub> = 147 lb/1000 gallons of Waste oil  
E<sub>B</sub> = 0.74 lb/ton of Blast Furnace slag used  
E<sub>T</sub> = 0.0014 lb/ton of Steel slag used

(b) Nitrogen Oxides (NO<sub>x</sub>) Emission Calculation

$$N = \frac{G(E_G) + O(E_O) + W(E_W)}{2,000 \text{ lbs/ton}}$$

where:

- N = tons of nitrogen oxide emissions for a 12-month consecutive period;  
G = million cubic feet of natural gas used in the last 12 months;  
O = kilogallons of No. 2 fuel oil used in the last 12 months;  
W = kilogallons of reclaimed/waste oil used in the last 12 months.  
E<sub>G</sub> = 190 lb/million cubic feet of natural gas;  
E<sub>O</sub> = 24.0 lb/1000 gallons of No. 2 fuel oil;  
E<sub>W</sub> = 19.0 lb/1000 gallons of waste oil.

\*\*\*

## SECTION E.1

## NSPS

### Emissions Unit Description:

- (a) ~~one (1) aggregate drum mix dryer, identified as emission unit No. 2, approved for modification in 2012, with a maximum throughput capacity of 400 tons of raw material per hour, processing blast furnace slag, steel slag, and asbestos-free recycled asphalt shingles in the aggregate mix, equipped with one (1) aggregate dryer burner with a maximum rated capacity of 120 million (MM) British thermal units (Btu) per hour, using natural gas as the primary fuel, using No. 2 distillate fuel oil and re-refined waste oil as a back-up fuel and one (1) baghouse for air pollution control, exhausting at one (1) stack, identified as S-1;~~ **One (1) aggregate drum mix dryer, identified as emission unit No. 2, approved in 2018 for construction, with a maximum throughput capacity of 400 tons of raw material per hour, processing blast furnace slag, steel slag, and asbestos-free recycled asphalt shingles in the aggregate mix, equipped with one (1) aggregate dryer burner with a maximum rated capacity of 130 million British thermal units (MMBtu) per hour, using natural gas as the primary fuel, using No. 2 distillate fuel oil and re-refined waste oil as a back-up fuel and one (1) baghouse for air pollution control, exhausting at one (1) stack, identified as S-1;**
- (b)\*\*\*
- (c) ~~one (1) cold feed system consisting of six (6) compartments;~~ **Ten (10) cold feed bins, identified as CF-1, with four (4) approved in 2018 for construction, each with a maximum storage capacity of 30 tons and a combined maximum throughput of 400,000 tons per year, using no controls, and exhausting to the atmosphere.**
- (d) ~~three (3) hot mix asphalt cement storage silos;~~ **Three (3) hot mix asphalt silos, approved in 2018 for construction, each with a maximum storage capacity of 200 tons, using no controls, and exhausting to the atmosphere.**

Under 40 CFR 60, Subpart I, New Source Performance Standards for Hot-mix Asphalt Plants, this asphalt plant is considered an affected source.

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

\*\*\*

## SECTION E.2

## NSPS

### Emissions Unit Description:

(g) ~~One (1) 430 horsepower, diesel fuel-fired portable RAP crusher and screener for processing reclaimed asphalt pavement (RAP), identified as EU002, approved for construction in 2012, with a maximum throughput capacity of 500 tons of RAP per hour.; and~~  
**One (1) diesel fuel-fired portable crusher/screener, not to exceed 500 horsepower, processing reclaimed asphalt pavement (RAP), with a maximum throughput not to exceed 500 tons of RAP per hour. Additional RAP crusher/screeners may be located at the source for storage and maintenance only. Only one (1) crusher/screener can be operable at any one time.**

Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.

Under 40 CFR 1068.30, General Compliance Provisions for Highway, Stationary, and Nonroad Programs - Definitions, this unit this is considered a nonroad engine.

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

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

FESOP Quarterly Report

Page 1 of 3

Source Name: Milestone Contractors, L.P.  
 Source Address: 7770 South US Highway 41, Veedersburg, Indiana 47987  
 FESOP Permit No.: F045-37360-00019  
 Facility: Dryer/Mixer (Unit No. 2)  
 Parameter: Fuel & Slag Usage / SO<sub>2</sub> emissions  
 Emission Limits: ~~90.29~~**75.61** tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.12(a).  
Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed ~~90.29~~**75.61** tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.12(a).  
Nitrogen Oxides (NO<sub>x</sub>) emissions shall not exceed 97.62 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.12(b).

Fuel & Slag Limits: When combusting only one type of fuel per twelve (12) consecutive month period in the dryer/mixer burner, in conjunction with the use of slag in the aggregate mix, fuel and slag usage shall not exceed the following:

Fuel Type (Units)	Fuel Usage Limit (per 12 consecutive month period)
Natural Gas (million cubic feet (MMcf))	1,028
No. 2 Distillate Fuel Oil (gallons)	<del>2,022,250</del> <b>2,129,948</b>
Waste Oil (gallons)	<del>4,302,314</del> <b>1,315,000</b>
Blast Furnace Slag (tons)	50,000
<b>Steel Slag (tons)</b>	<b>1,000,000</b>

**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 September 11, 2018.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Significant Permit Revision No. 045-40460-00019. The staff recommends to the Commissioner that this FESOP Significant Permit Revision be approved.

<b>IDEM Contact</b>
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- (a) If you have any questions regarding this permit, please contact Deena P. Levering, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCM 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 234-5400 or (800) 451-6027, and ask for Deena P. Levering or (317) 234-5400.
- (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 Air Permits page on the Internet at: <http://www.in.gov/idem/airquality/2356.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

**Appendix A.1: Unlimited Emissions Calculations  
Entire Source - Drum Mix**

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

**Asphalt Plant Maximum Capacity - Drum Mix**

Maximum Hourly Asphalt Production =	400	ton/hr								
Maximum Annual Asphalt Production =	3,504,000	ton/yr								
Maximum Annual Blast Furnace Slag Usage =	1,471,680	ton/yr	1.50	% sulfur						
Maximum Annual Steel Slag Usage =	1,471,680	ton/yr	0.66	% sulfur						
Maximum Dryer Fuel Input Rate =	130.0	MMBtu/hr								
Natural Gas Usage =	1,139	MMCF/yr								
No. 2 Fuel Oil Usage =	8,134,286	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Usage =	0	gal/yr, and	0	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and	0	% sulfur						
Propane Usage =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Butane Usage =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Used/Waste Oil Usage =	8,134,286	gal/yr, and	0.75	% sulfur	1.00	% ash	0.200	% chlorine,	0.010	% lead
Diesel Fuel Oil Usage (crusher only) =	0	gal/yr.	0.00	% sulfur						
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 NOx Dryer/Mixer Emission Factor =	0.055	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 Blast Furnace Slag SO2 Dryer/Mixer Emission Factor =	0.74	lb/ton of slag processed								
Unlimited Steel Slag SO2 Dryer/Mixer Emission Factor =	0.0014	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
<b>Ducted Emissions</b>									
Dryer Fuel Combustion (worst case)	260.30	207.42	207.42	448.40	108.19	4.07	47.83	58.29	53.69 (hydrogen chloride)
Dryer/Mixer (Process)	49,056.00	11,388.00	2,628.00	101.62	96.36	56.06	227.76	18.68	5.43 (formaldehyde)
Dryer/Mixer Slag Processing (worst case)	0	0	0	544.52	0	0	0	0	0
Hot Oil Heater Fuel Combustion (worst case)	0.14	0.23	0.23	4.89	1.38	0.01	0.34	0.005	0.004 (hexane)
<b>Worst Case Emissions*</b>	<b>49,056.14</b>	<b>11,388.23</b>	<b>2,628.23</b>	<b>997.81</b>	<b>109.56</b>	<b>56.08</b>	<b>228.10</b>	<b>58.30</b>	<b>53.69 (hydrogen chloride)</b>
<b>Fugitive Emissions</b>									
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	1.11	0.39	0.39	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)	176.07	44.87	4.49	0	0	0	0	0	0
Cold Mix Asphalt Production	0	0	0	0	0	42,109.32	0	10,983.67	3,789.84 (xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0.00	0	0.00	0.00 (xylenes)
Volatle Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	negl	0
Degreaser	0	0	0	0	0	0.49	0	0	0
<b>Total Fugitive Emissions</b>	<b>246.03</b>	<b>72.86</b>	<b>27.93</b>	<b>0</b>	<b>0</b>	<b>42,139.82</b>	<b>5.05</b>	<b>10,984.17</b>	<b>3,789.84 (xylenes)</b>
<b>Totals Unlimited/Uncontrolled PTE</b>	<b>49,302.17</b>	<b>11,461.09</b>	<b>2,656.16</b>	<b>997.81</b>	<b>109.56</b>	<b>42,195.90</b>	<b>233.15</b>	<b>11,042.47</b>	<b>3,789.84 (xylenes)</b>

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 + Worst Case Emissions From Dryer/Mixer Slag Processing + Worst Case Emissions from Hot Oil Heater Fuel Combustion  
 Fuel component percentages provided by the source.

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

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

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 =	130	MMBtu/hr
Natural Gas Usage =	1,139	MMCF/yr
No. 2 Fuel Oil Usage =	8,134,286	gal/yr, and
No. 4 Fuel Oil Usage =	0	0.50 % sulfur
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	0.00 % sulfur
Propane Usage =	0	0.00 % sulfur
Butane Usage =	0	0.00 gr/100 ft3 sulfur
Used/Waste Oil Usage =	8,134,286	0.00 gr/100 ft3 sulfur
		0.75 % sulfur
		1.00 % ash
		0.200 % chlorine
		0.010 % lead

**Unlimited/Uncontrolled Emissions**

Criteria Pollutant	Emission Factor (units)							Unlimited/Uncontrolled Potential to Emit (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)	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)	Worse Case Fuel (tons/yr)
PM	1.9	2.0	7.0	3.22	0.5	0.6	64.0	1.08	8.13	0.00	0.00	0.000	0.000	260.30	260.30
PM10/PM2.5	7.6	3.3	8.3	4.72	0.5	0.6	51	4.33	13.42	0.00	0.00	0.000	0.000	207.42	207.42
SO2	0.6	71.0	0.0	0.0	0.000	0.000	110.3	0.34	288.77	0.00	0.00	0.000	0.000	448.40	448.40
NOx	190	24.0	47.0	47.0	13.0	15.0	19.0	108.19	97.61	0.00	0.00	0.00	0.00	77.28	108.19
VOC	5.5	0.20	0.20	0.28	1.00	1.10	1.0	3.13	0.81	0.00	0.00	0.00	0.00	4.07	4.07
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	47.8296	20.34	0.00	0.00	0.00	0.00	20.34	47.83
<b>Hazardous Air Pollutant</b>															
HCl							13.2							53.69	53.69
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	1.1E-04	2.28E-03	0.00E+00	0.00E+00			4.47E-01	4.5E-01
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05			negl	6.8E-06	1.71E-03	0.00E+00	0.00E+00			negl	1.7E-03
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04			9.3E-03	6.3E-04	1.71E-03	0.00E+00	0.00E+00			3.78E-02	3.8E-02
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02	8.0E-04	1.71E-03	0.00E+00	0.00E+00			8.13E-02	8.1E-02
Cobalt	8.4E-05		6.02E-03	6.02E-03			2.1E-04	4.8E-05		0.00E+00	0.00E+00			8.54E-04	8.5E-04
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03			0.55	2.8E-04	5.12E-03	0.00E+00	0.00E+00			2.2E+00	2.24
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03			6.8E-02	2.2E-04	3.42E-03	0.00E+00	0.00E+00			2.77E-01	0.28
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04				1.5E-04	1.71E-03	0.00E+00	0.00E+00				1.7E-03
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02	1.2E-03	1.71E-03	0.00E+00	0.00E+00			4.47E-02	0.045
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl	1.4E-05	8.54E-03	0.00E+00	0.00E+00			negl	8.5E-03
1,1,1-Trichloroethane			2.36E-04	2.36E-04						0.00E+00	0.00E+00				0.0E+00
1,3-Butadiene															0.0E+00
Acetaldehyde															0.0E+00
Acrolein															0.0E+00
Benzene	2.1E-03		2.14E-04	2.14E-04				1.2E-03		0.00E+00	0.00E+00				1.2E-03
Bis(2-ethylhexyl)phthalate							2.2E-03							8.95E-03	8.9E-03
Dichlorobenzene	1.2E-03						8.0E-07	6.8E-04						3.25E-06	6.8E-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				4.3E-02	2.48E-01	0.00E+00	0.00E+00				0.248
Hexane	1.8E+00							1.02							1.025
Phenol							2.4E-03							9.76E-03	9.8E-03
Toluene	3.4E-03		6.20E-03	6.20E-03				1.9E-03		0.00E+00	0.00E+00				1.9E-03
Total PAH Haps	negl		1.13E-03	1.13E-03			3.9E-02	negl		0.00E+00	0.00E+00			1.59E-01	1.6E-01
Polycyclic Organic Matter		3.30E-03							1.34E-02						1.3E-02
Xylene			1.09E-04	1.09E-04						0.00E+00	0.00E+00				0.0E+00
<b>Total HAPs</b>								<b>1.07</b>	<b>0.29</b>	<b>0.00</b>	<b>0.00</b>	<b>0</b>	<b>0</b>	<b>56.99</b>	<b>58.29</b>

**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 5/10), 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

\*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)  
 PM2.5 = Particulate Matter (< 2.5 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.1: Unlimited Emissions Calculations  
Dryer/Mixer**

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

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)			
	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	Worse Case PTE
PM*	28	28	28	49,056.0	49,056.0	49,056.0	<b>49,056.00</b>
PM10*	6.5	6.5	6.5	11,388.0	11,388.0	11,388.0	<b>11,388.00</b>
PM2.5*	1.5	1.5	1.5	2,628.0	2,628.0	2,628.0	<b>2,628.00</b>
SO2**	0.0034	0.011	0.058	5.96	19.27	101.62	<b>101.62</b>
NOx**	0.026	0.055	0.055	45.55	96.36	96.36	<b>96.36</b>
VOC**	0.032	0.032	0.032	56.06	56.06	56.06	<b>56.06</b>
CO***	0.13	0.13	0.13	227.76	227.76	227.76	<b>227.76</b>
<b>Hazardous Air Pollutant</b>							
HCl			2.10E-04			3.68E-01	<b>0.37</b>
Antimony	1.80E-07	1.80E-07	1.80E-07	3.15E-04	3.15E-04	3.15E-04	<b>3.15E-04</b>
Arsenic	5.60E-07	5.60E-07	5.60E-07	9.81E-04	9.81E-04	9.81E-04	<b>9.81E-04</b>
Beryllium	negl	negl	negl	negl	negl	negl	<b>0.00E+00</b>
Cadmium	4.10E-07	4.10E-07	4.10E-07	7.18E-04	7.18E-04	7.18E-04	<b>7.18E-04</b>
Chromium	5.50E-06	5.50E-06	5.50E-06	9.64E-03	9.64E-03	9.64E-03	<b>9.64E-03</b>
Cobalt	2.60E-08	2.60E-08	2.60E-08	4.56E-05	4.56E-05	4.56E-05	<b>4.56E-05</b>
Lead	6.20E-07	1.50E-05	1.50E-05	1.09E-03	2.63E-02	2.63E-02	<b>2.63E-02</b>
Manganese	7.70E-06	7.70E-06	7.70E-06	1.35E-02	1.35E-02	1.35E-02	<b>1.35E-02</b>
Mercury	2.40E-07	2.60E-06	2.60E-06	4.20E-04	4.56E-03	4.56E-03	<b>4.56E-03</b>
Nickel	6.30E-05	6.30E-05	6.30E-05	0.11	0.11	0.11	<b>0.11</b>
Selenium	3.50E-07	3.50E-07	3.50E-07	6.13E-04	6.13E-04	6.13E-04	<b>6.13E-04</b>
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	0.07	0.07	0.07	<b>0.07</b>
Acetaldehyde			1.30E-03			2.28	<b>2.28</b>
Acrolein			2.60E-05			4.56E-02	<b>4.56E-02</b>
Benzene	3.90E-04	3.90E-04	3.90E-04	0.68	0.68	0.68	<b>0.68</b>
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0.42	0.42	0.42	<b>0.42</b>
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	5.43	5.43	5.43	<b>5.43</b>
Hexane	9.20E-04	9.20E-04	9.20E-04	1.61	1.61	1.61	<b>1.61</b>
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0.08	0.08	0.08	<b>0.08</b>
MEK			2.00E-05			0.04	<b>0.04</b>
Propionaldehyde			1.30E-04			0.23	<b>0.23</b>
Quinone			1.60E-04			0.28	<b>0.28</b>
Toluene	1.50E-04	2.90E-03	2.90E-03	0.26	5.08	5.08	<b>5.08</b>
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0.33	1.54	1.54	<b>1.54</b>
Xylene	2.00E-04	2.00E-04	2.00E-04	0.35	0.35	0.35	<b>0.35</b>

**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                      HAP = Hazardous Air Pollutant  
 HCl = Hydrogen Chloride                                      PAH = Polyaromatic Hydrocarbon  
 SO2 = Sulfur Dioxide



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

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

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

Maximum Annual Blast Furnace Slag Usage\* = 

1,471,680
-----------

 ton/yr      

1.5
-----

 % sulfur  
 Maximum Annual Steel Slag Usage\* = 

1,471,680
-----------

 ton/yr      

0.66
------

 % sulfur

Type of Slag	SO2 Emission Factor (lb/ton)**	Unlimited Potential to Emit SO2 (tons/yr)
Blast Furnace Slag	0.74	544.5
Steel Slag	0.0014	1.03

**Methodology**

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

\*\* Testing results for blast furnace 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 blast furnace 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%.

\*\* Testing results for steel slag, obtained June 2009 from E & B Paving, Inc. facility located in Huntington, IN. The testing results showed a steel slag emission factor of 0.0007 lb/ton from slag containing 0.33% sulfur content.

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

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

Maximum Hot Oil Heater Fuel Input Rate = 2.20 MMBtu/hr  
 Natural Gas Usage = 0 MMCF/yr  
 No. 2 Fuel Oil Usage = 137,657 gal/yr, and 0.50 % sulfur

**Unlimited/Uncontrolled Emissions**

Criteria Pollutant	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		Worse Case Fuel (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)	
PM	1.9	2.0	0.000	0.138	0.14
PM10/PM2.5	7.6	3.3	0.000	0.227	0.23
SO2	0.6	71.0	0.000	4.887	4.89
NOx	100	20.0	0.000	1.377	1.38
VOC	5.5	0.20	0.000	0.014	0.01
CO	84	5.0	0.000	0.344	0.34
<b>Hazardous Air Pollutant</b>					
Arsenic	2.0E-04	5.6E-04	0.0E+00	3.85E-05	3.9E-05
Beryllium	1.2E-05	4.2E-04	0.0E+00	2.89E-05	2.9E-05
Cadmium	1.1E-03	4.2E-04	0.0E+00	2.89E-05	2.9E-05
Chromium	1.4E-03	4.2E-04	0.0E+00	2.89E-05	2.9E-05
Cobalt	8.4E-05		0.0E+00		0
Lead	5.0E-04	1.3E-03	0.0E+00	8.67E-05	8.7E-05
Manganese	3.8E-04	8.4E-04	0.0E+00	5.78E-05	5.8E-05
Mercury	2.6E-04	4.2E-04	0.0E+00	2.89E-05	2.9E-05
Nickel	2.1E-03	4.2E-04	0.0E+00	2.89E-05	2.9E-05
Selenium	2.4E-05	2.1E-03	0.0E+00	1.45E-04	1.4E-04
Benzene	2.1E-03		0.0E+00		0
Dichlorobenzene	1.2E-03		0.0E+00		0
Ethylbenzene					0
Formaldehyde	7.5E-02	6.10E-02	0.0E+00	4.20E-03	4.2E-03
Hexane	1.8E+00		0.00		0
Phenol					0
Toluene	3.4E-03		0.0E+00		0
Total PAH Haps	negl		negl		0
Polycyclic Organic Matter		3.30E-03		2.27E-04	2.3E-04
<b>Total HAPs =</b>			<b>0.0E+00</b>	<b>4.9E-03</b>	<b>0.005</b>

**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 5/10), 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: Unlimited Emissions Calculations Asphalt Load-Out, Silo Filling, and Yard Emissions

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

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)

<b>PM/HAPs</b>	<b>0.042</b>	<b>0.050</b>	<b>0</b>	<b>0.093</b>
<b>VOC/HAPs</b>	<b>0.108</b>	<b>0.272</b>	<b>0.028</b>	<b>0.408</b>
<b>non-VOC/HAPs</b>	<b>5.6E-04</b>	<b>5.8E-05</b>	<b>1.5E-04</b>	<b>7.7E-04</b>
<b>non-VOC/non-HAPs</b>	<b>0.53</b>	<b>0.30</b>	<b>0.14</b>	<b>0.97</b>
<b>Total VOCs</b>	<b>6.85</b>	<b>21.35</b>	<b>1.8</b>	<b>30.0</b>
<b>Total HAPs</b>	<b>0.15</b>	<b>0.32</b>	<b>0.029</b>	<b>0.50</b>
<b>Worst Single HAP</b>				<b>0.155</b>
				<b>(formaldehyde)</b>

#### 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):

$$\text{Total PM/PM}_{10}/\text{PM}_{2.5} \text{ Ef} = 0.000181 + 0.00141(-V)e^{(0.0251)(T+460)-20.43}$$

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

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

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

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

$$\text{PM/PM}_{10} \text{ Ef} = 0.000332 + 0.00105(-V)e^{(0.0251)(T+460)-20.43}$$

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

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

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

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

\*No emission factors available for PM<sub>10</sub> or PM<sub>2.5</sub>, therefore IDEM assumes PM<sub>10</sub> and PM<sub>2.5</sub> are equivalent to Total PM.

#### Abbreviations

TOC = Total Organic Compounds

CO = Carbon Monoxide

PM = Particulate Matter

PM<sub>10</sub> = Particulate Matter (<10 um)

PM<sub>2.5</sub> = Particulate Matter (<2.5 um)

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

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

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

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		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
<b>Total PAH HAPs</b>							<b>0.035</b>	<b>0.050</b>	<b>NA</b>	<b>0.086</b>
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: Unlimited Emissions Calculations  
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)**

**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
<b>VOC</b>		VOC	---	TOC	94%	100%	<b>6.85</b>	<b>21.35</b>	<b>1.81</b>	<b>30.01</b>
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
<b>Total non-VOC/non-HAPS</b>					<b>7.30%</b>	<b>1.40%</b>	<b>0.532</b>	<b>0.299</b>	<b>0.141</b>	<b>0.97</b>
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
<b>Total volatile organic HAPs</b>					<b>1.50%</b>	<b>1.30%</b>	<b>0.109</b>	<b>0.278</b>	<b>0.029</b>	<b>0.416</b>

**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: Unlimited Emissions Calculations  
Material Storage Piles**

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

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

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

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

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10/PM2.5 (tons/yr)
Sand	2.6	3.01	0.88	0.483	0.169
Limestone	1.6	1.85	1.22	0.412	0.144
RAP	0.5	0.58	0.53	0.056	0.020
Gravel	1.6	1.85	0.38	0.128	0.045
Slag	3.8	4.40	0.02	0.016	0.006
Shingles	3.8	4.40	0.02	0.016	0.006
<b>Totals</b>				<b>1.11</b>	<b>0.39</b>

**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.

PM2.5 = PM10

**Abbreviations**

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

PTE = Potential to Emit

RAP - recycled asphalt pavement

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

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

**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.

$$E_f = k \cdot (0.0032)^{1.3} \cdot (U/5)^{1.4} \cdot (M/2)^{1.4}$$
 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
<b>Total (tons/yr)</b>	<b>11.32</b>	<b>5.35</b>	<b>0.81</b>

**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
<b>Unlimited Potential to Emit (tons/yr) =</b>			<b>55.59</b>	<b>20.31</b>

**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: Unlimited Emissions Calculations  
Unpaved Roads**

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

**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 =	8,134,286	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	734	0.139	20,656.4
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	1.5E+05	2.5E+06	734	0.139	20,656.4
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	4.9E+03	2.3E+05	734	0.139	676.5
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	4.9E+03	5.8E+04	734	0.139	676.5
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	8.6E+02	3.8E+04	734	0.139	119.4
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	8.6E+02	1.0E+04	734	0.139	119.4
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	7.9E+05	1.5E+07	348	0.066	52,309.7
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	7.9E+05	1.2E+07	348	0.066	52,309.7
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.0	1.5E+05	6.0E+06	510	0.097	14,103.6
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.0	1.5E+05	2.5E+06	510	0.097	14,103.6
<b>Total</b>					<b>2.2E+06</b>	<b>4.4E+07</b>			<b>1.8E+05</b>

Average Vehicle Weight Per Trip =	20.3	tons/trip
Average Miles Per Trip =	0.080	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	
k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
W =	20.3	20.3	20.3	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

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

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

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	62.95	16.04	1.60	41.39	10.55	1.05	20.70	5.27	0.53
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	62.95	16.04	1.60	41.39	10.55	1.05	20.70	5.27	0.53
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	2.062	0.525	0.05	1.356	0.345	0.03	0.678	0.173	0.02
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	2.062	0.525	0.05	1.356	0.345	0.03	0.678	0.173	0.02
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.364	0.093	0.01	0.239	0.061	0.01	0.120	0.030	0.00
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.364	0.093	0.01	0.239	0.061	0.01	0.120	0.030	0.00
Aggregate/RAP Loader Full	Front-end loader (3 CY)	159.41	40.63	4.06	104.82	26.71	2.67	52.41	13.36	1.34
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	159.41	40.63	4.06	104.82	26.71	2.67	52.41	13.36	1.34
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	42.98	10.95	1.10	28.26	7.20	0.72	14.13	3.60	0.36
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	42.98	10.95	1.10	28.26	7.20	0.72	14.13	3.60	0.36
<b>Totals</b>		<b>535.54</b>	<b>136.49</b>	<b>13.65</b>	<b>352.13</b>	<b>89.75</b>	<b>8.97</b>	<b>176.07</b>	<b>44.87</b>	<b>4.49</b>

**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: Unlimited Emissions Calculations  
Paved Roads**

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

**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 =	8,134,286	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	0	0.000	0.0
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.00	1.5E+05	2.5E+06	0	0.000	0.0
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.00	4.9E+03	2.3E+05	0	0.000	0.0
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	4.9E+03	5.8E+04	0	0.000	0.0
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.00	8.6E+02	3.8E+04	0	0.000	0.0
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	8.6E+02	1.0E+04	0	0.000	0.0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.20	7.9E+05	1.5E+07	0	0.000	0.0
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	7.9E+05	1.2E+07	0	0.000	0.0
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.00	1.5E+05	6.0E+06	0	0.000	0.0
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.00	1.5E+05	2.5E+06	0	0.000	0.0
<b>Total</b>					<b>2.2E+06</b>	<b>4.4E+07</b>			<b>0.0E+00</b>

Average Vehicle Weight Per Trip =	20.3	tons/trip
Average Miles Per Trip =	0.000	miles/trip

Unmitigated Emission Factor,  $E_f = [k * (SL)^{0.91} * (W)^{1.02}]$  (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	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)
SL =	0.6	0.6	0.6	gm <sup>3</sup> /m <sup>3</sup> = 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, $E_{ext} =$	0.125	days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
where p =	365	days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, $E_f =$	0.15	0.03	0.01	lb/mile
Mitigated Emission Factor, $E_{ext} =$	0.14	0.03	0.01	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)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.000	0.000	0.0E+00	0.000	0.000	0.0E+00	0.000	0.0E+00	0.0E+00
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.000	0.000	0.0E+00	0.000	0.000	0.0E+00	0.000	0.0E+00	0.0E+00
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Totals</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**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: Unlimited Emissions Calculations  
Cold Mix Asphalt Production and Stockpiles**

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

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 =  $\frac{3,504,000}{1}$  tons/yr  
 Percent Asphalt Cement/Binder (weight %) =  $\frac{5.0\%}{1}$   
 Maximum Asphalt Cement/Binder Throughput =  $\frac{175,200}{1}$  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%	44,325.6	42,109.3
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	50,107.2	35,075.0
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	35,040.0	8,760.0
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	26,280.0	12,193.9
Other asphalt with solvent binder	25.9%	2.5%	45,376.8	1,134.4
<b>Worst Case PTE of VOC =</b>				<b>42,109.3</b>

**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
<b>PTE of Total HAPs (tons/yr) =</b>	<b>10,983.67</b>
<b>PTE of Single HAP (tons/yr) =</b>	<b>3,789.84 Xylenes</b>

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

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

**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.

**Abbreviations**

VOC = Volatile Organic Compounds  
 PTE = Potential to Emit

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

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

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:

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

#### 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
Tank breathing and emptying	1.0	0
Vehicle refueling (displaced losses - controlled)	1.1	0
Spillage	0.7	0
<b>Total</b>		<b>0</b>

#### 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
<b>Limited PTE of Total HAPs (tons/yr) =</b>	<b>0</b>
<b>Limited PTE of Single HAP (tons/yr) =</b>	<b>0 Xylenes</b>

#### 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.

#### Abbreviations

VOC = Volatile Organic Compounds

PTE = Potential to Emit

**Appendix A: Emissions Calculations  
Degreaser**

**Company Name:** Milestone Contractors, L.P.  
**Address City IN Zip:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

In order for the degreaser to qualify as an insignificant activity under the listing in 326 IAC 2-7-1(21)(J)(vi)(DD), the source shall use solvents "the use of which, for all cleaners and solvents combined, does not exceed one hundred forty-five (145) gallons per twelve (12) months".

Based on a review of the solvents most widely supplied for the industry by Crystal Clean and Safety-Kleen, the following PTE is based on the following conservative estimates:

The solvent has a maximum density of 6.7 lb/gal.  
 The solvent used in the degreaser contains 100% VOC

Number of Degreasers: 1 each using a maximum of 5 gallons of solvent per week

**Uncontrolled Potential Emissions**

$$6.7 \text{ lb/gal} \times 100 \text{ \% VOC} \times 145 \text{ gal/yr} \div 2000 \text{ lb/ton} = 0.49 \text{ tons VOC per year}$$

**Appendix A.2: Limited Emissions Summary  
Entire Source - Drum Mix**

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

**Asphalt Plant Limitations - Drum Mix**

Maximum Hourly Asphalt Production =	400	ton/hr								
Annual Asphalt Production Limitation =	1,000,000	ton/yr								
Blast Furnace Slag Usage Limitation =	50,000	ton/yr	1.50	% sulfur						
Steel Slag Usage Limitation =	1,000,000		0.66	% sulfur						
Natural Gas Limitation =	1,028	MMCF/yr								
No. 2 Fuel Oil Limitation =	2,129,948	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Limitation =	0	gal/yr, and	0	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and	0	% sulfur						
Propane Limitation =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Butane Limitation =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Used/Waste Oil Limitation =	1,315,000	gal/yr, and	0.75	% sulfur	1.00	% ash	0.200	% chlorine,	0.010	% lead
PM Dryer/Mixer Limitation =	0.356	lb/ton of asphalt production								
PM10 Dryer/Mixer Limitation =	0.155	lb/ton of asphalt production								
PM2.5 Dryer/Mixer Limitation =	0.181	lb/ton of asphalt production								
NOx Dryer/Mixer Limitation =	0.055	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								
Blast Furnace Slag SO2 Dryer/Mixer Limitation =	0.740	lb/ton of slag processed								
Steel Slag SO2 Dryer/Mixer Limitation =	0.0014	lb/ton of slag processed								
Cold Mix Asphalt VOC Usage Limitation =	55.62	tons/yr								
HCl Limitation =	13.2	lb/kgal								

**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	
<b>Ducted Emissions</b>										
Dryer Fuel Combustion (worst case)	42.08	33.53	33.53	75.61	97.62	2.83	43.16	10.21	8.68 (hydrogen chloride)	
Dryer/Mixer (Process)	177.86	77.70	90.52	29.00	27.50	16.00	65.00	5.33	1.55 (formaldehyde)	
Dryer/Mixer Slag Processing	0	0	0	18.50	0	0	0	0	0	
Hot Oil Heater Fuel Combustion (worst case)	0.14	0.23	0.23	4.89	1.38	0.01	0.34	0.005	0.004 (hexane)	
<b>Worst Case Emissions*</b>	<b>178.00</b>	<b>77.93</b>	<b>90.75</b>	<b>99.00</b>	<b>99.00</b>	<b>16.01</b>	<b>65.34</b>	<b>10.22</b>	<b>8.68 (hydrogen chloride)</b>	
<b>Fugitive Emissions</b>										
Asphalt Load-Out, Silo Filling, On-Site Yard	0.55	0.55	0.55	0	0	8.57	1.44	0.14	0.04 (formaldehyde)	
Material Storage Piles	1.11	0.39	0.39	0	0	0	0	0	0	
Material Processing and Handling	3.23	1.53	0.23	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	15.87	5.80	5.80	0	0	0	0	0	0	
Unpaved and Paved Roads (worst case)	50.24	12.80	1.28	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	0	55.62	0	14.51	5.01 (xylenes)	
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0	0	0	0 (xylenes)	
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	negl	negl	
Degreaser	0	0	0	0	0	0.49	0	0	0	
<b>Total Fugitive Emissions</b>	<b>71.00</b>	<b>21.07</b>	<b>8.25</b>	<b>0</b>	<b>0</b>	<b>64.67</b>	<b>1.44</b>	<b>14.65</b>	<b>5.01 (xylenes)</b>	
<b>Totals Limited/Controlled Emissions</b>	<b>249.00</b>	<b>99.00</b>	<b>99.00</b>	<b>99.00</b>	<b>99.00</b>	<b>80.68</b>	<b>66.78</b>	<b>24.87</b>	<b>8.68 (hydrogen chloride)</b>	

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.

\*\* The crusher has been determined a nonroad vehicle under 40 CFR 60, and 40 CFR 63, therefore, the criteria pollutant emissions are not counted toward PSD and Title V applicability.

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

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

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 =	1,000,000	ton/yr
Natural Gas Limitation =	1,028	MMCF/yr
No. 2 Fuel Oil Limitation =	2,129,948	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 =	1,315,000	gal/yr, and
	0.50	% sulfur
	0	% sulfur
	0	% sulfur
	0	gr/100 ft3 sulfur
	0	gr/100 ft3 sulfur
	0.75	% sulfur
	1.00	% 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 (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/Waste Oil (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)	Worse Case Fuel (tons/yr)	
PM	1.9	2	7	3.22	0.5	0.6	64	0.9762343	2.13	0	0	0	0	42.08	42.08	
PM10	7.6	3.3	8.3	4.72	0.5	0.6	51	3.9049371	3.51	0	0	0	0	33.53	33.53	
SO2	0.6	71.0	0	0	0	0	110.3	0.3082845	75.61	0	0	0	0	72.49	75.61	
NOx	190	24.0	47.0	47.0	13.0	15.0	19.0	97.623429	25.56	0	0	0	0	12.49	97.62	
VOC	5.5	0.20	0.20	0.28	1.00	1.10	1.0	2.8259414	0.21	0	0	0	0	0.66	2.83	
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	43.159832	5.32	0	0	0	0	3.29	43.16	
<b>Hazardous Air Pollutant</b>																
HCl							13.2							8.68	8.68	
Antimony			5.25E-03	5.25E-03			negl			0	0			negl	0.0E+00	
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03			1.1E-01	0.0001028	5.96E-04	0	0			7.23E-02	7.2E-02	
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05			negl	6.166E-06	4.47E-04	0	0			negl	4.5E-04	
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04			9.3E-03	0.0005652	4.47E-04	0	0			6.11E-03	6.1E-03	
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02	0.0007193	4.47E-04	0	0			1.32E-02	1.3E-02	
Cobalt	8.4E-05	6.02E-03	6.02E-03	6.02E-03			2.1E-04	4.316E-05		0	0			1.38E-04	1.4E-04	
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03			0.55	0.0002569	1.34E-03	0	0			3.6E-01	0.36	
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03			6.8E-02	0.0001952	8.95E-04	0	0			4.47E-02	0.04	
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04				0.0001336	4.47E-04	0	0				4.5E-04	
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02	0.001079	4.47E-04	0	0			7.23E-03	0.007	
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl	1.233E-05	2.24E-03	0	0			negl	2.2E-03	
1,1,1-Trichloroethane			2.36E-04	2.36E-04						0	0				0.0E+00	
1,3-Butadiene															0.0E+00	
Acetaldehyde															0.0E+00	
Acrolein															0.0E+00	
Benzene	2.1E-03		2.14E-04	2.14E-04				0.001079		0	0				1.1E-03	
Bis(2-ethylhexyl)phthalate							2.2E-03							1.45E-03	1.4E-03	
Dichlorobenzene	1.2E-03						8.0E-07	0.0006166						5.26E-07	6.2E-04	
Ethylbenzene			6.36E-05	6.36E-05						0	0				0.0E+00	
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				0.0385356	6.50E-02	0	0				0.065	
Hexane	1.8E+00							0.9248535							0.925	
Phenol							2.4E-03						1.58E-03		1.6E-03	
Toluene	3.4E-03		6.20E-03	6.20E-03				0.0017469		0	0				1.7E-03	
Total PAH Haps	negl		1.13E-03	1.13E-03			3.9E-02	negl		0	0			2.57E-02	2.6E-02	
Polycyclic Organic Matter		3.30E-03							3.51E-03						3.5E-03	
Xylene			1.09E-04	1.09E-04						0	0				0.0E+00	
<b>Total HAPs</b>								<b>0.970</b>	<b>0.08</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9.21</b>	<b>10.21</b>	

**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 5/10), 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

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

**Abbreviations**

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

### Appendix A.2: Limited Emissions Summary Dryer/Mixer

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

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

Maximum Hourly Asphalt Production =	400	ton/hr
Annual Asphalt Production Limitation =	1,000,000	ton/yr
PM Dryer/Mixer Limitation =	0.356	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation =	0.155	lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation =	0.181	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*	0.356	0.356	0.356	177.9	177.9	177.9	177.9
PM10*	0.155	0.155	0.155	77.7	77.7	77.7	77.7
PM2.5*	0.181	0.181	0.181	90.5	90.5	90.5	90.5
SO2**	0.003	0.011	0.058	1.7	5.5	29.0	29.0
NOx**	0.026	0.055	0.055	13.0	27.5	27.5	27.5
VOC**	0.032	0.032	0.032	16.0	16.0	16.0	16.0
CO***	0.130	0.130	0.130	65.0	65.0	65.0	65.0
<b>Hazardous Air Pollutant</b>							
HCl			2.10E-04			0.11	0.11
Antimony	1.80E-07	1.80E-07	1.80E-07	9.00E-05	9.00E-05	9.00E-05	9.00E-05
Arsenic	5.60E-07	5.60E-07	5.60E-07	2.80E-04	2.80E-04	2.80E-04	2.80E-04
Beryllium	negl	negl	negl	negl	negl	negl	0.00E+00
Cadmium	4.10E-07	4.10E-07	4.10E-07	2.05E-04	2.05E-04	2.05E-04	2.05E-04
Chromium	5.50E-06	5.50E-06	5.50E-06	2.75E-03	2.75E-03	2.75E-03	2.75E-03
Cobalt	2.60E-08	2.60E-08	2.60E-08	1.30E-05	1.30E-05	1.30E-05	1.30E-05
Lead	6.20E-07	1.50E-05	1.50E-05	3.10E-04	7.50E-03	7.50E-03	7.50E-03
Manganese	7.70E-06	7.70E-06	7.70E-06	3.85E-03	3.85E-03	3.85E-03	3.85E-03
Mercury	2.40E-07	2.60E-06	2.60E-06	1.20E-04	1.30E-03	1.30E-03	1.30E-03
Nickel	6.30E-05	6.30E-05	6.30E-05	3.15E-02	3.15E-02	3.15E-02	3.15E-02
Selenium	3.50E-07	3.50E-07	3.50E-07	1.75E-04	1.75E-04	1.75E-04	1.75E-04
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	2.00E-02	2.00E-02	2.00E-02	2.00E-02
Acetaldehyde			1.30E-03			0.65	0.65
Acrolein			2.60E-05			1.30E-02	1.30E-02
Benzene	3.90E-04	3.90E-04	3.90E-04	0.20	0.20	0.20	0.20
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0.12	0.12	0.12	0.12
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	1.55	1.55	1.55	1.55
Hexane	9.20E-04	9.20E-04	9.20E-04	0.46	0.46	0.46	0.46
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0.02	0.02	0.02	0.02
MEK			2.00E-05			0.01	0.01
Propionaldehyde			1.30E-04			0.07	0.07
Quinone			1.60E-04			0.08	0.08
Toluene	1.50E-04	2.90E-03	2.90E-03	0.08	1.45	1.45	1.45
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0.10	0.44	0.44	0.44
Xylene	2.00E-04	2.00E-04	2.00E-04	0.10	0.10	0.10	0.10
						<b>Total HAPs</b>	<b>5.33</b>
						<b>Worst Single HAP</b>	<b>1.55 (formaldehyde)</b>

#### 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

HCl = Hydrogen Chloride

SO2 = Sulfur Dioxide

HAP = Hazardous Air Pollutant

PAH = Polyaromatic Hydrocarbon

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

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

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

Limited Blast Furnace Slag Usage =	50,000	ton/yr		1.50	% sulfur
Limited Annual Steel Slag Usage =	1,000,000	ton/yr		0.66	% sulfur

Type of Slag	SO2 Emission Factor (lb/ton)*	Limited Potential to Emit SO2 (tons/yr)
Blast Furnace Slag	0.7400	18.5
Steel Slag	0.0014	0.70

**Methodology**

\* Testing results for blast furnace 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 blast furnace 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%.

\*\* Testing results for steel slag, obtained June 2009 from E & B Paving, Inc. facility located in Huntington, IN. The testing results showed a steel slag emission factor of 0.0007 lb/ton from slag containing 0.33% sulfur content.  
 Limited Potential to Emit SO2 from Slag (tons/yr) = [(Limited Slag Usage (ton/yr)] \* [Emission Factor (lb/ton)] \* [ton/2000 lbs]

**Abbreviations**

SO2 = Sulfur Dioxide



**Appendix A.2: Limited Emissions Summary**  
**Hot Oil Heater**  
**Fuel Combustion with Maximum Capacity < 100 MMBtu/hr**

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

Maximum Hot Oil Heater Fuel Input Rate = 2.20 MMBtu/hr  
 Natural Gas Usage = 0 MMCF/yr  
 No. 2 Fuel Oil Usage = 137,657 gal/yr, and 0.50 % sulfur

**Unlimited/Uncontrolled Emissions**

Criteria Pollutant	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		Worst Case Fuel (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)	
PM	1.9	2.0	0	0.138	0.14
PM10/PM2.5	7.6	3.3	0	0.227	0.23
SO <sub>2</sub>	0.6	71.0	0	4.887	4.89
NO <sub>x</sub>	100	20.0	0	1.377	1.38
VOC	5.5	0.20	0	0.014	0.01
CO	84	5.0	0	0.344	0.34
<b>Hazardous Air Pollutant</b>					
Arsenic	2.0E-04	5.6E-04	0	3.85E-05	3.9E-05
Beryllium	1.2E-05	4.2E-04	0	2.89E-05	2.9E-05
Cadmium	1.1E-03	4.2E-04	0	2.89E-05	2.9E-05
Chromium	1.4E-03	4.2E-04	0	2.89E-05	2.9E-05
Cobalt	8.4E-05		0		0
Lead	5.0E-04	1.3E-03	0	8.67E-05	8.7E-05
Manganese	3.8E-04	8.4E-04	0	5.78E-05	5.8E-05
Mercury	2.6E-04	4.2E-04	0	2.89E-05	2.9E-05
Nickel	2.1E-03	4.2E-04	0	2.89E-05	2.9E-05
Selenium	2.4E-05	2.1E-03	0	1.45E-04	1.4E-04
Benzene	2.1E-03		0		0
Dichlorobenzene	1.2E-03		0		0
Ethylbenzene					0
Formaldehyde	7.5E-02	6.10E-02	0	4.20E-03	0.004
Hexane	1.8E+00		0		0
Phenol					0
Toluene	3.4E-03		0		0
Total PAH Haps	negl		negl		0
Polycyclic Organic Matter		3.30E-03		2.27E-04	2.3E-04
<b>Total HAPs =</b>			<b>0</b>	<b>4.9E-03</b>	<b>0.005</b>

**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)  
 SO<sub>2</sub> = Sulfur Dioxide  
 NO<sub>x</sub> = Nitrous Oxides  
 VOC = Volatile Organic Compounds

CO = Carbon Monoxide  
 HAP = Hazardous Air Pollutant  
 HCl = Hydrogen Chloride  
 PAH = Polyaromatic Hydrocarbon

## Appendix A.2: Limited Emissions Summary Asphalt Load-Out, Silo Filling, and Yard Emissions

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

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 =	1,000,000	tons/yr

Pollutant	Emission Factor (lb/ton asphalt)			Limited Potential to Emit (tons/yr)			
	Load-Out	Silo Filling	On-Site Yard	Load-Out	Silo Filling	On-Site Yard	Total
Total PM*	5.2E-04	5.9E-04	NA	0.26	0.29	NA	0.55
Organic PM	3.4E-04	2.5E-04	NA	0.17	0.127	NA	0.30
TOC	0.004	0.012	0.001	2.08	6.09	0.550	8.7
CO	0.001	0.001	3.5E-04	0.67	0.590	0.176	1.44

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

<b>PM/HAPs</b>	<b>0.012</b>	<b>0.014</b>	<b>0</b>	<b>0.027</b>
<b>VOC/HAPs</b>	<b>0.031</b>	<b>0.077</b>	<b>0.008</b>	<b>0.116</b>
<b>non-VOC/HAPs</b>	<b>1.6E-04</b>	<b>1.6E-05</b>	<b>4.2E-05</b>	<b>2.2E-04</b>
<b>non-VOC/non-HAPs</b>	<b>0.15</b>	<b>0.09</b>	<b>0.04</b>	<b>0.28</b>

<b>Total VOCs</b>	<b>1.95</b>	<b>6.09</b>	<b>0.5</b>	<b>8.6</b>
<b>Total HAPs</b>	<b>0.04</b>	<b>0.09</b>	<b>0.008</b>	<b>0.14</b>
<b>Worst Single HAP</b>				<b>0.044</b>
				<b>(formaldehyde)</b>

### 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: Limited Emissions Summary  
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)**

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

**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
<b>PAH HAPs</b>										
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	0.47%	4.4E-04	6.0E-04	NA	1.0E-03
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	4.8E-05	1.8E-05	NA	6.6E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	1.2E-04	1.7E-04	NA	2.8E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	3.2E-05	7.1E-05	NA	1.0E-04
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	1.3E-05	0	NA	1.3E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	3.8E-06	0	NA	3.8E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	3.2E-06	0	NA	3.2E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	3.9E-06	0	NA	3.9E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	1.3E-05	1.2E-05	NA	2.5E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	1.8E-04	2.7E-04	NA	4.4E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	6.3E-07	0	NA	6.3E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	8.5E-05	1.9E-04	NA	2.8E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	1.3E-03	1.3E-03	NA	2.6E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	8.0E-07	0	NA	8.0E-07
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	4.1E-03	6.7E-03	NA	0.011
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	2.1E-03	2.3E-03	NA	4.4E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	3.8E-05	3.8E-05	NA	7.6E-05
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	1.4E-03	2.3E-03	NA	3.7E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	2.6E-04	5.6E-04	NA	8.1E-04
<b>Total PAH HAPs</b>							<b>0.010</b>	<b>0.014</b>	<b>NA</b>	<b>0.025</b>
<b>Other semi-volatile HAPs</b>										
Phenol		PM/HAP	---	Organic PM	1.18%	0	2.0E-03	0	0	2.0E-03

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

**Methodology**

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

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

**Abbreviations**

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

**Appendix A.2: Limited Emissions Summary**  
**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
<b>VOC</b>		VOC	---	TOC	94%	100%	<b>1.95</b>	<b>6.09</b>	<b>0.52</b>	<b>8.57</b>
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	1.4E-01	1.6E-02	3.6E-02	0.187
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	9.6E-04	3.4E-03	2.5E-04	0.005
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	1.5E-02	6.7E-02	3.9E-03	0.086
<b>Total non-VOC/non-HAPS</b>					<b>7.30%</b>	<b>1.40%</b>	<b>0.152</b>	<b>0.085</b>	<b>0.040</b>	<b>0.28</b>
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	1.1E-03	1.9E-03	2.9E-04	3.3E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	2.0E-04	3.0E-04	5.3E-05	5.5E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	1.0E-03	2.4E-03	2.7E-04	3.7E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	2.7E-04	9.7E-04	7.2E-05	1.3E-03
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	4.4E-06	2.4E-04	1.2E-06	2.5E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	3.1E-04	1.4E-03	8.3E-05	1.8E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	2.3E-03	0	6.1E-04	2.9E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	5.8E-03	2.3E-03	1.5E-03	0.010
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	1.8E-03	4.2E-02	4.8E-04	0.044
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	3.1E-03	6.1E-03	8.3E-04	0.010
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	3.7E-05	1.9E-05	9.9E-06	6.6E-05
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	1.6E-05	0	1.6E-05
MTBE	1634-04-4	VOC/HAP	---	TOC	0	0	0	0	0	0
Styrene	100-42-5	VOC/HAP	---	TOC	0.0073%	0.0054%	1.5E-04	3.3E-04	4.0E-05	5.2E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	1.6E-04	0	4.2E-05	2.0E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	4.4E-03	3.8E-03	1.2E-03	0.009
1,1,1-Trichloroethane	71-55-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichloroethene	79-01-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichlorofluoromethane	75-69-4	VOC/HAP	---	TOC	0.0013%	0	2.7E-05	0	7.2E-06	3.4E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	8.5E-03	1.2E-02	2.3E-03	0.023
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	1.7E-03	3.5E-03	4.4E-04	5.6E-03
<b>Total volatile organic HAPs</b>					<b>1.50%</b>	<b>1.30%</b>	<b>0.031</b>	<b>0.079</b>	<b>0.008</b>	<b>0.119</b>

**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: Limited Emissions Summary Material Storage Piles

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

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.

$$E_f = 1.7 \cdot (s/1.5)^3 \cdot (365-p)/235 \cdot (f/15)$$

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

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10/PM2.5 (tons/yr)
Sand	2.6	3.01	0.88	0.483	0.169
Limestone	1.6	1.85	1.22	0.412	0.144
RAP	0.5	0.58	0.53	0.056	0.020
Gravel	1.6	1.85	0.38	0.128	0.045
Slag	3.8	4.40	0.02	0.016	0.006
Shingles	3.8	4.40	0.02	0.016	0.006
<b>Totals</b>				<b>1.11</b>	<b>0.39</b>

### 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: Limited Emissions Summary**  
**Material Processing, Handling, Crushing, Screening, and Conveying**

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

**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 $\leq 100$ $\mu\text{m}$ )
$k$ (PM10) =	0.35	= particle size multiplier (0.35 assumed for aerodynamic diameter $\leq 10$ $\mu\text{m}$ )
$k$ (PM2.5) =	0.053	= particle size multiplier (0.053 assumed for aerodynamic diameter $\leq 2.5$ $\mu\text{m}$ )
$U$ =	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 =	1,000,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	950,000	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	1.08	0.51	0.08
Front-end loader dumping of materials into feeder bins	1.08	0.51	0.08
Conveyor dropping material into dryer/mixer or batch tower	1.08	0.51	0.08
<b>Total (tons/yr)</b>	<b>3.23</b>	<b>1.53</b>	<b>0.23</b>

**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	2.57	1.14
Screening	0.025	0.0087	11.88	4.13
Conveying	0.003	0.0011	1.43	0.52
<b>Limited Potential to Emit (tons/yr) =</b>			<b>15.87</b>	<b>5.80</b>

**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  $\mu\text{m}$ )

PM2.5 = Particulate Matter (<2.5  $\mu\text{m}$ )

PTE = Potential to Emit

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

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

**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 = 1,000,000 tons/yr  
 Percent Asphalt Cement/Binder (weight %) = 5.0%  
 Maximum Material Handling Throughput = 950,000 tons/yr  
 Maximum Asphalt Cement/Binder Throughput = 50,000 tons/yr  
 No. 2 Fuel Oil Limitation = 2,129,948 gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.4	4.2E+04	1.7E+06	734	0.139	5895.1
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	4.2E+04	7.2E+05	734	0.139	5895.1
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	1.4E+03	6.7E+04	734	0.139	193.1
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	1.4E+03	1.7E+04	734	0.139	193.1
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	2.2E+02	9.9E+03	734	0.139	31.3
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	2.2E+02	2.7E+03	734	0.139	31.3
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	2.3E+05	4.3E+06	348	0.066	14928.6
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	2.3E+05	3.4E+06	348	0.066	14928.6
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.0	4.2E+04	1.7E+06	510	0.097	4025.0
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.0	4.2E+04	7.1E+05	510	0.097	4025.0
<b>Total</b>					<b>6.2E+05</b>	<b>1.3E+07</b>			<b>5.0E+04</b>

Average Vehicle Weight Per Trip = 20.3 tons/trip  
 Average Miles Per Trip = 0.080 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
s =	4.8	4.8	4.8
a =	0.7	0.9	0.9
W =	20.3	20.3	20.3
b =	0.45	0.45	0.45

lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)  
 % = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)  
 = constant (AP-42 Table 13.2.2-2)  
 tons = average vehicle weight (provided by source)  
 = constant (AP-42 Table 13.2.2-2)

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

Mitigated Emission Factor,  $E_{ext} = E \cdot [(365 - P)/365]$

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

	PM	PM10	PM2.5	lb/mile
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)	17.96	4.58	0.46	11.81	3.01	0.30	5.91	1.51	0.15
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.96	4.58	0.46	11.81	3.01	0.30	5.91	1.51	0.15
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.588	0.150	0.01	0.387	0.099	9.9E-03	0.193	0.049	4.9E-03
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.588	0.150	0.01	0.387	0.099	9.9E-03	0.193	0.049	4.9E-03
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.095	0.024	2.4E-03	0.063	0.016	1.6E-03	0.031	0.008	8.0E-04
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.095	0.024	2.4E-03	0.063	0.016	1.6E-03	0.031	0.008	8.0E-04
Aggregate/RAP Loader Full	Front-end loader (3 CY)	45.49	11.59	1.16	29.91	7.62	0.76	14.96	3.81	0.38
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	45.49	11.59	1.16	29.91	7.62	0.76	14.96	3.81	0.38
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	12.27	3.13	0.31	8.07	2.06	0.21	4.03	1.03	0.10
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	12.27	3.13	0.31	8.07	2.06	0.21	4.03	1.03	0.10
<b>Totals</b>		<b>152.82</b>	<b>38.95</b>	<b>3.89</b>	<b>100.48</b>	<b>25.61</b>	<b>2.56</b>	<b>50.24</b>	<b>12.80</b>	<b>1.28</b>

**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: Limited Emissions Summary**  
**Paved Roads**  
**Limited Emissions**

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

**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 =	1,000,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	950,000	tons/yr
Maximum Asphalt Cement/Binder Throughput =	50,000	tons/yr
No. 2 Fuel Oil Limitation =	2,129,948	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per day (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.40	4.2E+04	1.7E+06	0	0.000	0.0
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.00	4.2E+04	7.2E+05	0	0.000	0.0
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.00	1.4E+03	6.7E+04	0	0.000	0.0
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	1.4E+03	1.7E+04	0	0.000	0.0
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.00	2.2E+02	9.9E+03	0	0.000	0.0
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	2.2E+02	2.7E+03	0	0.000	0.0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.20	2.3E+05	4.3E+06	0	0.000	0.0
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	2.3E+05	3.4E+06	0	0.000	0.0
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.00	4.2E+04	1.7E+06	0	0.000	0.0
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.00	4.2E+04	7.1E+05	0	0.000	0.0
<b>Total</b>					<b>6.2E+05</b>	<b>1.3E+07</b>			<b>0.0E+00</b>

Average Vehicle Weight Per Trip = 20.3 tons/trip  
 Average Miles Per Trip = 0.000 miles/trip

Unmitigated Emission Factor, Ef = [k \* (sL)<sup>0.91</sup> \* (W)<sup>1.02</sup>] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5
where k =	0.011	0.0022	0.00054
W =	20.3	20.3	20.3
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)  
 g/m<sup>2</sup> = Ubiquitous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months)

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

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

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

	PM	PM10	PM2.5	lb/mile
Unmitigated Emission Factor, Ef =	0.15	0.03	0.01	lb/mile
Mitigated Emission Factor, Eext =	0.14	0.03	0.01	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)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.000	0.000	0.0E+00	0.000	0.000	0.0E+00	0.000	0.0E+00	0.0E+00
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.000	0.000	0.0E+00	0.000	0.000	0.0E+00	0.000	0.0E+00	0.0E+00
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Totals</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**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: Limited Emissions Summary Cold Mix Asphalt Production and Stockpiles

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

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

Limited VOC Emissions from the Sum of the Liquid Binders =  tons/yr

#### Volatiles 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)	Liquid Binder Adjustment Ratio
Cut back asphalt rapid cure (assuming gasoline or naphtha solvent)	25.3%	95.0%	58.55	55.62	1.053
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	79.46	55.62	1.429
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	222.48	55.62	4.000
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	119.87	55.62	2.155
Other asphalt with solvent binder	25.9%	2.5%	2,224.80	55.62	40.0
<b>Worst Case Limited PTE of VOC =</b>				<b>55.62</b>	

#### 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
<b>Limited PTE of Total HAPs (tons/yr) =</b>	<b>14.51</b>
<b>Limited PTE of Single HAP (tons/yr) =</b>	<b>5.01 Xylenes</b>

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

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

#### 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.

#### Abbreviations

VOC = Volatile Organic Compounds  
PTE = Potential to Emit

## Appendix A.2: Limited Emissions Summary Gasoline Fuel Transfer and Dispensing Operation

**Company Name:** Milestone Contractors, L.P.  
**Source Address:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

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:

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

### 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
Tank breathing and emptying	1.0	0
Vehicle refueling (displaced losses - controlled)	1.1	0
Spillage	0.7	0
<b>Total</b>		<b>0</b>

### 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
<b>Limited PTE of Total HAPs (tons/yr) =</b>	<b>0</b>	
<b>Limited PTE of Single HAP (tons/yr) =</b>	<b>0</b>	<b>Xylenes</b>

### 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.

### Abbreviations

VOC = Volatile Organic Compounds

PTE = Potential to Emit

**Appendix A: Emissions Calculations  
Degreaser**

**Company Name:** Milestone Contractors, L.P.  
**Address City IN Zip:** 7770 South US Highway 41, Veedersburg, Indiana 47987  
**Permit Number:** 045-40460-00019  
**Reviewer:** Deena P. Levering

In order for the degreaser to qualify as an insignificant activity under the listing in 326 IAC 2-7-1(21)(J)(vi)(DD), the source shall use solvents "the use of which, for all cleaners and solvents combined, does not exceed one hundred forty-five (145) gallons per twelve (12) months".

Based on a review of the solvents most widely supplied for the industry by Crystal Clean and Safety-Kleen, the following PTE is based on the following conservative estimates:

The solvent has a maximum density of 6.7 lb/gal.  
The solvent used in the degreaser contains 100% VOC

Number of Degreasers            1 each using a maximum of 5 gallons of solvent per week

**Uncontrolled Potential Emissions**

6.7      lb/gal x      100      % VOC x      145      gal/yr ÷      2000      lb/ton =      0.49      tons VOC per year



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

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

**Eric J. Holcomb**  
Governor

**Bruno L. Pigott**  
Commissioner

November 14, 2018

Robert Beyke  
Milestone Contractors, L.P.  
5950 S Belmont Ave  
Indianapolis, IN 46217

Re: Public Notice  
Milestone Contractors  
Permit Level: FESOP Significant Permit Rev

(Minor PSD/EO) (120)

Permit Number: 045-40460-00019

Dear Robert Beyke:

Enclosed is a copy of your draft FESOP Significant Permit Rev (Minor PSD/EO) (120), Technical Support Document, emission calculations, and the Public Notice which will be printed in your local newspaper.

The Office of Air Quality (OAQ) has prepared two versions of the Public Notice Document. The abbreviated version will be published in the newspaper, and the more detailed version will be made available on the IDEM's website and provided to interested parties. Both versions are included for your reference. The OAQ has requested that the Fountain County Neighbor in Attica, Indiana publish the abbreviated version of the public notice no later than November 27, 2018. You will not be responsible for collecting any comments, nor are you responsible for having the notice published in the newspaper.

OAQ has submitted the draft permit package to the Veedersburg Public Library, 408 North Main Street in Veedersburg IN. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Deena P. Levering, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 4-5400 or dial (317) 234-5400.

Sincerely,  
*Len Pogost*

Len Pogost  
Permits Branch  
Office of Air Quality

Enclosures  
PN Applicant Cover Letter 1/9/2017



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**Eric J. Holcomb**  
Governor

**Bruno Pigott**  
Commissioner

## **ATTENTION: PUBLIC NOTICES, LEGAL ADVERTISING**

November 14, 2018

Fountain County Neighbor  
Attn: Classifieds  
113 S Perry Street  
Attica, Indiana 47918

Enclosed, please find one Indiana Department of Environmental Management Notice of Public Comment for Milestone Contractors, Fountain County, Indiana.

Since our agency must comply with requirements which call for a Notice of Public Comment, we request that you print this notice one time, no later than November 27, 2018.

Please send the invoice, notarized form, clippings showing the date of publication to Bo Liu, at the Indiana Department of Environmental Management, Accounting, Room N1340, 100 North Senate Avenue, Indianapolis, Indiana, 46204.

**To ensure proper payment, please reference account # 100174737.**

We are required by the Auditor's Office to request that you place the Federal ID Number on all claims. If you have any conflicts, questions, or problems with the publishing of this notice or if you do not receive complete public notice information for this notice, please call Len Pogost at 800-451-6027 and ask for extension 3-2803 or dial 317-233-2803.

Sincerely,

*Len Pogost*

Len Pogost  
Permit Branch  
Office of Air Quality

Permit Level: FESOP Significant Permit Rev (Minor PSD/EO) (120)  
Permit Number: 045-40460-00019

Enclosure

PN Newspaper.dot 1/9/2017



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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**Eric J. Holcomb**  
Governor

**Bruno L. Pigott**  
Commissioner

November 14, 2018

To: Veedersburg Public Library 408 North Main Street Veedersburg IN

From: Jenny Acker, Branch Chief  
Permits Branch  
Office of Air Quality

Subject: **Important Information to Display Regarding a Public Notice for an Air Permit**

**Applicant Name: Milestone Contractors**  
**Permit Number: 045-40460-00019**

Enclosed is a copy of important information to make available to the public. This proposed project is regarding a source that may have the potential to significantly impact air quality. Librarians are encouraged to educate the public to make them aware of the availability of this information. The following information is enclosed for public reference at your library:

- Notice of a 30-day Period for Public Comment
- Request to publish the Notice of 30-day Period for Public Comment
- Draft Permit and Technical Support Document

You will not be responsible for collecting any comments from the citizens. Please refer all questions and request for the copies of any pertinent information to the person named below.

Members of your community could be very concerned in how these projects might affect them and their families. **Please make this information readily available until you receive a copy of the final package.**

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. Questions pertaining to the permit itself should be directed to the contact listed on the notice.

Enclosures  
PN Library 1/9/2017



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

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**Eric J. Holcomb**  
Governor

**Bruno L. Pigott**  
Commissioner

## Notice of Public Comment

**November 14, 2018**  
**Milestone Contractors**  
**045-40460-00019**

Dear Concerned Citizen(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has been placed in the Legal Advertising section of your local newspaper. The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana's Air Permitting Program.

**Please Note:** *If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at [PPEAR@IDEM.IN.GOV](mailto:PPEAR@IDEM.IN.GOV). If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.*

Enclosure  
PN AAA Cover Letter 1/9/2017

# Mail Code 61-53

IDEM Staff	LPOGOST 11/14/2018 Milestone Contractors, L.P. 045-40460-00019 draft/)			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	Type of Mail:  <b>CERTIFICATE OF MAILING ONLY</b>	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee
											Remarks
1		Robert Beyke Milestone Contractors, L.P. 5950 S Belmont Ave Indianapolis IN 46217 (Source CAATS)									
2		Fountain-Warren County Health Department Fountain-Warren County Health Department 113 W Sycamore St Attica IN 47918 (Health Department)									
3		Fountain County Commissioners 301 Fourth Street Covington IN 47932 (Local Official)									
4		Veedersburg Public Library 408 North Main Street Veedersburg IN 47987 (Library)									
5		Veedersbrug Town Council 100 S. Main St. Veedersburg IN 47987 (Local Official)									
6											
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11											
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13											
14											
15											

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See <b>Domestic Mail Manual R900, S913, and S921</b> for limitations of coverage on inured and COD mail. See <b>International Mail Manual</b> for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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