



# 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

**Michael R. Pence**  
Governor

**Thomas W. Easterly**  
Commissioner

TO: Interested Parties / Applicant

DATE: November 6, 2013

RE: Dave O'Mara Contractor, Inc. / 031-33048-05047

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

## Notice of Decision: Approval - Effective Immediately

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

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures  
FNPER.dot 6/13/13



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Ms. Amy Boswell  
Dave O'Mara Contractor, Inc.  
1100 East O & M Avenue  
North Vernon, IN 47265

November 6, 2013

Re: 031-33048-05047  
Second Significant Revision to  
F031-25342-05047

Dear Ms. Boswell

Dave O'Mara Contractor, Inc. was issued a Federally Enforceable State Operating Permit (FESOP) Renewal No. F031-25342-05047 on February 20, 2009 for a portable hot drum-mix asphalt plant located at New Point Stone at 992 South County Road 800 East, Greensburg, Indiana. On April 4, 2013, the Office of Air Quality (OAQ) received an application from the source requesting the addition of onsite reclaimed asphalt pavement (RAP) crushing. The RAP crushing will be performed by a portable unit that will be moved to the site on an as-needed basis. Dave O'Mara has also requested approval to add recycled shingles to their aggregate mix, and propane as a back-up fuel in the aggregate dryer. Additionally, Dave O'Mara has requested approval to construct a new 10,519 gallon #2 fuel oil storage tank and increase the electric arc furnace steel mill slag storage capacity. Each of these changes is intended to increase the operational flexibility of this portable source. Furthermore, Dave O'Mara has indicated that it no longer wishes to have approval to relocate to LaPorte County due to additional requirements specific to the county. Finally, Dave O'Mara has requested the permit be updated to correct several emission unit descriptions to reflect actual operating conditions. The attached Technical Support Document (TSD) provides additional explanation of the changes to the source/permit. Pursuant to the provisions of 326 IAC 2-8-11.1, these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-8-11.1(f). Pursuant to the provisions of 326 IAC 2-8-11.1, a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

The following construction conditions are applicable to the proposed project:

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

**DRAFT**

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. Attached please find the entire revised permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Ms. Hannah Desrosiers, of my staff, at (317) 233-9327 or toll free at 1-800-451-6027 extension 3-9327.

Sincerely,



Nathan C. Bell, Section Chief  
Permits Branch  
Office of Air Quality

Attachments: Technical Support Documents, and revised permit and attachments.

NCB/hd

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



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

### Dave O'Mara Contractor, Inc. Portable

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

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

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

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

Operation Permit No. F031-25342-05047	
Original Signed by: Chrystal A. Wagner, Section Chief Permits Branch Office of Air Quality	Issuance Date: February 20, 2009  Expiration Date: February 20, 2019

Significant Permit Revision No. 031-28784-05047, Issued on May 12, 2010.

Significant Permit Revision No. 031-33048-05047	
Issued by:  Nathan C. Bell, Section Chief Permits Branch Office of Air Quality	Issuance Date: November 6, 2013  Expiration Date: February 20, 2019

## TABLE OF CONTENTS

### A. SOURCE SUMMARY .....Error! Bookmark not defined.

- 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)(3)(I)]
- A.4 FESOP Applicability [326 IAC 2-8-2]

### B. GENERAL CONDITIONS .....Error! Bookmark not defined.

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

### C. SOURCE OPERATION CONDITIONS .....Error! Bookmark not defined.

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

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

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

**Compliance Requirements [326 IAC 2-1.1-11]**

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

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

- C.12 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]
- C.13 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

**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]
- 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]

**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]
- C.19 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

**Portable Source Requirement**

- C.20 Relocation of Portable Sources [326 IAC 2-14-4]

**Stratospheric Ozone Protection**

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

**D.1. EMISSIONS UNIT OPERATION CONDITIONS - Portable Drum Mix Asphalt Plant ..... 23**

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

- D.1.1 Particulate Matter (PM) [326 IAC 2-2]
- D.1.2 FESOP Limits [326 IAC 2-8-4][326 IAC 2-2] [326 IAC 8-1-6]
- D.1.3 Sulfur Dioxide (SO<sub>2</sub>) and Hazardous Air Pollutant (HAP) Limits [326 IAC 2-8-4][326 IAC 2-2] [326 IAC 2-3][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 Particulate Emission Limits [326 IAC 6.5]
- D.1.7 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1-1][326 IAC 7-2-1]
- D.1.8 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

**Compliance Determination Requirements**

- D.1.9 Particulate Matter (PM, PM<sub>10</sub>, and PM<sub>2.5</sub>) Control
- D.1.10 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]
- D.1.11 Sulfur Dioxide Emissions and Sulfur Content
- D.1.12 Multiple Fuel & Steel Slag Usage / Sulfur Dioxide (SO<sub>2</sub>) Emissions
- D.1.13 Shingle Asbestos Content

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

- D.1.14 Visible Emission Notations
- D.1.15 Parametric Monitoring
- D.1.16 Broken or Failed Bag Detection

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

- D.1.17 Record Keeping Requirement
- D.1.18 Reporting Requirements

**D.2. EMISSIONS UNIT OPERATION CONDITIONS - Cold-mix Asphalt Storage Piles ..... 32**

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

- D.2.1 Volatile Organic Compound (VOC) [326 IAC 2-8-4][326 IAC 2-2]
- D.2.2 Volatile Organic Compound (VOC)
- D.2.3 Volatile Organic Compound Rules for Asphalt Pavers (VOC) [326 IAC 8-5-2]

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

- D.2.4 Record Keeping Requirements
- D.2.5 Reporting Requirements

**D.3. EMISSIONS UNIT OPERATION CONDITIONS - Storage Vessels (Tanks) ..... 35**

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

- D.3.1 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]

**E.1. NSPS REQUIREMENTS - Portable Drum-Mix Asphalt Plant ..... 36**

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

- E.1.1 General Provisions Relating to NSPS [326 IAC 12-1][40 CFR Part 60, Subpart A]
- E.1.2 New Source Performance Standards (NSPS) for Hot Mix Asphalt Facilities [40 CFR Part 60, Subpart I] [326 IAC 12]

**E.2. NSPS REQUIREMENTS - Portable RAP Crusher ..... 38**

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

- E.2.1 General Provisions Relating to NSPS [326 IAC 12] [40 CFR Part 60, Subpart A]
- E.2.2 NSPS Subpart OOO Requirements - Standards of Performance for Nonmetallic Mineral Processing Plants [40 CFR Part 60, Subpart OOO] [326 IAC 12-1]
- E.2.3 Testing Requirements [40 CFR Part 60, Subpart OOO] [326 IAC 12-1] [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

**E.3. NSPS & NESHAP REQUIREMENTS - Portable RAP Crusher ..... 40**

**New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAPs) Requirements [326 IAC 2-8-4(1)]**

- E.3.1 Nonroad Engines [326 IAC 12][40 CFR 60, Subpart IIII][326 IAC 20-82] [40 CFR 63, Subpart ZZZZ][40 CFR 1068.30]
- E.3.2 Record Keeping Requirements
- E.3.3 Reporting Requirements

Certification Form ..... 42  
Emergency Occurrence Form ..... 43  
FESOP Quarterly Report Forms ..... 45  
Quarterly Deviation and Compliance Monitoring Report Form ..... 53  
Fugitive Dust Control Plan ..... Attachment A  
NSPS Subpart I - Standards of Performance for Hot-mix Asphalt Facilities ..... Attachment B  
NSPS Subpart OOO-Standards of Performance for Nonmetallic Mineral Processing Plants.. Attachment C

## 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)]

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The Permittee owns and operates a portable hot drum-mix asphalt plant and cold-mix asphalt production operation. Electric arc furnace steel mill slag (steel slag) and asbestos-free recycled asphalt shingles (RAS) are processed in the aggregate mix, and recycled asphalt pavement (RAP) is crushed on-site. This source does not process blast furnace slag or grind shingles.

Current Source Address:	New Point Stone at 992 South County Road 800 East, Greensburg, Indiana 47240
General Source Phone Number:	(812) 346-4135
SIC Code:	2951
County Location:	Decatur
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)]

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

- (a) One (1) portable asphalt drum-mix plant, constructed in 1998, with a nominal capacity of 300 tons per hour, equipped with one (1) aggregate dryer burner with a maximum rated capacity of 96.8 million British thermal units (MMBtu) per hour, using natural gas, No. 2 fuel oil, residual No. 4 fuel oil, or propane, as available, processing steel slag and asbestos-free recycled asphalt shingles (RAS) in the aggregate mix, and using one (1) pulse jet baghouse for particulate control, exhausting at one (1) stack, identified as #1;
- (b) six (6) compartment cold feed bins with feeders and collection conveyors;
- (c) one (1) 30" incline conveyor with 4' X 10' scalping screen;
- (d) two (2) conveyors and one (1) screen to transfer aggregate from two (2) recycle bins to the asphalt dryer;
- (e) one (1) drag slat conveyor to transfer product from asphalt dryer to two (2) 200 ton storage silos;
- (f) two (2) 25,000 gallon asphalt storage tanks;
- (g) one (1) 11,000 gallon #2 fuel oil storage tank.
- (h) cold-mix (stockpile mix) asphalt storage piles
- (i) one (1) 15,000 gallon No. 4 fuel oil storage tank;
- (j) One (1) 10,519 gallon No. 2 fuel oil storage tank, approved for construction in 2013.

Under NSPS Subpart I, this is considered an affected hot mix asphalt facility.

- (k) One (1) 335 horsepower, diesel fuel-fired portable crusher for processing reclaimed asphalt pavement (RAP), identified as RAP Crusher, approved for construction in 2013, with a maximum throughput capacity of 200 tons of RAP per hour.

Under 40 CFR 60, 1068.30(2)(iii), General Compliance Provisions for Highway, Stationary, and Nonroad Programs, this unit this is considered a nonroad engine.

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

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

This portable source also includes the following insignificant activities:

- (a) Paved and unpaved roads and parking lots with public access [326 IAC 6-4];
- (b) combustion source flame safety purging on startup;
- (c) 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;
- (d) Other categories with emissions below insignificant thresholds:
  - (1) one (1) #2 fuel fired hot oil heater, with a rated capacity of 0.828 MMBtu/hr; [326 IAC 6-2]
  - (2) one (1) recycle bin with twenty-five (25) ton storage capacity;
  - (3) one (1) storage silo with seventy (70) ton storage capacity;
  - (4) aggregate storage piles with a total storage capacity of 12,500 tons.
  - (5) Recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) storage piles, with a maximum anticipated pile size of 0.50 acres; and
  - (6) Electric arc steel slag storage piles, with a maximum anticipated pile size of 1.00 acres.

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

This portable 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, F031-25342-05047, 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(a)(1)]

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- (a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:
  - (i) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and

- (ii) 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)]**

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- (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)]**

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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)]**

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- (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, or Southeast Regional Office and Southwest Regional Office, 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  
Southeast Regional Office phone: (812) 358-2027; fax: (812) 358-2058.  
Southwest Regional Office phone: (812) 380 2305; fax: (812) 380 2304.

- (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 F031-25342-05047 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 F031-25342-05047.

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

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

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating

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

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

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(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]**

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(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]**

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- (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 after 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

### 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) and greenhouse gases (GHGs), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period. This limitation shall also render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-3 (Emission Offset) not applicable;
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (4) The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e) 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, when the source is located in any County except Lake or the areas specified in Conditions C.3(b)(1) through (7).

- (b) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4, when the source is located in the following areas listed in 326 IAC 5-1-1(c):
- (1) Clark County (Jefferson Township - Cities of Jeffersonville, Clarksville, Oak Park);
  - (2) Dearborn County (Lawrenceburg Township - Cities of Lawrenceburg and Greendale);
  - (3) Dubois County (Bainbridge Township - the City of Jasper);
  - (4) Marion County (except the area of Washington Township east of Fall Creek and the area of Franklin Township south of Thompson Road and east of Five Points Road);
  - (5) St. Joseph County (the area north of Kern Road and east of Pine Road);
  - (6) Vanderburgh County (the area included in the City of Evansville and Pigeon Township); and
  - (7) Vigo County (Indiana State University campus, 0.5km radius around UTM Easting 464,519.00, Northing 4,369,208.00, Zone 16.
- (c) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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

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

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

The Permittee shall not operate an incinerator 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]

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

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

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

C.8 Reserved

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

The Permittee shall comply with the applicable requirements of 326 IAC 14-10, 326 IAC 18, and 40 CFR 61.140.

### **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]**

---

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

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

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

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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 or of initial start-up, whichever is later, 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 or the date of initial startup, whichever is later, 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).

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

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

---

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

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- (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]**

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- (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.
  - (1) Support information includes the following, where applicable:
    - (A) All calibration and maintenance records.
    - (B) All original strip chart recordings for continuous monitoring instrumentation.
    - (C) Copies of all reports required by the FESOP.
  - (2) Records of required monitoring information include the following, where applicable:
    - (A) The date, place, as defined in this permit, and time of sampling or measurements.
    - (B) The dates analyses were performed.
    - (C) The company or entity that performed the analyses.
    - (D) The analytical techniques or methods used.
    - (E) The results of such analyses.
    - (F) 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]**

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- (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.

**Portable Source Requirement**

**C.20 Relocation of Portable Sources [326 IAC 2-14-4]**

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- (a) This permit is approved for operation in all areas of Indiana except in severe nonattainment areas for ozone and in Lake, LaPorte, and Porter Counties. This determination is based on the requirements of Prevention of Significant Deterioration in 326 IAC 2-2, and Emission Offset requirements in 326 IAC 2-3. Prior to locating in any severe nonattainment area, the Permittee must submit a request and obtain a permit modification.
- (b) Pursuant to 326 IAC 2-14-4(a)(1), a request to relocate shall be submitted to IDEM, OAQ at least thirty (30) days prior to the intended date of relocation.
- (c) Pursuant to 326 IAC 2-14-4(a)(3), this submittal shall include the following:

- (1) A list of governmental officials entitled to receive notice of application to relocate.  
IC 13-15-3-1
- (2) If required by IC 13-15-8 a list of adjacent landowners that the Permittee will send written notice to not more than ten (10) days after submission of the request to relocate.
- (3) The new location address of the portable source.
- (4) Whether or not this portable source will be relocated to another source.
- (5) If relocating to another source:
  - (A) Name, location address, and permit number of the source this portable source is relocating to.
  - (B) Whether or not the sources will be considered as one source. See Non Rule Policy (NRP) Air-005 and Air-006.
- (6) If the sources will be considered as one source, whether or not the source to be relocated to has received the necessary approvals from IDEM to allow the relocation.

The notification by the Permittee does require 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) A "Relocation Site Approval" letter shall be obtained prior to relocating.
- (e) A valid operation permit consists of this document and any subsequent "Relocation Site Approval" letter specifying the current location of the portable plant.

### **Stratospheric Ozone Protection**

#### **C.21 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

## FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Portable Drum-Mix Asphalt Plant

- (a) One (1) portable asphalt drum-mix plant, constructed in 1998, with a nominal capacity of 300 tons per hour, equipped with one (1) aggregate dryer burner with a maximum rated capacity of 96.8 million British thermal units (MMBtu) per hour, using natural gas, No. 2 fuel oil, residual No. 4 fuel oil, or propane, as available, processing steel slag and asbestos-free recycled asphalt shingles (RAS) in the aggregate mix, and using one (1) pulse jet baghouse for particulate control, exhausting at one (1) stack, identified as #1;
- (b) six (6) compartment cold feed bins with feeders and collection conveyors;
- (c) one (1) 30" incline conveyor with 4' X 10' scalping screen;
- (d) two (2) conveyors and one (1) screen to transfer aggregate from two (2) recycle bins to the asphalt dryer;
- (e) one (1) drag slat conveyor to transfer product from asphalt dryer to two (2) 200 ton storage silos;
- (f) two (2) 25,000 gallon asphalt storage tanks;
- (g) one (1) 11,000 gallon #2 fuel oil storage tank.
- (h) cold-mix (stockpile mix) asphalt storage piles
- (i) one (1) 15,000 gallon No.4 fuel oil storage tank.
- (j) One (1) 10,519 gallon No. 2 fuel oil storage tank, approved for construction in 2013; and

Under NSPS Subpart I, this is considered an affected hot mix asphalt facility.

- (k) One (1) 335 horsepower, diesel fuel-fired portable crusher for processing reclaimed asphalt pavement (RAP), identified as RAP Crusher, approved for construction in 2013, with a maximum throughput capacity of 200 tons of RAP per hour.

Under 40 CFR 60, 1068.30(2)(iii), General Compliance Provisions for Highway, Stationary, and Nonroad Programs, this unit this is considered a nonroad engine.

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

### Insignificant Activities: Boilers

- (d) Other categories with emissions below insignificant thresholds:
  - (1) one (1) #2 fuel fired hot oil heater, with a rated capacity of 0.828 MMBtu/hr; [326 IAC 6-2]

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

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

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

- (a) The asphalt production rate shall not exceed 750,000 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 0.538 pounds per ton of asphalt produced.

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

**D.1.2 FESOP Limits [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-3] [326 IAC 8-1-6]**

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Pursuant to 326 IAC 2-8-4, and in order to render 326 IAC 2-7, 326 IAC 2-2, 326 IAC 2-3, and 326 IAC 8-1-6 not applicable, the Permittee shall comply with the following:

- (a) The asphalt production rate shall not exceed 750,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) PM10 emissions from the dryer/mixer shall not exceed 0.218 pounds per ton of asphalt produced.
- (c) PM2.5 emissions from the dryer/mixer shall not exceed 0.237 pounds per ton of asphalt produced.
- (d) CO emissions from the dryer/mixer shall not exceed 0.19 pounds per ton of asphalt produced.
- (e) VOC emissions from the dryer/mixer shall not exceed 0.049 pounds per ton of asphalt produced.

When combined with the limited potential to emit PM10, PM2.5, CO, and VOC from all other emission units at this source, compliance with these limits shall limit the source-wide total potential to emit of PM10, PM2.5, CO, and VOC to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permit Program), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-3 (Emission Offset) not applicable.

In addition, compliance with these limits 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 (VOC Rules: General Reduction Requirements for New Facilities) not applicable.

**D.1.3 Sulfur Dioxide (SO<sub>2</sub>) and Hazardous Air Pollutant (HAP) Limits [326 IAC 2-8-4][326 IAC 2-2] [326 IAC 2-3][326 IAC 2-4.1]**

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Pursuant to 326 IAC 2-8-4, and in order to render 326 IAC 2-7, 326 IAC 2-2, 326 IAC 2-3, and 326 IAC 2-4.1 not applicable, the Permittee shall comply with the following:

- (a) Slag Usage Limitation  
Steel slag usage shall not exceed 75,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) Slag and Fuel Specifications
  - (1) SO<sub>2</sub> emissions from the usage of steel slag in the dryer/mixer shall not exceed 0.0014 pounds of SO<sub>2</sub> per ton of steel slag processed.
  - (2) The sulfur content of the steel slag shall not exceed 0.66 percent by weight.
  - (3) When combusting No. 2 fuel oil in the dryer/mixer burner the calendar month average sulfur content of the No. 2 fuel oil shall not exceed 0.5 percent by weight, with compliance determined at the end of each month.
  - (4) When combusting No. 4 fuel oil in the dryer/mixer burner the calendar month average sulfur content of the No. 4 fuel oil shall not exceed 1.60 percent by weight, with compliance determined at the end of each month.

(c) Single Fuel Usage Limitations

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

- (1) Natural gas usage shall not exceed 631 million cubic feet per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (2) No. 2 fuel oil usage shall not exceed 2,626,479 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (3) No. 4 fuel oil usage shall not exceed 777,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (4) Propane usage shall not exceed 9,369,812 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) Multiple Fuel & Slag Usage Limitations

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

- (1) SO<sub>2</sub> emissions from the dryer/mixer shall not exceed 93.29 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(e) Asphalt Shingle Usage Limitation

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAPs)) not applicable, the Permittee shall not grind recycled asphalt shingles on-site and shall only use certified asbestos-free recycled shingles, post consumer waste and/or factory seconds, as an additive in its aggregate mix.

Compliance with these limits, combined with the limited potential to emit SO<sub>2</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> to less than 100 tons per twelve (12) consecutive month period, each, 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 326 IAC 2-7 (Part 70 Permit Program) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), 326 IAC 2-3 (Emission Offset), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable.

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

Pursuant to 326 IAC 6-2-4, the particulate emissions from the 0.828 MMBtu/hr hot oil heater 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]

When not located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne County, pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the portable RAP crusher shall not exceed 58.51 pounds per hour when operating at a process weight rate of 200 tons (or 400,000 pounds) per hour. The pound per hour limitation was calculated as follows: 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:

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

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

#### D.1.6 Particulate Emission Limits [326 IAC 6.5]

Pursuant to 326 IAC 6.5-1-2 (Particulate Matter Limitations except Lake County), particulate matter (PM) emissions from the drum mixer, dryer burner, hot oil heater, any systems for crushing, conveying, handling, screening, weighing, and/or storing materials such as aggregate, reclaimed asphalt pavement, recycled asphalt shingles, mineral filler, and asphalt concrete, and the loading, transfer, and storage systems associated with emission control systems, each, shall not exceed three-hundredths (0.03) grains per dry standard cubic foot of exhaust air, when located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne County.

#### D.1.7 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1-1][326 IAC 7-2-1]

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

- (a) The sulfur dioxide (SO<sub>2</sub>) emissions from the dryer/mixer burner shall not exceed 0.5 pounds per MMBtu when using distillate oil.
- (b) The sulfur dioxide (SO<sub>2</sub>) emissions from the dryer/mixer burner shall not exceed 1.60 pounds per MMBtu heat input when using residual oil.
- (c) Pursuant to 326 IAC 7-2-1, compliance shall be determined on a calendar month average.

#### D.1.8 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for this facility and its control device. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

### **Compliance Determination Requirements**

#### D.1.9 Particulate Matter (PM, PM<sub>10</sub>, and PM<sub>2.5</sub>) Control

In order to comply with Conditions D.1.1(b) - Particulate Matter (PM), D.1.2(b) - FESOP Limits, and D.1.2(c) - FESOP Limits, the baghouse for particulate control shall be in operation and control emissions from the drum mix dryer/burner at all times that the drum mix dryer/burner is in operation.

#### D.1.10 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

- (a) In order to demonstrate compliance with Condition D.1.1(b) - Particulate Matter (PM), the Permittee shall perform PM testing of the dryer/mixer at least once every five (5) years from the date of the most recent valid compliance demonstration, utilizing methods approved by the Commissioner. 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.
- (b) In order to demonstrate compliance with Conditions D.1.2(b) and D.1.2(c) - FESOP Limits, the Permittee shall perform PM<sub>10</sub> and PM<sub>2.5</sub> testing on the dryer/mixer not later than 180 days after final promulgation of the new or revised condensable PM test method(s) referenced in the U.S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM<sub>2.5</sub>), signed on May 8th, 2008 or no later than five (5) years after the date of the most recent valid compliance demonstration, whichever is later. These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. This testing shall be conducted utilizing methods as approved by the Commissioner. 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 PM.

#### D.1.11 Sulfur Dioxide Emissions and Sulfur Content

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- (a) Compliance with the steel slag limitation established in Conditions D.1.3(b)(1) and D.1.3(b)(2) - Sulfur Dioxide (SO<sub>2</sub>) Limits shall be determined utilizing one of the following options.
- (1) Providing vendor analysis of the steel slag delivered, if accompanied by a vendor certification; or
  - (2) Analyzing a sample of the slag delivery 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 72 MMBtu per hour 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 above shall not be refuted by evidence of compliance pursuant to the other method.

- (b) Compliance with the fuel limitations established in Conditions D.1.3(b)(3) and D.1.3(b)(4) - Sulfur Dioxide (SO<sub>2</sub>) Limits and D.1.4(a) and D.1.4(b) Sulfur Dioxide (SO<sub>2</sub>) shall be determined utilizing one of the following options.
- (1) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed 0.5 pounds per million British thermal units heat input when combusting No. 2 distillate fuel oil, or 1.6 pounds per million British thermal units heat input when combusting No. 4 residual fuel oil, by:
    - (A) Providing vendor analysis of heat content and sulfur content of the fuel delivered, if accompanied by a vendor certification; or
    - (B) Analyzing the fuel sample to determine the sulfur content of the fuel via the procedures in 40 CFR 60, Appendix A, Method 19.
      - (i) Fuel samples may be collected from the fuel tank immediately after the fuel tank is filled and before any fuel is combusted; and
      - (ii) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
  - (2) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 72 MMBtu per hour 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 above shall not be refuted by evidence of compliance pursuant to the other method.

#### D.1.12 Multiple Fuel & Slag Usage / Sulfur Dioxide (SO<sub>2</sub>) Emissions

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In order to determine compliance with Condition D.1.3(d) - Multiple Fuel & Slag Usage Limitations, when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, in conjunction with the use of steel slag in the aggregate mix, the Permittee shall use the following equation to determine the tons of SO<sub>2</sub> emitted per twelve (12) consecutive month period:

Sulfur Dioxide emission calculation

$$S = \frac{F(E_F) + R(E_R) + N(E_N) + P(E_P) + L(E_L)}{2000 \text{ lbs/ton}}$$

Where:

- S = tons of sulfur dioxide emissions for twelve (12) month consecutive period  
F = gallons of No. 2 fuel oil used in last twelve (12) months  
R = gallons of No. 4 fuel oil used in last twelve (12) months  
N = million cubic feet of natural gas used in last twelve (12) months  
P = gallons of Propane used in last twelve (12) months  
L = tons of steel slag used in last twelve (12) months with less than or equal to sixty-six hundredths percent (0.66%) sulfur content

Emission Factors:

- $E_F = 0.071$  pounds per gallon of No. 2 fuel oil  
 $E_R = 0.24$  pounds per gallon of No. 4 fuel oil  
 $E_N = 0.6$  pounds per million cubic feet of natural gas  
 $E_P = 0.00002$  pounds per gallon of Propane  
 $E_L = 0.0014$  pounds per ton of slag

**D.1.13 Shingle Asbestos Content**

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Pursuant to 326 IAC 2-8-4, compliance with Condition D.1.3(e) - Asphalt Shingle Usage Limitation shall be determined utilizing one of the following options:

- (a) Providing shingle supplier certification that the factory seconds and/or post consumer waste shingles do not contain asbestos; or
- (b) Analyzing a sample of the recycled asphalt shingles (factory seconds and/or post consumer waste, only) delivery to determine the asbestos content of the recycled asphalt 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] [326 IAC 2-8-5(a)(1)]**

**D.1.14 Visible Emissions Notations**

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- (a) Visible emission notations of the aggregate dryer/burner stack 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 Parametric Monitoring

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- (a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the aggregate dryer/mixer at least once per day when the drying/mixing process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 3.0 and 6.0 inches of water unless a different upper-bound or lower-bound value for this range determined during the latest stack test. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.
- (b) The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer specifications, if used.

#### D.1.16 Broken or Failed Bag Detection

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In the event that bag failure has been observed:

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

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

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

#### D.1.17 Record Keeping Requirements

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- (a) To document the compliance status with Conditions D.1.1(a) - Particulate Matter (PM) and D.1.2(a) - FESOP Limits, the Permittee shall maintain records of the amount of asphalt produced per month. Records necessary to demonstrate compliance shall be available no later than thirty (30) days after the end of each compliance period.
- (b) To document the compliance status with Conditions D.1.3(a) - Slag Usage Limitation, D.1.3(b) - Slag and Fuel Specifications, and D.1.3(d) - Multiple Fuel & Slag Usage Limitations, the Permittee shall maintain records in accordance with (1) through (4) below. Records necessary to demonstrate compliance shall be available no later than 30 days after the end of each compliance period.
  - (1) Calendar dates covered in the compliance determination period;
  - (2) Actual steel slag usage and sulfur content for all steel slag used at the source since the last compliance determination period;

- (3) A certification, signed by the owner or operator, that the records of the steel slag supplier certifications represent all of the steel slag used during the period; and
  - (4) If the steel slag supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:
    - (i) Steel slag supplier certifications;
    - (ii) The name of the steel slag supplier; and
    - (iii) A statement from the steel slag supplier that certifies the sulfur content of the steel slag.
- (c) To document the compliance status with Conditions D.1.3 - Sulfur Dioxide (SO<sub>2</sub>) and Hazardous Air Pollutant (HAP) Limits and D.1.4 - Sulfur Dioxide (SO<sub>2</sub>), the Permittee shall maintain records in accordance with (1) through (5) below. Records necessary to determine compliance shall be available no later than 30 days after the end of each compliance period.

- (1) Calendar dates covered in the compliance determination period;
- (2) Calendar month average sulfur content, heat content, fuel usage, and equivalent sulfur dioxide emission rates for each fuel used at the source since the last compliance determination period;
- (3) A certification, signed by the owner or operator, that the records of the fuel oil supplier certifications represent all of the fuel combusted during the period; and

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

- (4) The name of the fuel supplier; and
- (5) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

- (d) To document the compliance status with Conditions D.1.3(e) - Asphalt Shingle Usage Limitation and D.1.13 - Shingle Asbestos Content, the Permittee shall maintain records in accordance with (1) through (3) below. Records necessary to determine compliance shall be available no later than 30 days after the end of each compliance period.
- (1) Calendar dates covered in the compliance determination period;
  - (2) A certification, signed by the owner or operator, that the records of the shingle supplier certifications represent all of the shingles used during the period; and
  - (3) If the shingle supplier certification is used to demonstrate compliance, the following, as a minimum, shall be maintained:
    - (A) Shingle supplier certifications;
    - (B) The name of the shingle supplier(s); and

- (C) A statement from the shingle supplier(s) that certifies the asbestos content of the shingles from their company.
- (e) To document the compliance status with Condition D.1.14 - Visible Emission Notations, the Permittee shall maintain records of the daily visible emission notations of the aggregate dryer/burner stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (i.e., the process did not operate that day).
- (f) To document the compliance status with Condition D.1.15 - Parametric Monitoring, the Permittee shall maintain records of the once per day pressure drop during reading. The Permittee shall include in its daily record when the pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).
- (g) Section C - General Record Keeping Requirements, of this permit contains the Permittee's obligations with regard to the records required by this condition.

#### D.1.18 Reporting Requirements

A quarterly summary of the information to document compliance status with Conditions D.1.1(a) - Particulate Matter (PM), D.1.2(a) - FESOP Limits, D.1.3 - Sulfur Dioxide (SO<sub>2</sub>) and Hazardous Air Pollutant (HAP) Limits, D.1.4 - Sulfur Dioxide (SO<sub>2</sub>), D.1.12 - Multiple Fuel Usage / Sulfur Dioxide (SO<sub>2</sub>) Emissions, and D.1.13 - Shingle Asbestos Content, 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 D.2

## FACILITY OPERATION CONDITIONS

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

(h) cold-mix (stockpile mix) asphalt storage piles.

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

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

#### D.2.1 Volatile Organic Compounds (VOC) [326 IAC 2-2] [326 IAC 2-8-4]

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

VOC emissions from the sum of the binders shall not exceed 66.82 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

When combined with the potential emissions from all other emission units at this source, compliance with this limit will limit source-wide emissions of VOC to less than 100 tons per year and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable.

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

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

- (1) Cut back asphalt rapid cure, containing a maximum of 25.3% of the liquid binder by weight of VOC solvent and 95% by weight of VOC solvent evaporating.
- (2) Cut back asphalt medium cure, containing a maximum of 28.6% of the liquid binder by weight of VOC solvent and 70% by weight of VOC solvent evaporating.
- (3) Cut back asphalt slow cure, containing a maximum of 20% of the liquid binder by weight of VOC solvent and 25% by weight of VOC solvent evaporating.
- (4) Emulsified asphalt with solvent, containing a maximum of 15% of liquid binder by weight of VOC solvent and 46.4% by weight of the VOC solvent in the liquid blend evaporating. The percent oil distillate in emulsified asphalt with solvent liquid, as determined by ASTM, must be 7% or less of the total emulsion by volume
- (5) Other asphalt with solvent binder, containing a maximum 25.9% of the liquid binder of VOC solvent and 2.5% by weight of the VOC solvent evaporating

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

- (1) The amount of VOC solvent used in rapid cure cutback asphalt shall not exceed 70.3 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 95.5 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 267.3 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 144.0 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 2672.8 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (6) 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	4.0
emulsified asphalt	2.155
other asphalt	40

When combined with the limited potential to emit VOC from all other emission units at this source, compliance with these limits shall limit the source-wide total potential to emit of VOC to less than 100 tons per 12 consecutive month period, and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD) not applicable.

#### D.2.3 Volatile Organic Compound Rules for Asphalt Pavers [326 IAC 8-5-2]

Pursuant to 326 IAC 8-5-2, Volatile Organic Compound Rules for Asphalt Pavers, the cutback asphalt or asphalt emulsions produced by the source shall not contain more than seven percent (7%) oil distillate by volume of emulsion as determined by ASTM D244-80a "Emulsific Asphalts" ASTM part 15, 1981 ASTM 1916 Race St., Philadelphia, PA 19103, Library of Congress Card Catalog #40-10712, for any paving application except as used for the following purposes:

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

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

##### D.2.4 Record Keeping Requirements

- (a) To document the compliance status with Conditions D.2.1 - Volatile Organic Compounds (VOC) and D.2.2 - Volatile Organic Compounds (VOC) the Permittee shall record and maintain complete monthly records of the information listed in items (1) through (4) below:
  - (1) Calendar dates covered in the compliance determination period;

- (2) Liquid asphalt binder usage in the production of cold mix asphalt since the last compliance determination period.
- (3) VOC solvent content by weight of the liquid binder used in the production of cold mix asphalt since the last compliance determination period.
- (4) 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 that may be used to document the information included in (1) through (4) 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, of this permit contains the Permittee's obligations with regard to the records required by this condition.

#### D.2.5 Reporting Requirements

A quarterly summary of the information to document compliance status with Conditions D.2.1 - Volatile Organic Compounds (VOC) and D.2.2 - Volatile Organic Compounds (VOC) 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 D.3

### FACILITY OPERATION CONDITIONS

**Facility Description [326 IAC 2-8-4(10)]: Storage Vessels (Tanks)**

- (f) two (2) 25,000 gallon asphalt storage tanks; and
- (g) one (1) 11,000 gallon #2 fuel oil storage tank.
- (i) one (1) 15,000 gallon No. 4 fuel oil storage tank.
- (j) One (1) 10,519 gallon No. 2 fuel oil storage tank, approved for construction in 2013; and

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

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

#### D.3.1 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]

Pursuant to 326 IAC 8-9-1(b), the storage tanks are subject to reporting and recordkeeping provisions of section 6(a) and 6(b) of this rule when operating in Clark or Floyd Counties, as follows:

- (a) Pursuant to 326 IAC 8-9-6(a), the Permittee shall keep all records required by this section for three (3) years unless specified otherwise. Records required by subsection (b) shall be maintained for the life of the/each vessel.
- (b) Pursuant to 326 IAC 8-9-6(b), the Permittee shall maintain a record for each vessel (storage tank), and submit to the department a report containing the following information for each vessel (storage tank):
  - (1) The vessel (storage tank) identification number.
  - (2) The vessel (storage tank) dimensions.
  - (3) The vessel (storage tank) capacity.

## SECTION E.1

## NSPS REQUIREMENTS

### Facility Description [326 IAC 2-8-4(10)]: Portable Drum-Mix Asphalt Plant

- (a) One (1) portable asphalt drum-mix plant, constructed in 1998, with a nominal capacity of 300 tons per hour, equipped with one (1) aggregate dryer burner with a maximum rated capacity of 96.8 million British thermal units (MMBtu) per hour, using natural gas, No. 2 fuel oil, residual No. 4 fuel oil, or propane, as available, processing steel slag and asbestos-free recycled asphalt shingles (RAS) in the aggregate mix, and using one (1) pulse jet baghouse for particulate control, exhausting at one (1) stack, identified as #1;
- (b) six (6) compartment cold feed bins with feeders and collection conveyors;
- (c) one (1) 30" incline conveyor with 4' X 10' scalping screen;
- (d) two (2) conveyors and one (1) screen to transfer aggregate from two (2) recycle bins to the asphalt dryer;
- (e) one (1) drag slat conveyor to transfer product from asphalt dryer to two (2) 200 ton storage silos;

### Insignificant Activities:

- (d) Other categories with emissions below insignificant thresholds:
  - (2) one (1) recycle bin with twenty-five (25) ton storage capacity;
  - (3) one (1) storage silo with seventy (70) ton storage capacity; and
  - (4) aggregate storage piles with a total storage capacity of 12,500 tons.
  - (5) Recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) storage piles, with a maximum anticipated pile size of 0.50 acres; and
  - (6) Electric arc steel slag storage piles, with a maximum anticipated pile size of 1.00 acres.

Under NSPS subpart I, this is considered an affected hot-mix asphalt facility.

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

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

### E.1.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 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, except as otherwise specified in 40 CFR 60, Subpart I.
- (b) Pursuant to 40 CFR 60.10, 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 (NSPS) for Hot Mix Asphalt Facilities [40 CFR Part 60, Subpart I] [326 IAC 12]

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The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart I (included as Attachment B of this permit), which are incorporated by reference as 326 IAC 12, except as otherwise specified in 40 CFR Part 60, Subpart I:

- (a) 40 CFR 60.90
- (b) 40 CFR 60.91
- (c) 40 CFR 60.92
- (d) 40 CFR 60.93

## SECTION E.2

## NSPS REQUIREMENTS

### Facility Description [326 IAC 2-8-4(10)]: Portable RAP Crusher

- (k) One (1) 335 horsepower, diesel fuel-fired portable crusher for processing reclaimed asphalt pavement (RAP), identified as RAP Crusher, approved for construction in 2013, with a maximum throughput capacity of 200 tons of RAP per hour.

Under 40 CFR 60, 1068.30(2)(iii), General Compliance Provisions for Highway, Stationary, and Nonroad Programs, this unit this is considered a nonroad engine.

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

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

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

#### E.2.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

- (a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR 60, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 12-1, except as otherwise specified in 40 CFR 60, Subpart OOO.
- (b) Pursuant to 40 CFR 60.10, 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 NSPS Subpart OOO Requirements - Standards of Performance for Nonmetallic Mineral Processing Plants [40 CFR Part 60, Subpart OOO] [326 IAC 12-1]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart OOO (included as Attachment C of this permit), which are incorporated by reference as 326 IAC 12, except as otherwise specified in 40 CFR Part 60, Subpart OOO, for the RAP Crusher:

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

#### E.2.3 Testing Requirements [40 CFR Part 60, Subpart OOO] [326 IAC 12-1] [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition E.2.2, the Permittee shall perform testing for fugitive emissions from affected facilities without water sprays, as required under NSPS 40 CFR 60, Subpart OOO, not later than five (5) years from the most recent valid compliance demonstration, utilizing methods approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this 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.

## SECTION E.3

## NSPS & NESHAP REQUIREMENTS

### Facility Description [326 IAC 2-8-4(10)]: Portable RAP Crusher

- (k) One (1) 335 horsepower, diesel fuel-fired portable crusher for processing reclaimed asphalt pavement (RAP), identified as RAP Crusher, approved for construction in 2013, with a maximum throughput capacity of 200 tons of RAP per hour.

Under 40 CFR 60, 1068.30(2)(iii), General Compliance Provisions for Highway, Stationary, and Nonroad Programs, this unit this is considered a nonroad engine.

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

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

### New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAPs) Requirements [326 IAC 2-8-4(1)]

#### E.3.1 Nonroad Engines [326 IAC 12][40 CFR 60, Subpart IIII][326 IAC 20-82][40 CFR 63, Subpart ZZZZ][40 CFR 1068.30]

In order to render the requirements of the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR Part 60, Subpart IIII, which are incorporated by reference as 326 IAC 12, and the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ), which are incorporated by reference as 326 IAC 20-82, not applicable, and to ensure the portable RAP crusher is a nonroad engine, as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), the Permittee shall comply with the following:

- (a) The portable RAP crusher shall remain at a location for a period not to exceed twelve (12) consecutive months.
- (b) Any portable RAP crusher that replaces a portable RAP crusher at a location and that is intended to perform the same or similar function as the portable RAP crusher replaced will be included in calculating the consecutive time period.
- (c) For the purposes of this condition, and pursuant to 40 CFR 1069.30 Nonroad Engine (2)(iii), a location is any single site at a building, structure, facility, or installation.

Compliance with these limits shall render the requirements of the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR Part 60, Subpart IIII) and the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ) not applicable.

#### E.3.2 Record Keeping Requirements

- (a) To document the compliance status with Condition E.3.1(a), the Permittee shall maintain records of the dates of installation and removal of the portable RAP crusher as the unit is installed and removed.
- (b) To document the compliance status with Condition E.3.1(b), the Permittee shall maintain records of the make, model, horsepower rating, manufacture date, and model year of each portable RAP crusher brought onto the site.
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required to be maintained by this condition.

### E.3.3 Reporting Requirements

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A quarterly summary of the information to document compliance status with Conditions E.3.1(a) and E.3.1(b), shall be submitted using the reporting form located at the end of this permit, or its 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).

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

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

Source Name: Dave O'Mara Contractor, Inc.  
Initial Source Address: New Point Stone at 992 South County Road 800 East, Greensburg, IN 47240  
FESOP Permit No.: F031-25342-05047

**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: Dave O'Mara Contractor, Inc.  
Initial Source Address: New Point Stone at 992 South County Road 800 East, Greensburg, IN 47240  
FESOP Permit No.: F031-25342-05047

**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 2-7-16</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 - Hot Mix Asphalt Production**

Source Name: Dave O'Mara Contractor, Inc.  
Current Source Address: New Point Stone at 992 South County Road 800 East, Greensburg, IN 47240  
FESOP Permit No.: F031-25342-05047  
Facility: One (1) portable asphalt drum-mix plant with one (1) baghouse exhausting at one (1) stack, identified as #1;  
Parameter: Hot Mix Asphalt Production  
Limit: 750,000 tons per twelve (12) consecutive months

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

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

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

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

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

**FESOP Quarterly Report**

Source Name: Dave O'Mara Contractor, Inc.  
Current Source Address: New Point Stone at 992 South County Road 800 East, Greensburg, IN 47240  
FESOP Permit No.: F031-25342-05047  
Facility: One (1) portable asphalt drum-mix plant with one (1) baghouse exhausting at one (1) stack, identified as #1;  
Parameter: Steel Slag Usage  
Limit: Steel slag usage shall not exceed 75,000 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
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

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

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

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

### FESOP Quarterly Report

Source Name: Dave O'Mara Contractor, Inc.  
 Current Source Address: New Point Stone at 992 South County Road 800 East, Greensburg, IN 47240  
 FESOP Permit No.: F031-25342-05047  
 Facility: One (1) portable asphalt drum-mix plant with one (1) baghouse exhausting at one (1) stack, identified as #1;  
 Parameter: Single fuel usage  
 Limit: When combusting only one type of fuel per twelve (12) consecutive month period in the dryer/mixer burner the usage of fuel shall be limited as follows:

Fuel Type (units)	Fuel Usage Limit (per 12 consecutive month period)
Natural Gas (million cubic feet)	631
No. 2 fuel oil (gallons)	2,626,479
No. 4 fuel oil (gallons)	777,000
Propane (gallons)	9,369,812

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

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

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

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

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

**FESOP Quarterly Report**

Page 1 of 2

Source Name: Dave O'Mara Contractor, Inc.  
Current Source Address: New Point Stone at 992 South County Road 800 East, Greensburg, IN 47240  
FESOP Permit No.: F031-25356-03326  
Facility: One (1) portable asphalt drum-mix plant with one (1) baghouse exhausting at one (1) stack, identified as #1;  
Parameter: **Multiple Fuel & Slag Usage / Sulfur Dioxide (SO<sub>2</sub>) Emissions**  
Limit: SO<sub>2</sub> emissions from the dryer/mixer shall not exceed 93.29 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.

**FESOP Fuel Usage and SO2 Emissions Quarterly Reporting Form**

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

Month	Fuel Types/Slag (units)	Column 1	Column 2	Column 1 + Column 2	Total SO2 Emissions From All Fuels Used and Slag (tons per 12 month consecutive period)
		Usage This Month	Usage Previous 11 Months	Usage 12 Month Total	
Month 1	Natural gas (mmcf)				
	No. 2 fuel oil (gallons)				
	No. 4 fuel oil (gallons)				
	Propane (gallons)				
	Steel Slag (tons)				
Month 2	Natural gas (mmcf)				
	No. 2 fuel oil (gallons)				
	No. 4 fuel oil (gallons)				
	Propane (gallons)				
	Steel Slag (tons)				
Month 3	Natural gas (mmcf)				
	No. 2 fuel oil (gallons)				
	No. 4 fuel oil (gallons)				
	Propane (gallons)				
	Steel Slag (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 - Single Liquid Binder VOC Solvent**

Source Name: Dave O'Mara Contractor, Inc.  
Current Source Address: New Point Stone at 992 South County Road 800 East, Greensburg, IN 47240  
FESOP Permit No.: F031-25342-05047  
Facility: Cold-mix (stockpile mix) asphalt manufacturing operations and storage piles  
Parameter: Cutback or emulsified asphalt VOC solvent usage  
Limit: Cutback asphalt rapid cure liquid binder usage shall not exceed 70.3 tons of VOC solvent per twelve (12) consecutive month period. Cutback asphalt medium cure liquid binder usage shall not exceed 95.5 tons of VOC solvent per twelve (12) consecutive month period. Cutback asphalt slow cure liquid binder usage shall not exceed 267.3 tons of VOC solvent per twelve (12) consecutive month period. Emulsified asphalt with solvent liquid binder usage shall not exceed 144.0 tons of VOC solvent per twelve (12) consecutive month period. Other asphalt with solvent liquid binder shall not exceed 2672.8 tons of VOC solvent per twelve (12) consecutive month period.

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

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

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

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

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

**Multiple Liquid Binder Solvent Quarterly Report**

Source Name: Dave O'Mara Contractor, Inc.  
 Current Source Address: New Point Stone at 992 South County Road 800 East, Greensburg, IN 47240  
 FESOP Permit No.: F031-25342-05047  
 Facility: Cold-mix (stockpile mix) asphalt manufacturing operations and storage piles  
 Parameter: VOC emissions  
 Limit: VOC emissions from the sum of the binders shall not exceed 66.82 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Quarter \_\_\_\_\_ Year: \_\_\_\_\_

Month	Type of Liquid binder	Solvent Usage This Month (tons)	Divisor	VOC emissions This Month (tons) for each solvent	VOC emissions This Month (tons)	VOC emissions Previous 11 Months (tons)	This month + Previous 11 months = VOC emissions 12 Month Total (tons)
Month 1	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				
Month 2	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				
Month 3	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				

- 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: \_\_\_\_\_

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

**FESOP Quarterly Report**

Source Name: Dave O'Mara Contractor, Inc.  
Current Source Address: New Point Stone at 992 South County Road 800 East, Greensburg, IN 47240  
FESOP Permit No.: F031-25356-03326  
Facility: RAP Crusher  
Parameter: Residence Time  
Limit: The portable RAP crusher shall remain at a location for a period not to exceed twelve (12) consecutive months.

Manufacture Date: \_\_\_\_\_ Installation Date: \_\_\_\_\_  
Make: \_\_\_\_\_ Removal Date: \_\_\_\_\_  
Model: \_\_\_\_\_ Model Year: \_\_\_\_\_  
Horsepower Rating: \_\_\_\_\_ MMBtu/hr Rating: \_\_\_\_\_

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

Month	Column 1	Column 2	Column 1 - Column 2
	Number of Days Onsite This Month	Number of Days Onsite Previous 11 Months	12 Month Total Number of Days Onsite
Month 1			
Month 2			
Month 3			

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

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

Signature: \_\_\_\_\_

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

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

**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: Dave O'Mara Contractor, Inc.  
Initial Source Address: New Point Stone at 992 South County Road 800 East, Greensburg, IN 47240  
FESOP Permit No.: F031-25342-05047

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

<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: \_\_\_\_\_

**FEDERALLY ENFORCEABLE  
STATE OPERATING PERMIT RENEWAL  
OFFICE OF AIR QUALITY**

**Dave O'Mara Contractor, Inc.  
Portable Source**

**Attachment A**

**HOT-MIX ASPHALT PLANT  
FUGITIVE DUST CONTROL PLAN**

**F031-25342-05047**

## HOT-MIX ASPHALT PLANT SITE FUGITIVE DUST CONTROL PLAN

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

**Federally Enforceable State Operating  
Permit (FESOP) Renewal  
OFFICE OF AIR QUALITY**

**Dave O'Mara Contractor, Inc.  
Portable Source**

**Attachment B**

**Title 40: Protection of Environment**

**PART 60—NEW SOURCE PERFORMANCE STANDARDS**

**Subpart I - STANDARDS OF PERFORMANCE FOR HOT MIX ASPHALT  
FACILITIES**

**F031-25342-05047**

## **Title 40: Protection of Environment**

### **Subpart I—Standards of Performance for Hot Mix Asphalt Facilities**

#### **§ 60.90 Applicability and designation of affected facility.**

- (a) The affected facility to which the provisions of this subpart apply is each hot mix asphalt facility. For the purpose of this subpart, a hot mix asphalt facility is comprised only of any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler, systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems.
- (b) Any facility under paragraph (a) of this section that commences construction or modification after June 11, 1973, is subject to the requirements of this subpart.

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

#### **§ 60.91 Definitions.**

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

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

[51 FR 12325, Apr. 10, 1986]

#### **§ 60.92 Standard for particulate matter.**

- (a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall discharge or cause the discharge into the atmosphere from any affected facility any gases which:
  - (1) Contain particulate matter in excess of 90 mg/dscm (0.04 gr/dscf).
  - (2) Exhibit 20 percent opacity, or greater.

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

#### **§ 60.93 Test methods and procedures.**

- (a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).
- (b) The owner or operator shall determine compliance with the particulate matter standards in §60.92 as follows:
  - (1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf).
  - (2) Method 9 and the procedures in §60.11 shall be used to determine opacity.

[54 FR 6667, Feb. 14, 1989]

**Federally Enforceable State Operating  
Permit (FESOP) Renewal  
OFFICE OF AIR QUALITY**

**Dave O'Mara Contractor, Inc.  
Portable Source**

**Attachment C**

**Title 40: Protection of Environment**

**PART 60—NEW SOURCE PERFORMANCE STANDARDS**

**Subpart 000 - STANDARDS OF PERFORMANCE  
FOR NONMETALLIC MINERAL PROCESSING PLANTS**

**F031-25342-05047**

## **40 CFR 60, SUBPART 000—STANDARDS OF PERFORMANCE FOR NONMETALLIC MINERAL PROCESSING PLANTS**

*SOURCE: 74 FR 19309, Apr. 28, 2009, unless otherwise noted.*

### **§ 60.670 Applicability and designation of affected facility.**

(a)(1) Except as provided in paragraphs (a)(2), (b), (c), and (d) of this section, the provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin are subject to the provisions of this subpart.

(2) The provisions of this subpart do not apply to the following operations: All facilities located in underground mines; plants without crushers or grinding mills above ground; and wet material processing operations (as defined in § 60.671).

(b) An affected facility that is subject to the provisions of subparts F or I of this part or that follows in the plant process any facility subject to the provisions of subparts F or I of this part is not subject to the provisions of this subpart.

(c) Facilities at the following plants are not subject to the provisions of this subpart:

(1) Fixed sand and gravel plants and crushed stone plants with capacities, as defined in § 60.671, of 23 megagrams per hour (25 tons per hour) or less;

(2) Portable sand and gravel plants and crushed stone plants with capacities, as defined in § 60.671, of 136 megagrams per hour (150 tons per hour) or less; and

(3) Common clay plants and pumice plants with capacities, as defined in § 60.671, of 9 megagrams per hour (10 tons per hour) or less.

(d)(1) When an existing facility is replaced by a piece of equipment of equal or smaller size, as defined in § 60.671, having the same function as the existing facility, and there is no increase in the amount of emissions, the new facility is exempt from the provisions of §§ 60.672, 60.674, and 60.675 except as provided for in paragraph (d)(3) of this section.

(2) An owner or operator complying with paragraph (d)(1) of this section shall submit the information required in § 60.676(a).

(3) An owner or operator replacing all existing facilities in a production line with new facilities does not qualify for the exemption described in paragraph (d)(1) of this section and must comply with the provisions of §§ 60.672, 60.674 and 60.675.

(e) An affected facility under paragraph (a) of this section that commences construction, modification, or reconstruction after August 31, 1983, is subject to the requirements of this part.

(f) Table 1 of this subpart specifies the provisions of subpart A of this part 60 that do not apply to owners and operators of affected facilities subject to this subpart or that apply with certain exceptions.

## § 60.671 Definitions.

All terms used in this subpart, but not specifically defined in this section, shall have the meaning given them in the Act and in subpart A of this part.

*Bagging operation* means the mechanical process by which bags are filled with nonmetallic minerals.

*Belt conveyor* means a conveying device that transports material from one location to another by means of an endless belt that is carried on a series of idlers and routed around a pulley at each end.

*Bucket elevator* means a conveying device of nonmetallic minerals consisting of a head and foot assembly which supports and drives an endless single or double strand chain or belt to which buckets are attached.

*Building* means any frame structure with a roof.

*Capacity* means the cumulative rated capacity of all initial crushers that are part of the plant.

*Capture system* means the equipment (including enclosures, hoods, ducts, fans, dampers, etc.) used to capture and transport particulate matter generated by one or more affected facilities to a control device.

*Control device* means the air pollution control equipment used to reduce particulate matter emissions released to the atmosphere from one or more affected facilities at a nonmetallic mineral processing plant.

*Conveying system* means a device for transporting materials from one piece of equipment or location to another location within a plant. Conveying systems include but are not limited to the following: Feeders, belt conveyors, bucket elevators and pneumatic systems.

*Crush or Crushing* means to reduce the size of nonmetallic mineral material by means of physical impaction of the crusher or grinding mill upon the material.

*Crusher* means a machine used to crush any nonmetallic minerals, and includes, but is not limited to, the following types: Jaw, gyratory, cone, roll, rod mill, hammermill, and impactor.

*Enclosed truck or railcar loading station* means that portion of a nonmetallic mineral processing plant where nonmetallic minerals are loaded by an enclosed conveying system into enclosed trucks or railcars.

*Fixed plant* means any nonmetallic mineral processing plant at which the processing equipment specified in § 60.670(a) is attached by a cable, chain, turnbuckle, bolt or other means (except electrical connections) to any anchor, slab, or structure including bedrock.

*Fugitive emission* means particulate matter that is not collected by a capture system and is released to the atmosphere at the point of generation.

*Grinding mill* means a machine used for the wet or dry fine crushing of any nonmetallic mineral. Grinding mills include, but are not limited to, the following types: Hammer, roller, rod, pebble and ball, and fluid energy. The grinding mill includes the air conveying system, air separator, or air classifier, where such systems are used.

*Initial crusher* means any crusher into which nonmetallic minerals can be fed without prior crushing in the plant.

*Nonmetallic mineral* means any of the following minerals or any mixture of which the majority is any of the following minerals:

(1) Crushed and Broken Stone, including Limestone, Dolomite, Granite, Traprock, Sandstone, Quartz, Quartzite, Marl, Marble, Slate, Shale, Oil Shale, and Shell.

(2) Sand and Gravel.

(3) Clay including Kaolin, Fireclay, Bentonite, Fuller's Earth, Ball Clay, and Common Clay.

(4) Rock Salt.

(5) Gypsum (natural or synthetic).

(6) Sodium Compounds, including Sodium Carbonate, Sodium Chloride, and Sodium Sulfate.

(7) Pumice.

(8) Gilsonite.

(9) Talc and Pyrophyllite.

(10) Boron, including Borax, Kernite, and Colemanite.

(11) Barite.

(12) Fluorospar.

(13) Feldspar.

(14) Diatomite.

(15) Perlite.

(16) Vermiculite.

(17) Mica.

(18) Kyanite, including Andalusite, Sillimanite, Topaz, and Dumortierite.

*Nonmetallic mineral processing plant* means any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located, including lime plants, power plants, steel mills, asphalt concrete plants, portland cement plants, or any other facility processing nonmetallic minerals except as provided in § 60.670 (b) and (c).

*Portable plant* means any nonmetallic mineral processing plant that is mounted on any chassis or skids and may be moved by the application of a lifting or pulling force. In addition, there shall be no cable, chain, turnbuckle, bolt or other means (except electrical connections) by which any piece of equipment is attached or clamped to any anchor, slab, or structure, including bedrock that must be removed prior to the application of a lifting or pulling force for the purpose of transporting the unit.

*Production line* means all affected facilities (crushers, grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins, and enclosed truck and railcar loading stations) which are directly connected or are connected together by a conveying system.

*Saturated material* means, for purposes of this subpart, mineral material with sufficient surface moisture such that particulate matter emissions are not generated from processing of the material through screening operations, bucket elevators and belt conveyors. Material that is wetted solely by wet suppression systems is not considered to be "saturated" for purposes of this definition.

*Screening operation* means a device for separating material according to size by passing undersize material through one or more mesh surfaces (screens) in series, and retaining oversize material on the mesh surfaces (screens). Grizzly feeders associated with truck dumping and static (non-moving) grizzlies used anywhere in the nonmetallic mineral processing plant are not considered to be screening operations.

*Seasonal shut down* means shut down of an affected facility for a period of at least 45 consecutive days due to weather or seasonal market conditions.

*Size* means the rated capacity in tons per hour of a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station; the total surface area of the top screen of a screening operation; the width of a conveyor belt; and the rated capacity in tons of a storage bin.

*Stack emission* means the particulate matter that is released to the atmosphere from a capture system.

*Storage bin* means a facility for storage (including surge bins) of nonmetallic minerals prior to further processing or loading.

*Transfer point* means a point in a conveying operation where the nonmetallic mineral is transferred to or from a belt conveyor except where the nonmetallic mineral is being transferred to a stockpile.

*Truck dumping* means the unloading of nonmetallic minerals from movable vehicles designed to transport nonmetallic minerals from one location to another. Movable vehicles include but are not limited to: Trucks, front end loaders, skip hoists, and railcars.

*Vent* means an opening through which there is mechanically induced air flow for the purpose of exhausting from a building air carrying particulate matter emissions from one or more affected facilities.

*Wet material processing operation(s)* means any of the following:

(1) Wet screening operations (as defined in this section) and subsequent screening operations, bucket elevators and belt conveyors in the production line that process saturated materials (as defined in this section) up to the first crusher, grinding mill or storage bin in the production line; or

(2) Screening operations, bucket elevators and belt conveyors in the production line downstream of wet mining operations (as defined in this section) that process saturated materials (as defined in this section) up to the first crusher, grinding mill or storage bin in the production line.

*Wet mining operation* means a mining or dredging operation designed and operated to extract any nonmetallic mineral regulated under this subpart from deposits existing at or below the water table, where the nonmetallic mineral is saturated with water.

*Wet screening operation* means a screening operation at a nonmetallic mineral processing plant which removes unwanted material or which separates marketable fines from the product by a washing process which is designed and operated at all times such that the product is saturated with water.

**§ 60.672 Standard for particulate matter (PM).**

(a) Affected facilities must meet the stack emission limits and compliance requirements in Table 2 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under § 60.8. The requirements in Table 2 of this subpart apply for affected facilities with capture systems used to capture and transport particulate matter to a control device.

(b) Affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under § 60.11. The requirements in Table 3 of this subpart apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems.

(c) [Reserved]

(d) Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section.

(e) If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in paragraphs (a) and (b) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits:

(1) Fugitive emissions from the building openings (except for vents as defined in § 60.671) must not exceed 7 percent opacity; and

(2) Vents (as defined in § 60.671) in the building must meet the applicable stack emission limits and compliance requirements in Table 2 of this subpart.

(f) Any baghouse that controls emissions from only an individual, enclosed storage bin is exempt from the applicable stack PM concentration limit (and associated performance testing) in Table 2 of this subpart but must meet the applicable stack opacity limit and compliance requirements in Table 2 of this subpart. This exemption from the stack PM concentration limit does not apply for multiple storage bins with combined stack emissions.

**§ 60.673 Reconstruction.**

(a) The cost of replacement of ore-contact surfaces on processing equipment shall not be considered in calculating either the "fixed capital cost of the new components" or the "fixed capital cost that would be required to construct a comparable new facility" under § 60.15. Ore-contact surfaces are crushing surfaces; screen meshes, bars, and plates; conveyor belts; and elevator buckets.

(b) Under § 60.15, the "fixed capital cost of the new components" includes the fixed capital cost of all depreciable components (except components specified in paragraph (a) of this section) which are or will be replaced pursuant to all continuous programs of component replacement commenced within any 2-year period following August 31, 1983.

**§ 60.674 Monitoring of operations.**

(a) The owner or operator of any affected facility subject to the provisions of this subpart which uses a wet scrubber to control emissions shall install, calibrate, maintain and operate the following monitoring devices:

(1) A device for the continuous measurement of the pressure loss of the gas stream through the scrubber. The monitoring device must be certified by the manufacturer to be accurate within  $\pm 250$  pascals  $\pm 1$  inch water gauge pressure and must be calibrated on an annual basis in accordance with manufacturer's instructions.

(2) A device for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within  $\pm 5$  percent of design scrubbing liquid flow rate and must be calibrated on an annual basis in accordance with manufacturer's instructions.

(b) The owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under § 60.676(b).

(1) If an affected facility relies on water carryover from upstream water sprays to control fugitive emissions, then that affected facility is exempt from the 5-year repeat testing requirement specified in Table 3 of this subpart provided that the affected facility meets the criteria in paragraphs (b)(1)(i) and (ii) of this section:

(i) The owner or operator of the affected facility conducts periodic inspections of the upstream water spray(s) that are responsible for controlling fugitive emissions from the affected facility. These inspections are conducted according to paragraph (b) of this section and § 60.676(b), and

(ii) The owner or operator of the affected facility designates which upstream water spray(s) will be periodically inspected at the time of the initial performance test required under § 60.11 of this part and § 60.675 of this subpart.

(2) If an affected facility that routinely uses wet suppression water sprays ceases operation of the water sprays or is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under § 60.676(b) must specify the control mechanism being used instead of the water sprays.

(c) Except as specified in paragraph (d) or (e) of this section, the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions must conduct quarterly 30-minute visible emissions inspections using EPA Method 22 (40 CFR part 60, Appendix A-7). The Method 22 (40 CFR part 60, Appendix A-7) test shall be conducted while the baghouse is operating. The test is successful if no visible emissions are observed. If any visible emissions are observed, the owner or operator of the affected facility must initiate corrective action within 24 hours to return the baghouse to normal operation. The owner or operator must record each Method 22 (40 CFR part 60, Appendix A-7) test, including the date and any corrective actions taken, in the logbook required under § 60.676(b). The owner or operator of the affected facility may establish a different baghouse-specific success level for the visible emissions test (other than no visible emissions) by conducting a PM performance test according to § 60.675(b) simultaneously with a Method 22 (40 CFR part

60, Appendix A-7) to determine what constitutes normal visible emissions from that affected facility's baghouse when it is in compliance with the applicable PM concentration limit in Table 2 of this subpart. The revised visible emissions success level must be incorporated into the permit for the affected facility.

(d) As an alternative to the periodic Method 22 (40 CFR part 60, Appendix A-7) visible emissions inspections specified in paragraph (c) of this section, the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions may use a bag leak detection system. The owner or operator must install, operate, and maintain the bag leak detection system according to paragraphs (d)(1) through (3) of this section.

(1) Each bag leak detection system must meet the specifications and requirements in paragraphs (d)(1)(i) through (viii) of this section.

(i) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 1 milligram per dry standard cubic meter (0.00044 grains per actual cubic foot) or less.

(ii) The bag leak detection system sensor must provide output of relative PM loadings. The owner or operator shall continuously record the output from the bag leak detection system using electronic or other means ( e.g. , using a strip chart recorder or a data logger).

(iii) The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to paragraph (d)(1)(iv) of this section, and the alarm must be located such that it can be heard by the appropriate plant personnel.

(iv) In the initial adjustment of the bag leak detection system, the owner or operator must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time.

(v) Following initial adjustment, the owner or operator shall not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority except as provided in paragraph (d)(1)(vi) of this section.

(vi) Once per quarter, the owner or operator may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by paragraph (d)(2) of this section.

(vii) The owner or operator must install the bag leak detection sensor downstream of the fabric filter.

(viii) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(2) The owner or operator of the affected facility must develop and submit to the Administrator or delegated authority for approval of a site-specific monitoring plan for each bag leak detection system. The owner or operator must operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. Each monitoring plan must describe the items in paragraphs (d)(2)(i) through (vi) of this section.

(i) Installation of the bag leak detection system;

(ii) Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point will be established;

(iii) Operation of the bag leak detection system, including quality assurance procedures;

(iv) How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list;

(v) How the bag leak detection system output will be recorded and stored; and

(vi) Corrective action procedures as specified in paragraph (d)(3) of this section. In approving the site-specific monitoring plan, the Administrator or delegated authority may allow owners and operators more than 3 hours to alleviate a specific condition that causes an alarm if the owner or operator identifies in the monitoring plan this specific condition as one that could lead to an alarm, adequately explains why it is not feasible to alleviate this condition within 3 hours of the time the alarm occurs, and demonstrates that the requested time will ensure alleviation of this condition as expeditiously as practicable.

(3) For each bag leak detection system, the owner or operator must initiate procedures to determine the cause of every alarm within 1 hour of the alarm. Except as provided in paragraph (d)(2)(vi) of this section, the owner or operator must alleviate the cause of the alarm within 3 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following:

(i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM emissions;

(ii) Sealing off defective bags or filter media;

(iii) Replacing defective bags or filter media or otherwise repairing the control device;

(iv) Sealing off a defective fabric filter compartment;

(v) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system; or

(vi) Shutting down the process producing the PM emissions.

(e) As an alternative to the periodic Method 22 (40 CFR part 60, Appendix A-7) visible emissions inspections specified in paragraph (c) of this section, the owner or operator of any affected facility that is subject to the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart AAAAA) may follow the continuous compliance requirements in row 1 items (i) through (iii) of Table 6 to Subpart AAAAA of 40 CFR part 63.

#### **§ 60.675 Test methods and procedures.**

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendices A-1 through A-7 of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b). Acceptable alternative methods and procedures are given in paragraph (e) of this section.

(b) The owner or operator shall determine compliance with the PM standards in § 60.672(a) as follows:

(1) Except as specified in paragraphs (e)(3) and (4) of this section, Method 5 of Appendix A-3 of this part or Method 17 of Appendix A-6 of this part shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5 (40 CFR part 60,

Appendix A-3), if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.

(2) Method 9 of Appendix A-4 of this part and the procedures in § 60.11 shall be used to determine opacity.

(c)(1) In determining compliance with the particulate matter standards in § 60.672(b) or § 60.672(e)(1), the owner or operator shall use Method 9 of Appendix A-4 of this part and the procedures in § 60.11, with the following additions:

(i) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(ii) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources ( e.g., road dust). The required observer position relative to the sun (Method 9 of Appendix A-4 of this part, Section 2.1) must be followed.

(iii) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

(2)(i) In determining compliance with the opacity of stack emissions from any baghouse that controls emissions only from an individual enclosed storage bin under § 60.672(f) of this subpart, using Method 9 (40 CFR part 60, Appendix A-4), the duration of the Method 9 (40 CFR part 60, Appendix A-4) observations shall be 1 hour (ten 6-minute averages).

(ii) The duration of the Method 9 (40 CFR part 60, Appendix A-4) observations may be reduced to the duration the affected facility operates (but not less than 30 minutes) for baghouses that control storage bins or enclosed truck or railcar loading stations that operate for less than 1 hour at a time.

(3) When determining compliance with the fugitive emissions standard for any affected facility described under § 60.672(b) or § 60.672(e)(1) of this subpart, the duration of the Method 9 (40 CFR part 60, Appendix A-4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Table 3 of this subpart must be based on the average of the five 6-minute averages.

(d) To demonstrate compliance with the fugitive emission limits for buildings specified in § 60.672(e)(1), the owner or operator must complete the testing specified in paragraph (d)(1) and (2) of this section. Performance tests must be conducted while all affected facilities inside the building are operating.

(1) If the building encloses any affected facility that commences construction, modification, or reconstruction on or after April 22, 2008, the owner or operator of the affected facility must conduct an initial Method 9 (40 CFR part 60, Appendix A-4) performance test according to this section and § 60.11.

(2) If the building encloses only affected facilities that commenced construction, modification, or reconstruction before April 22, 2008, and the owner or operator has previously conducted an initial Method 22 (40 CFR part 60, Appendix A-7) performance test showing zero visible emissions, then the owner or operator has demonstrated compliance with the opacity limit in § 60.672(e)(1). If the owner or operator has not conducted an initial performance test for the building before April 22, 2008, then the owner or operator

must conduct an initial Method 9 (40 CFR part 60, Appendix A-4) performance test according to this section and § 60.11 to show compliance with the opacity limit in § 60.672(e)(1).

(e) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For the method and procedure of paragraph (c) of this section, if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:

(i) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

(ii) Separate the emissions so that the opacity of emissions from each affected facility can be read.

(2) A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:

(i) No more than three emission points may be read concurrently.

(ii) All three emission points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.

(iii) If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer must stop taking readings for the other two points and continue reading just that single point.

(3) Method 5I of Appendix A-3 of this part may be used to determine the PM concentration as an alternative to the methods specified in paragraph (b)(1) of this section. Method 5I (40 CFR part 60, Appendix A-3) may be useful for affected facilities that operate for less than 1 hour at a time such as (but not limited to) storage bins or enclosed truck or railcar loading stations.

(4) In some cases, velocities of exhaust gases from building vents may be too low to measure accurately with the type S pitot tube specified in EPA Method 2 of Appendix A-1 of this part [ *i.e.*, velocity head <1.3 mm H<sub>2</sub> O (0.05 in. H<sub>2</sub> O)] and referred to in EPA Method 5 of Appendix A-3 of this part. For these conditions, the owner or operator may determine the average gas flow rate produced by the power fans ( *e.g.*, from vendor-supplied fan curves) to the building vent. The owner or operator may calculate the average gas velocity at the building vent measurement site using Equation 1 of this section and use this average velocity in determining and maintaining isokinetic sampling rates.

$$v_e = \frac{Q_f}{A_e} \quad (\text{Eq. 1})$$

Where:

$V_e$  = average building vent velocity (feet per minute);

$Q_f$  = average fan flow rate (cubic feet per minute); and

$A_e$  = area of building vent and measurement location (square feet).

(f) To comply with § 60.676(d), the owner or operator shall record the measurements as required in § 60.676(c) using the monitoring devices in § 60.674 (a)(1) and (2) during each particulate matter run and shall determine the averages.

(g) For performance tests involving only Method 9 (40 CFR part 60 Appendix A-4) testing, the owner or operator may reduce the 30-day advance notification of performance test in § 60.7(a)(6) and 60.8(d) to a 7-day advance notification.

(h) [Reserved]

(i) If the initial performance test date for an affected facility falls during a seasonal shut down (as defined in § 60.671 of this subpart) of the affected facility, then with approval from the permitting authority, the owner or operator may postpone the initial performance test until no later than 60 calendar days after resuming operation of the affected facility.

### **§ 60.676 Reporting and recordkeeping.**

(a) Each owner or operator seeking to comply with § 60.670(d) shall submit to the Administrator the following information about the existing facility being replaced and the replacement piece of equipment.

(1) For a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station:

(i) The rated capacity in megagrams or tons per hour of the existing facility being replaced and

(ii) The rated capacity in tons per hour of the replacement equipment.

(2) For a screening operation:

(i) The total surface area of the top screen of the existing screening operation being replaced and

(ii) The total surface area of the top screen of the replacement screening operation.

(3) For a conveyor belt:

(i) The width of the existing belt being replaced and

(ii) The width of the replacement conveyor belt.

(4) For a storage bin:

(i) The rated capacity in megagrams or tons of the existing storage bin being replaced and

(ii) The rated capacity in megagrams or tons of replacement storage bins.

(b)(1) Owners or operators of affected facilities (as defined in §§ 60.670 and 60.671) for which construction, modification, or reconstruction commenced on or after April 22, 2008, must record each periodic inspection required under § 60.674(b) or (c), including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Administrator upon request.

(2) For each bag leak detection system installed and operated according to § 60.674(d), the owner or operator must keep the records specified in paragraphs (b)(2)(i) through (iii) of this section.

(i) Records of the bag leak detection system output;

(ii) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and

(iii) The date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and whether the cause of the alarm was alleviated within 3 hours of the alarm.

(3) The owner or operator of each affected facility demonstrating compliance according to § 60.674(e) by following the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart AAAAA) must maintain records of visible emissions observations required by § 63.7132(a)(3) and (b) of 40 CFR part 63, subpart AAAAA.

(c) During the initial performance test of a wet scrubber, and daily thereafter, the owner or operator shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate.

(d) After the initial performance test of a wet scrubber, the owner or operator shall submit semiannual reports to the Administrator of occurrences when the measurements of the scrubber pressure loss and liquid flow rate decrease by more than 30 percent from the average determined during the most recent performance test.

(e) The reports required under paragraph (d) of this section shall be postmarked within 30 days following end of the second and fourth calendar quarters.

(f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in § 60.672 of this subpart, including reports of opacity observations made using Method 9 (40 CFR part 60, Appendix A-4) to demonstrate compliance with § 60.672(b), (e) and (f).

(g) The owner or operator of any wet material processing operation that processes saturated and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. At the time of such change, this screening operation, bucket elevator, or belt conveyor becomes subject to the applicable opacity limit in § 60.672(b) and the emission test requirements of § 60.11.

(h) The subpart A requirement under § 60.7(a)(1) for notification of the date construction or reconstruction commenced is waived for affected facilities under this subpart.

(i) A notification of the actual date of initial startup of each affected facility shall be submitted to the Administrator.

(1) For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the owner or operator to the Administrator. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available.

(2) For portable aggregate processing plants, the notification of the actual date of initial startup shall include both the home office and the current address or location of the portable plant.

(j) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected facilities within the State will be relieved of the obligation to comply with the reporting requirements of this section, provided that they comply with requirements established by the State.

(k) Notifications and reports required under this subpart and under subpart A of this part to demonstrate compliance with this subpart need only to be sent to the EPA Region or the State which has been delegated authority according to § 60.4(b).

**Table 1 to Subpart OOO of Part 60—Exceptions to Applicability of Subpart A to Subpart OOO**

<b>Subpart A reference</b>	<b>Applies to subpart OOO</b>	<b>Explanation</b>
60.4, Address	Yes	Except in § 60.4(a) and (b) submittals need not be submitted to both the EPA Region and delegated State authority (§ 60.676(k)).
60.7, Notification and recordkeeping	Yes	Except in (a)(1) notification of the date construction or reconstruction commenced (§ 60.676(h)).
		Also, except in (a)(6) performance tests involving only Method 9 (40 CFR part 60, Appendix A-4) require a 7-day advance notification instead of 30 days (§ 60.675(g)).
60.8, Performance tests	Yes	Except in (d) performance tests involving only Method 9 (40 CFR part 60, Appendix A-4) require a 7-day advance notification instead of 30 days (§ 60.675(g)).
60.11, Compliance with standards and maintenance requirements	Yes	Except in (b) under certain conditions (§§ 60.675(c)), Method 9 (40 CFR part 60, Appendix A-4) observation is reduced from 3 hours to 30 minutes for fugitive emissions.
60.18, General control device	No	Flares will not be used to comply with the emission limits.

**Table 2 to Subpart OOO of Part 60—Stack Emission Limits for Affected Facilities With Capture Systems**

For * * *	The owner or operator must meet a PM limit of * * *	And the owner or operator must meet an opacity limit of * * *	The owner or operator must demonstrate compliance with these limits by conducting * * *
Affected facilities (as defined in §§ 60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	0.05 g/dscm (0.022 gr/dscf) <sup>a</sup>	7 percent for dry control devices <sup>b</sup>	An initial performance test according to § 60.8 of this part and § 60.675 of this subpart; and Monitoring of wet scrubber parameters according to § 60.674(a) and § 60.676(c), (d), and (e).
Affected facilities (as defined in §§ 60.670 and 60.671) that commence construction, modification, or reconstruction on or after April 22, 2008	0.032 g/dscm (0.014 gr/dscf) <sup>a</sup>	Not applicable (except for individual enclosed storage bins) 7 percent for dry control devices on individual enclosed storage bins	An initial performance test according to § 60.8 of this part and § 60.675 of this subpart; and Monitoring of wet scrubber parameters according to § 60.674(a) and § 60.676(c), (d), and (e); and
			Monitoring of baghouses according to § 60.674(c), (d), or (e) and § 60.676(b).

<sup>a</sup> Exceptions to the PM limit apply for individual enclosed storage bins and other equipment. See § 60.672(d) through (f).

<sup>b</sup> The stack opacity limit and associated opacity testing requirements do not apply for affected facilities using wet scrubbers.

**Table 3 to Subpart 000 of Part 60—Fugitive Emission Limits**

For * * *	The owner or operator must meet the following fugitive emissions limit for grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affected facility (as defined in §§ 60.670 and 60.671) * * *	The owner or operator must meet the following fugitive emissions limit for crushers at which a capture system is not used * * *	The owner or operator must demonstrate compliance with these limits by conducting * * *
Affected facilities (as defined in §§ 60.670 and 60.671) that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008	10 percent opacity	15 percent opacity	An initial performance test according to § 60.11 of this part and § 60.675 of this subpart.
Affected facilities (as defined in §§ 60.670 and 60.671) that commence construction, modification, or reconstruction on or after April 22, 2008	7 percent opacity	12 percent opacity	An initial performance test according to § 60.11 of this part and § 60.675 of this subpart; and Periodic inspections of water sprays according to § 60.674(b) and § 60.676(b); and
			A repeat performance test according to § 60.11 of this part and § 60.675 of this subpart within 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays. 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.

**Reference:**

The US EPA Electronic Code of Federal Regulations - 40 CFR 60, Subpart 000—Standards Of Performance For Nonmetallic Mineral Processing Plants weblink:

<http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=e5222bf93f94811ebc9bf9b4d7d23dcd&rgn=div6&view=text&node=40:7.0.1.1.1.81&idno=40>

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

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

**Source Background and Description**

<b>Source Name:</b>	Dave O'Mara Contractor, Inc.
<b>Source Location:</b>	Portable
<b>Current Location:</b>	New Point Stone at 992 South County Road 800 East, Greensburg, Indiana
<b>County:</b>	Decatur
<b>SIC Code:</b>	2951
<b>Operation Permit No.:</b>	F 031-25342-05047
<b>Operation Permit Issuance Date:</b>	February 20, 2009
<b>Significant Permit Revision No.:</b>	031-33048-05047
<b>Permit Reviewer:</b>	Hannah L. Desrosiers

On September 28, 2013, the Office of Air Quality (OAQ) had a notice published in Greensburg Daily News, Greensburg, Indiana, stating that Dave O'Mara Contractor, Inc. had applied for a significant revision of their FESOP to add onsite reclaimed asphalt pavement (RAP) crushing to be performed by a portable unit that will be moved to the site on an as-needed basis. Dave O'Mara has also requested approval to add recycled shingles to their aggregate mix, and propane as a back-up fuel in the aggregate dryer. Additionally, Dave O'Mara has requested approval to construct a new 10,519 gallon #2 fuel oil storage tank and increase the electric arc furnace steel mill slag storage capacity. Furthermore, Dave O'Mara has indicated that it no longer wishes to have approval to relocate to LaPorte County due to additional requirements specific to the county. Finally, Dave O'Mara has requested the permit be updated to correct several emission unit descriptions to reflect actual operating conditions. The notice also stated that the OAQ proposed to issue a FESOP Significant Revision for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

**Comments and Responses**

No comments were received during the public notice period.

**Additional Changes**

U.S. EPA, in the Federal Register Notice 78 FR 47191 dated August 5, 2013, has designated Daviess County, Veale Township, Marion County, Center, Perry, and Wayne Townships, Morgan County, Clay and Washington Townships, Pike County, Washington Township, and Vigo County, Fayette and Harrison Townships as nonattainment for SO<sub>2</sub>. The Permittee is approved for operation in all areas of Indiana except in severe nonattainment areas for ozone, and in Lake, LaPorte, and Porter Counties.

If this source were to locate to any of the townships listed in the paragraph above, this source would not be subject to the requirements of Emission Offset, 326 IAC 2-3, since the potential to emit of SO<sub>2</sub> from the entire source is limited to less than 100 tons per year.

The Permittee previously elected to limit SO<sub>2</sub> emissions to less than one hundred (100) tons per year in its federally enforceable permit, as follows:

D.1.3 Sulfur Dioxide (SO<sub>2</sub>) and Hazardous Air Pollutant (HAP) Limits [326 IAC 2-8-4][326 IAC 2-2]  
[326 IAC 2-3][326 IAC 2-4.1]

Pursuant to 326 IAC 2-8-4, and in order to render 326 IAC 2-7, 326 IAC 2-2, 326 IAC 2-3, and 326 IAC 2-4.1 not applicable, the Permittee shall comply with the following:

(a) Slag Usage Limitation

Steel slag usage shall not exceed 75,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) Slag and Fuel Specifications

- (1) SO<sub>2</sub> emissions from the usage of steel slag in the dryer/mixer shall not exceed 0.0014 pounds of SO<sub>2</sub> per ton of steel slag processed.
- (2) The sulfur content of the steel slag shall not exceed 0.66 percent by weight.
- (3) When combusting No. 2 fuel oil in the dryer/mixer burner the calendar month average sulfur content of the No. 2 fuel oil shall not exceed 0.5 percent by weight, with compliance determined at the end of each month.
- (4) When combusting No. 4 fuel oil in the dryer/mixer burner the calendar month average sulfur content of the No. 4 fuel oil shall not exceed 1.60 percent by weight, with compliance determined at the end of each month.

(c) Single Fuel Usage Limitations

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

- (1) Natural gas usage shall not exceed 631 million cubic feet per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (2) No. 2 fuel oil usage shall not exceed 2,626,479 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (3) No. 4 fuel oil usage shall not exceed 777,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (4) Propane usage shall not exceed 9,369,812 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) Multiple Fuel & Slag Usage Limitations

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

- (1) SO<sub>2</sub> emissions from the dryer/mixer shall not exceed 93.29 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

\* \* \* \* \*

Compliance with these limits, combined with the potential to emit SO<sub>2</sub> from all other emission units at the source, also renders the requirements of 326 IAC 2-3 (Emission Offset) not applicable.

\* \* \* \* \*

No change has been made to the permit as a result of this SO<sub>2</sub> nonattainment designation for Daviess County, Veale Township, Marion County, Center, Perry, and Wayne Townships, Morgan County, Clay and Washington Townships, Pike County, Washington Township, and Vigo County, Fayette and Harrison Townships.

<b>IDEM Contact</b>
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- (a) Questions regarding this proposed permit can be directed to Ms. Hannah Desrosiers at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-9327 or toll free at 1-800-451-6027 extension 3-9327.
- (b) A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.idem.in.gov](http://www.idem.in.gov)

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

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

<b>Source Description and Location</b>
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<b>Source Name:</b>	Dave O'Mara Contractor, Inc.
<b>Source Location:</b>	Portable
<b>Current Location:</b>	New Point Stone at 992 South County Road 800 East, Greensburg, Indiana
<b>County:</b>	Decatur
<b>SIC Code:</b>	2951
<b>Operation Permit No.:</b>	F 031-25342-05047
<b>Operation Permit Issuance Date:</b>	February 20, 2009
<b>Significant Permit Revision No.:</b>	031-33048-05047
<b>Permit Reviewer:</b>	Hannah L. Desrosiers

On April 4, 2013, the Office of Air Quality (OAQ) received an application from Dave O'Mara Contractor, Inc. (Dave O'Mara) related to a modification to an existing portable hot drum-mix asphalt plant.

<b>Existing Approvals</b>
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The source was issued FESOP Renewal No. 031-25342-05047 on February 20, 2009. The source has since received the following approvals:

Significant Permit Revision No. 031-28784-05047, issued on May 12, 2010.

<b>County Attainment Status</b>
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The source is located in Decatur County. The following attainment status designations are applicable to Decatur 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 June 15, 2004, for the 8-hour ozone standard. <sup>1</sup>
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
PM <sub>2.5</sub>	Unclassifiable or attainment effective April 5, 2005.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Not designated.
<sup>1</sup> Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.	

*(Air Pollution Control Board; 326 IAC 1-4-17; filed Dec 26, 2007, 1:43 p.m.: 20080123-IR-326070308FRA)*

- (a) Ozone Standards  
Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule

applicability relating to ozone. Decatur County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) PM<sub>2.5</sub>

Decatur County has been classified as attainment for PM<sub>2.5</sub>. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM<sub>2.5</sub> emissions. These rules became effective on July 15, 2008. On May 4, 2011, the air pollution control board issued an emergency rule establishing the direct PM<sub>2.5</sub> significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct PM<sub>2.5</sub> and SO<sub>2</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants

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

<b>Portable Source Status</b>
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(a) *Initial Location*

This is a portable source and its initial location was New Point Stone at 992 South County Road 800 East, Greensburg, IN 47240.

(b) *PSD and Emission Offset Requirements*

The emissions from this portable source were reviewed under the requirements of the Prevention of Significant Deterioration (PSD) 326 IAC 2-2 and Emission Offset 326 IAC 2-3.

(c) *Relocation Locations*

The Permittee is approved for operation in all areas of Indiana except in severe nonattainment areas for ozone, and in Lake, LaPorte, and Porter Counties. Currently, no county in Indiana is designated severe non-attainment for ozone. Therefore, since the limited potential emissions of all regulated pollutants are less than 100 tons per year, this source may relocate to any county in Indiana, except Lake, LaPorte, or Porter counties, and will be a minor source under 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset).

<b>Status of the Existing Source</b>
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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:

*Note: The following table was taken directly from the ATSD for FESOP SPR No. 031-28784-05047, issued on May 12, 2010 (page 6 of 71).*

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)								
	PM	PM10 <sup>1</sup>	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Total HAPs	Worst Single HAP
<b>Ducted Emissions</b>									
Fuel Combustion (worst case)	2.72	4.33	4.33	93.24	31.55	1.74	26.5	0.70	0.57 Hexane
Dryer/Mixer (Process)	201.75	81.75	88.88	21.75	20.63	18.38	71.25	4.00	1.16 Formaldehyde
Dryer/Mixer Slag Processing	0	0	0	0.05	0	0	0	0	0
Hot Oil Heaters Fuel Combustion	0.05	0.09	0.09	1.66	0.52	0.01	0.13	0.002	0.002 Hexane
<b>Worst Case Emissions</b>	<b>201.80</b>	<b>81.84</b>	<b>88.96</b>	<b>95.13</b>	<b>32.07</b>	<b>18.38</b>	<b>71.38</b>	<b>4.00</b>	<b>1.16 Formaldehyde</b>
<b>Fugitive Emissions</b>									
Asphalt Load-Out, Silo Filling, On-Site Yard	0.42	0.42	0.42	0	0	6.42	1.08	0.11	0.03 Formaldehyde
Material Storage Piles	1.60	0.56	0.56	0	0	0	0	0	0
Material Processing and Handling	2.42	1.15	0.17	0	0	0	0	0	0
Material Crushing, Screening, and Conveying	11.90	4.35	4.35	0	0	0	0	0	0
Paved and Unpaved Roads (worst case)	26.65	6.79	0.68	0	0	0	0	0	0
Cold Mix Asphalt Production	0	0	0	0	0	66.82	0	17.43	6.01 Xylenes
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl.	0	negl.	negl.
<b>Total Fugitive Emissions</b>	<b>42.98</b>	<b>13.26</b>	<b>6.17</b>	<b>0</b>	<b>0</b>	<b>73.24</b>	<b>1.08</b>	<b>17.57</b>	<b>6.01 Xylenes</b>
<b>Total PTE of Entire Source</b>	<b>244.78</b>	<b>95.09</b>	<b>95.13</b>	<b>95.13</b>	<b>32.07</b>	<b>91.62</b>	<b>72.46</b>	<b>21.54</b>	<b>6.01 Xylenes</b>
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	NA	NA	NA	NA	NA	NA	NA
negl. = negligible <sup>1</sup> Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".									

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

- (c) This existing source is not a major stationary source under Emission Offset (326 IAC 2-3), because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year or more.

<b>Description of Proposed Revision</b>
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The Office of Air Quality (OAQ) has reviewed an application, submitted by Dave O'Mara Contractor, Inc. (Dave O'Mara) on April 4, 2013, relating to the addition of onsite reclaimed asphalt pavement (RAP) crushing. The RAP crushing will be performed by a portable unit that will be moved to the site on an as-needed basis. Dave O'Mara has also requested approval to add recycled shingles to their aggregate mix, and propane as a back-up fuel in the aggregate dryer. Additionally, Dave O'Mara has requested approval to construct a new 10,519 gallon #2 fuel oil storage tank and increase the electric arc furnace steel mill slag storage capacity. Each of these changes is intended to increase the operational flexibility of this portable source. Furthermore, Dave O'Mara has indicated that it no longer wishes to have approval to relocate to LaPorte County due to additional requirements specific to the county. Finally, Dave O'Mara has requested the permit be updated to correct several emission unit descriptions to reflect actual operating conditions.

- (a) The following is a list of the new insignificant activities:

- (1) One (1) 335 horsepower, diesel fuel-fired portable RAP crusher for processing reclaimed asphalt pavement (RAP), identified as Crusher, approved for construction in 2013, with a maximum throughput capacity of 200 tons of RAP per hour.

Under 40 CFR 60, 1068.30(2)(iii), General Compliance Provisions for Highway, Stationary, and Nonroad Programs, this unit this is considered a nonroad engine.

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

- (2) Recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) storage piles, with a maximum anticipated pile size of 0.50 acres.
- (3) Electric arc steel slag storage piles, with a maximum anticipated pile size of 1.00 acres.
- (4) One (1) 10,519 gallon No. 2 fuel oil storage tank, approved for construction in 2013.

- (b) The following is a list of the modified emission units and pollution control device(s):

- (1) One (1) portable asphalt drum-mix plant, constructed in 1998, with a nominal capacity of 300 tons per hour, equipped with one (1) aggregate dryer burner with a maximum rated capacity of 96.8 million British thermal units (MMBtu) per hour, using natural gas, No. 2 fuel oil, residual No. 4 fuel oil, or propane, as available, processing steel slag and asbestos-free recycled asphalt shingles (RAS) in the aggregate mix, and using one (1) pulse jet baghouse for particulate control, exhausting at one (1) stack, identified as #1;
- (2) six (6) compartment cold feed bins with feeders and collection conveyors;
- (3) two (2) conveyors and one (1) screen to transfer aggregate from two (2) recycle bins to the asphalt dryer;
- (4) one (1) drag slat conveyor to transfer product from asphalt dryer to two (2) 200 ton storage silos;

- (d) Upon review of the permit and supporting documentation, IDEM OAQ, in collaboration with the source, determined that the following additional revision was required to maintain the Source's FESOP Status:

Dave O' Mara does not intend to grind shingles at this plant; therefore, they will be required to use/purchase only supplier certified asbestos-free factory seconds and/or post consumer waste shingles for use in their aggregate mix. This requirement will be added to the permit because it is the physical act of grinding that releases asbestos into the air. Consequently, the company performing the grinding would need to test the shingles, prior to grinding, in order for the testing to be effective. A new condition limiting the use of asphalt shingles in the aggregate mix to only those that are asbestos-free, will be added to the permit.

*This is a new requirement for this source. This is a Title I change.*

(E) Finally, IDEM OAQ has determined that the following additional revisions were required.

(1) Pursuant to 326 IAC 2-7-1(39), starting July 1, 2011, greenhouse gases (GHGs) emissions are subject to regulation at a source with a potential to emit 100,000 tons per year or more of CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e). Therefore, CO<sub>2</sub>e emissions have been calculated for this source (see TSD Appendix A.3 for detailed calculations and this TSD, for a summary table). Based on the calculations, the unlimited potential to emit greenhouse gases from the entire source is less than 100,000 tons of CO<sub>2</sub>e per year. A FESOP emissions cap for greenhouse gases (GHGs) has been added to Section C of the permit. No other changes have been made to the permit as a result of this review.

*This is a new requirement for this source. This is a Title I change.*

(2) A number of Federal National Emission Standards for Hazardous Air Pollutants (NESHAPs) and New Source Performance Standards (NSPS) have been promulgated, or revised, since the issuance of FESOP SPR No. F031-28784-05047, on May 12, 2010. Therefore, IDEM has performed an applicability determination for the following:

- |    |                                |    |                                     |
|----|--------------------------------|----|-------------------------------------|
| A. | 40 CFR 63, Subpart LLLLL (5L); | F. | 40 CFR 63, Subpart JJJJJJ (6J); and |
| B. | 40 CFR 63, Subpart DDDDD (5D); | G. | 40 CFR 63, Subpart AAAAAA (7A).     |
| E. | 40 CFR 63, Subpart CCCCC (6C); |    |                                     |

(3) IDEM has determined that a majority of the hot-mix asphalt plant hot oil heating systems are indirect-fired units and meet the definition of a boiler under 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units). Therefore, as part of this revision, IDEM has performed an applicability determination for the existing natural gas-fired hot oil heater, which uses No. 2 fuel oil as back-up fuel, and determined that the rule applies.

*This is a new requirement for this source. This is a Title I change.*

#### **Enforcement Issues**

There are no pending enforcement actions related to this revision.

#### **Fugitive Emissions**

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

The source is subject to New Source Performance Standard (NSPS) Subpart I, Standards of Performance for Hot Mix Asphalt Facilities [40 CFR Part 60, Subpart I], which was in effect on August 7, 1980.

**Emission Calculations**

See Appendices A.1, A.2, and A.3 of this TSD for detailed emission calculations.

The following applies as a result of this revision:

- The new 335 horsepower, diesel fuel-fired portable crusher is considered a portable, non-stationary, nonroad engine as defined in 40 CFR §1068.30. Additionally, the definition of "stationary source" under 326 IAC 2-2-1(yy), and "source" under 326 IAC 1-2-73, does not include emissions resulting from an internal combustion engine used for transportation purposes (mobile sources), or from a nonroad engine or nonroad vehicle. Therefore, the combustion emissions from the RAP crusher are not included in the potential to emit calculations.

**Permit Level Determination – FESOP Revision**

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

Process/ Emission Unit	PTE of Proposed Revision (tons/year)									
	PM	PM10	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs as CO <sub>2</sub> e	Total HAPs	Worst Single HAP
<b>Ducted Emissions</b>										
Dryer Fuel Combustion - Existing Fuels (worst case)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	73,390.45	N/A	N/A
Dryer Fuel Combustion - Propane	2.34	2.34	2.34	0.09	60.90	4.68	35.14	59,927.63	0	N/A
Hot Oil Heater - Fuel Combustion / Process (worst case)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	725.33	N/A	N/A
Diesel-Fired Generator Fuel Combustion (< 600 HP) (RAP Crusher)*	0	0	0	0	0	0	0	0	0	N/A
<b>Worst Case Emissions**</b>	<b>2.34</b>	<b>2.34</b>	<b>2.34</b>	<b>0.09</b>	<b>60.90</b>	<b>4.68</b>	<b>35.14</b>	<b>74,115.78</b>	<b>0</b>	<b>N/A</b>
<b>Fugitive Emissions</b>										
Material Crushing (RAP Crusher)	4.73	2.10	2.10	0	0	0	0	0	0	N/A
Material Storage Piles (Slag, Shingles)	0.80	0.28	0.28	0	0	0	0	0	0	N/A
<b>Total Fugitive Emissions</b>	<b>5.53</b>	<b>2.38</b>	<b>2.38</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>N/A</b>
<b>Total PTE of Proposed Revision</b>	<b>7.88</b>	<b>4.73</b>	<b>4.73</b>	<b>0.09</b>	<b>60.90</b>	<b>4.68</b>	<b>35.14</b>	<b>74,115.78</b>	<b>0</b>	<b>N/A</b>
N/A = not applicable Detailed calculations are available in TSD Appendix A.3: Unlimited Potential To Emit of the revision. * The diesel fuel-fired RAP Crusher has been determined a nonroad vehicle under 40 CFR 60, and 40 CFR 63, therefore, the fuel combustion emissions are not counted toward PSD and TV applicability. ** Worst Case Emissions (tons/yr) = Emissions from Dryer Fuel Combustion (Worst Case) + Worst Case Emissions from Hot Oil Heater Fuel Combustion/Process + Diesel-Fired Generator Fuel Combustion (< 600 HP) (200 ton/hr RAP Crusher).										

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 a change in operation (i.e., addition of Propane as a back-up fuel) with potential to emit greater than or equal to twenty-five (25) tons per year of Nitrogen oxides (NO<sub>x</sub>).

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

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

Process/ Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)									
	PM	PM <sub>10</sub> *	PM <sub>2.5</sub> **	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs** as CO <sub>2</sub> e	Total HAPs	Worst Single HAP
<b>Ducted/Ductable Emissions</b>										
Dryer Fuel Combustion (worst case) <sup>(1)</sup>	2.72	4.33	4.33	93.24	<b>60.90</b> <del>31.55</del>	<b>4.68</b> <del>1.74</del>	<b>35.14</b> <del>26.5</del>	<b>59,927.63</b>	0.70	0.57 (hexane)
Dryer/Mixer <sup>(2)</sup> (Process)	201.75	81.75	88.88	21.75	20.63	18.38	71.25	<b>12,469.50</b>	4.00	1.16 (formaldehyde)
Dryer/Mixer Slag Processing <sup>(2)</sup>	0	0	0	0.05	0	0	0	<b>0</b>	0	0
Hot Oil Heater - Fuel Combustion / Process (worst case)	0.05	0.09	0.09	1.66	0.52	0.01	0.13	<b>725.33</b>	0.002	0.002 (hexane)
<b>Generator (&lt; 600 hp) Fuel Combustion (RAP Crusher)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>N/A</b>
<b>Generator (&gt; 600 hp) Fuel Combustion</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>N/A</b>
Worst Case Emissions <sup>a</sup>	201.80	81.84	88.96	95.13	<b>61.42</b> <del>32.07</del>	18.38	71.38	<b>60,652.96</b>	4.00	1.16 (formaldehyde)
<b>Fugitive Emissions</b>										
Asphalt Load-Out, Silo Filling, and On-Site Yard <sup>(3)</sup>	0.42	0.42	0.42	0	0	6.42	1.08	<b>0</b>	0.11	0.03 (formaldehyde)
Material Storage Piles	<b>1.85</b> <del>1.60</del>	<b>0.65</b> <del>0.56</del>	<b>0.65</b> <del>0.56</del>	0	0	0	0	<b>0</b>	0	0
Material Processing and Handling <sup>(3)</sup>	2.42	1.15	0.17	0	0	0	0	<b>0</b>	0	0
Material Screening, and Conveying <sup>(3)</sup>	11.90	4.35	4.35	0	0	0	0	<b>0</b>	0	0
Unpaved and Paved Roads (worst case) <sup>(1)</sup>	26.65	6.79	0.68	0	0	0	0	<b>0</b>	0	0
Cold Mix Asphalt Production <sup>(4)</sup>	0	0	0	0	0	66.82	0	<b>0</b>	17.43	6.01 (xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0	0	<b>0</b>	0	N/A
Volatile Organic Liquid Storage Vessels ***	0	0	0	0	0	negl.	0	<b>0</b>	negl.	negl.
Total Fugitive Emissions	<b>43.24</b> <del>42.98</del>	<b>13.35</b> <del>13.26</del>	<b>6.26</b> <del>6.17</del>	0	0	73.24	1.08	<b>0</b>	17.54	6.01 (xylenes)
<b>Total Limited/ Controlled Emissions</b>	<b>245.04</b> <del>244.78</del>	<b>95.18</b> <del>95.09</del>	<b>95.22</b> <del>95.13</del>	95.13	<b>61.42</b> <del>32.07</del>	91.62	72.46	<b>60,652.96</b>	21.54	6.01 (xylenes)
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000	N/A	N/A

negl. = negligible	N/A = Not applicable
* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant."	
** The 100,000 CO2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.	
*** Fugitive emissions from each of the volatile organic liquid storage tanks were calculated using the EPA Tanks 4.0.9d program and were determined to be negligible.	
α 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 and Hot Oil Heating System + Diesel-Fired Generator < 600 HP + Diesel-Fired Generator > 600 HP	
(1) Limited PTE based upon annual production and fuel usage limits to comply with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).	
(2) Limited PTE based upon annual production limit and lb/ton emission limits to comply with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).	
(3) Limited PTE based upon annual production limit to comply with 326 IAC 2-2 (PSD) & 326 IAC 2-8 (FESOP).	
(4) Limited PTE based upon maximum annual VOC usage limit to comply with 326 IAC 2-8 (FESOP).	

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

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Revision (tons/year)									
	PM	PM <sub>10</sub> *	PM <sub>2.5</sub> **	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs** as CO <sub>2</sub> e	Total HAPs	Worst Single HAP
<b>Ducted/Ductable Emissions</b>										
Dryer Fuel Combustion (worst case) <sup>(1)</sup>	2.72	4.33	4.33	93.24	60.90	4.68	35.14	59,927.63	0.70	0.57 (hexane)
Dryer/Mixer <sup>(2)</sup> (Process)	201.75	81.75	88.88	21.75	20.63	18.38	71.25	12,469.50	4.00	1.16 (formaldehyde)
Dryer/Mixer Slag Processing <sup>(2)</sup>	0	0	0	0.05	0	0	0	0	0	0
Hot Oil Heater - Fuel Combustion / Process (worst case)	0.05	0.09	0.09	1.66	0.52	0.01	0.13	725.33	0.002	0.002 (hexane)
Generator (< 600 hp) Fuel Combustion (RAP Crusher)	0	0	0	0	0	0	0	0	0	N/A
Generator (> 600 hp) Fuel Combustion	0	0	0	0	0	0	0	0	0	N/A
<b>Worst Case Emissions <sup>α</sup></b>	<b>201.80</b>	<b>81.84</b>	<b>88.96</b>	<b>95.13</b>	<b>61.42</b>	<b>18.38</b>	<b>71.38</b>	<b>60,652.96</b>	<b>4.00</b>	<b>1.16 (formaldehyde)</b>
<b>Fugitive Emissions</b>										
Asphalt Load-Out, Silo Filling, and On-Site Yard <sup>(3)</sup>	0.42	0.42	0.42	0	0	6.42	1.08	0	0.11	0.03 (formaldehyde)
Material Storage Piles	1.85	0.65	0.65	0	0	0	0	0	0	0
Material Processing and Handling <sup>(3)</sup>	2.42	1.15	0.17	0	0	0	0	0	0	0
Material Screening, and Conveying <sup>(3)</sup>	11.90	4.35	4.35	0	0	0	0	0	0	0
Unpaved and Paved Roads (worst case) <sup>(1)</sup>	26.65	6.79	0.68	0	0	0	0	0	0	0
Cold Mix Asphalt Production <sup>(4)</sup>	0	0	0	0	0	66.82	0	0	17.43	6.01 (xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0	0	0	0	N/A
Volatile Organic Liquid Storage Vessels ***	0	0	0	0	0	negl.	0	0	negl.	negl.
<b>Total Fugitive Emissions</b>	<b>43.24</b>	<b>13.35</b>	<b>6.26</b>	<b>0</b>	<b>0</b>	<b>73.24</b>	<b>1.08</b>	<b>0</b>	<b>17.54</b>	<b>6.01 (xylenes)</b>
<b>Total Limited/ Controlled Emissions</b>	<b>245.04</b>	<b>95.18</b>	<b>95.22</b>	<b>95.13</b>	<b>61.42</b>	<b>91.62</b>	<b>72.46</b>	<b>60,652.96</b>	<b>21.54</b>	<b>6.01 (xylenes)</b>
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000	N/A	N/A

negl. = negligible	N/A = Not applicable
*	Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal ten (10) micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant.
**	The 100,000 CO <sub>2</sub> e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.
***	Fugitive emissions from each of the volatile organic liquid storage tanks were calculated using the EPA Tanks 4.0.9d program and were determined to be negligible.
α	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 and Hot Oil Heating System + Diesel-Fired Generator < 600 HP + Diesel-Fired Generator > 600 HP.
(1)	Limited PTE based upon annual production and fuel usage limits to comply with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).
(2)	Limited PTE based upon annual production limit and lb/ton emission limits to comply with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).
(3)	Limited PTE based upon annual production limit to comply with 326 IAC 2-2 (PSD) & 326 IAC 2-8 (FESOP).
(4)	Limited PTE based upon maximum annual VOC usage limit to comply with 326 IAC 2-8 (FESOP).

### FESOP and PSD Minor Status

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

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

(a) 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:

(a) The asphalt production rate shall not exceed 750,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

*This is an existing requirement for this source.*

(b) PM emissions from the dryer/mixer shall not exceed 0.538 pounds per ton of asphalt produced.

*This is an existing requirement for this source.*

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

Note: A PM limit is not required to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable for the new RAP crushing operation because this operations/activity is inherently limited by the FESOP and PSD asphalt production throughput limit established in the permit. The source can only crush as much material as it can use in the aggregate mix, and the calculations found on the "Material Processing, Handling, Crushing, Screening, and Conveying" worksheet, Appendix A.2, estimate particulate emissions based on the total material needs of the asphalt production operation, not just the portion of the mix that is RAP. The unlimited, uncontrolled particulate emissions from the crusher, found on the "Material Crushing Emissions" worksheet, Appendix A.3, estimated at 8760 hours/year, are 4.73 tons per year. However, after implementing the below-listed asphalt production PSD avoidance limit, the unlimited, uncontrolled particulate emissions from crushing, estimated at 8760 hours/year, decrease to 1.92 tons per year. Additionally, the PSD asphalt production throughput limit also inherently limits particulate emissions from the asphalt load-out and on-site yard, material processing and handling, material screening, and conveying, and the paved and unpaved roads.

(b) Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-3 (Emission Offset) not applicable, PM10, PM2.5, CO, and VOC emissions from the dryer/mixer process shall be limited as follows:

(a) The asphalt production rate shall not exceed 750,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

*This is an existing requirement for this source.*

(b) PM10 emissions from the dryer/mixer shall not exceed 0.218 pounds per ton of asphalt produced.

*This is an existing requirement for this source.*

(c) PM2.5 emissions from the dryer/mixer shall not exceed 0.237 pounds per ton of asphalt produced.

*This is an existing requirement for this source.*

(d) CO emissions from the dryer/mixer shall not exceed 0.19 pounds per ton of asphalt produced.

*This is an existing requirement for this source.*

(e) VOC emissions from the dryer/mixer shall not exceed 0.049 pounds per ton of asphalt produced.

*This is an existing requirement for this source.*

When combined with the limited potential to emit PM10, PM2.5, CO, and VOC from all other emission units at this source, compliance with these limits shall limit the source-wide total potential to emit of PM10, PM2.5, CO, and VOC to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permit Program), 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset) not applicable.

(c) Pursuant to 326 IAC 2-8-4 (FESOP) and in order to render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), 326 IAC 2-3 (Emission Offset), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable, SO2 and HAP emissions from the dryer/mixer shall be limited as follows:

(1) Slag Usage Limitation

Steel slag usage shall not exceed 75,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

*This is an existing requirement for this source.*

(2) Slag and Fuel Specifications

(A) SO2 emissions from the usage of steel slag in the dryer/mixer shall not exceed 0.0014 pounds of SO2 per ton of steel slag processed.

*This is an existing requirement for this source.*

(B) The sulfur content of the steel slag shall not exceed 0.66 percent by weight.

*This is an existing requirement for this source.*

- (C) When combusting No. 2 fuel oil in the dryer/mixer burner the calendar month average sulfur content of the No. 2 fuel oil shall not exceed 0.5 percent by weight, with compliance determined at the end of each month.

*This is an existing requirement for this source.*

- (D) When combusting No. 4 fuel oil in the dryer/mixer burner the calendar month average sulfur content of the No. 4 fuel oil shall not exceed 1.60 percent by weight, with compliance determined at the end of each month.

*This is an existing requirement for this source.*

(3) Single Fuel Usage Limitations

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

- (A) Natural gas usage shall not exceed 631 million cubic feet per twelve (12) consecutive month period, with compliance determined at the end of each month.

*This is an existing requirement for this source.*

- (B) No. 2 fuel oil usage shall not exceed 2,626,479 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

*This is an existing requirement for this source.*

- (C) No. 4 fuel oil usage shall not exceed 777,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

*This is an existing requirement for this source.*

- (D) Propane usage shall not exceed 9,369,812 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.**

***This is a new requirement for this source. This is a Title I change.***

Note: Although the PTE from the combustion of Propane in the 98.6 MMBtu/hr dryer burner is less than 100 tons/yr for all criteria pollutants, and less than 10 tons per year for any single HAP and less than 25 tons per year for combined HAPs, a limit is added to the permit to assist Dave O'Mara in maintaining compliance with the annual SO<sub>2</sub> emission limit (< 93.29 tons/yr).

(4) Multiple Fuel Usage Limitations

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

- (A) SO<sub>2</sub> emissions from the dryer/mixer shall not exceed 93.29 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

*This is an existing requirement for this source.*

The Permittee shall limit fuel usage in the dryer/mixer burner in order to limit SO<sub>2</sub> emissions from the dryer/mixer to less than limit above according to the following formula:

$$S = \frac{F(E_F) + R(E_R) + N(E_N) + P(E_P) + L(E_L)}{2000 \text{ lbs/ton}}$$

Where:

S = tons of sulfur dioxide emissions for twelve (12) month consecutive period

F = gallons of No. 2 fuel oil used in last twelve (12) months

R = gallons of No. 4 fuel oil used in last twelve (12) months

N = million cubic feet of natural gas used in last twelve (12) months

**P = gallons of Propane used in last twelve (12) months**

L = tons of steel slag used in last twelve (12) months with less than or equal to sixty-six hundredths percent (0.66%) sulfur content

Emission Factors:

E<sub>F</sub> = 0.071 pounds per gallon of No. 2 fuel oil

E<sub>R</sub> = 0.24 pounds per gallon of No. 4 fuel oil

E<sub>N</sub> = 0.6 pounds per million cubic feet of natural gas

**E<sub>P</sub> = 0.00002 pounds per gallon of Propane**

E<sub>L</sub> = 0.0014 pounds per ton of slag

***This is a revised requirement for this source.***

Note: Propane is added to assist Dave O'Mara in maintaining compliance with the annual SO<sub>2</sub> emission limit (< 93.29 tons/yr).

- (5) **Asphalt Shingle Usage Limitation**  
Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAPs)) not applicable, the Permittee shall not grind recycled asphalt shingles on-site and shall only use certified asbestos-free recycled shingles, post consumer waste and/or factory seconds, as an additive in its aggregate mix.

***This is a new requirement for this source. This is a Title I change.***

Note: Since the source does not intend to grind shingles at this plant, they will be required to use/purchase only supplier certified asbestos-free post consumer waste and/or factory seconds shingles in their aggregate mix. This requirement will be included, because it is the physical act of grinding that releases asbestos into the air. Therefore, the company performing the grinding would need to test the shingles prior to grinding, in order for the testing to be effective. A new condition limiting the use of asphalt shingles in the aggregate mix to only those that are asbestos-free, has been added to the permit.

Compliance with these limits combined with the limited potential to emit SO<sub>2</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> to less than 100 tons per twelve (12) consecutive month period, each, 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 326 IAC 2-7 (Part 70 Permit Program) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), 326 IAC 2-3 (Emission Offset), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable.

### Federal Rule Applicability Determination

#### New Source Performance Standards (NSPS)

- (a) 40 CFR 60, Subpart Kb - Standards for Volatile Organic Liquid Storage Vessels  
The requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels, 40 CFR 60, Subpart Kb (326 IAC 12), are not included in the permit for the new 10,519 gallon No 2 fuel oil storage tank, because although the tank is approved for construction in 2013, after the rule applicability date of July 23, 1984, the tank has a maximum storage capacity of less than seventy-five cubic meters (75 m<sup>3</sup>) (19,813 gallons), and the liquid stored in the tank has a maximum true vapor pressure of less than fifteen kiloPascals (15.0 kPa).
- (b) 40 CFR 60, Subpart OOO - Standards for Nonmetallic Mineral Processing Plants  
This existing stationary drum hot-mix asphalt plant continues to be subject to the New Source Performance Standard for Nonmetallic Mineral Processing Plants, 40 CFR 60, Subpart OOO (30) (326 IAC 12), whenever a crusher is being used to reduce the size of nonmetallic minerals embedded in the Recycled Asphalt Pavement (RAP).

*This is a new requirement for this source. This is a Title I change.*

The units subject to this rule include the following:

- (1) crushers;
- (2) grinding mills; and
- (3) subsequent affected facilities up to, but not including, the first storage silo or bin, such as:
  - (A) bucket elevators;
  - (B) belt conveyors;
  - (C) screening operations; and
  - (D) bagging operations;

Therefore, pursuant to 40 CFR 60.672(b) and (c), fugitive particulate matter emissions from any transfer point on belt conveyors or from any other of the above-listed facilities, except the crusher, shall continue to not exceed seven percent (7%) opacity, and fugitive particulate matter emissions from the crusher shall continue to not exceed twelve percent (12%) opacity.

The source will comply with this rule by applying the management techniques outlined in their Fugitive Dust Plan (included as Attachment A of the permit).

The portable RAP crusher is therefore still subject to the following requirements of 40 CFR 60, Subpart OOO (included as Attachment C of the permit):

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

*Note: this NSPS includes testing requirements applicable to the new Rap Crusher.*

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

(c) 40 CFR 60, Subpart IIII - NSPS for Stationary Compression Ignition Internal Combustion Engines

The requirements of the New Source Performance Standard for Portable Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart IIII (4I) (326 IAC 12), are not included in the permit for the diesel fuel-fired portable RAP crusher, as follows:

Pursuant to 40 CFR 60.4219, *Stationary internal combustion engine (ICE)* means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary ICE is not a *nonroad engine* as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle or a vehicle used solely for competition. Stationary ICE include; reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

Pursuant to 40 CFR 1068.30, *Nonroad engine* means:

- (1) Except as discussed in paragraph (2) of this definition, a *nonroad engine* is an internal combustion engine that meets any of the following criteria:
  - (A) 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).
  - (B) 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).
  - (C) 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.
- (2) An internal combustion engine is not a *nonroad engine* if it meets any of the following criteria:
  - (A) The engine is used to propel a motor vehicle, an aircraft, or equipment used solely for competition.
  - (B) The engine is regulated under 40 CFR part 60, (or otherwise regulated by a federal New Source Performance Standard promulgated under section 111 of the Clean Air Act (42 U.S.C. 7411)).
  - (C) The engine otherwise included in paragraph (1)(iii) of this definition remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. Any engine (or engines) that replace(s) an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period. An engine located at a seasonal source is an engine that remains at a seasonal source during the full annual operating period of the seasonal source. A seasonal source is a stationary source that remains in a single location on a permanent basis (i.e., at least two years) and that operates at that single location approximately three months (or more) each year. See §1068.31 for provisions that apply if the engine is removed from the location.

IDEM, OAQ has determined that based on information submitted by Dave O'Mara, the portable RAP crusher may be considered a nonroad engine for the purposes of 40 CFR 60, Subpart IIII applicability, provided it meets the requirements of paragraph (2)(iii) of the definition of nonroad engine in 40 CFR 1068.30. Therefore, the requirements of 40 CFR 60, Subpart IIII are not applicable to the portable RAP crusher, provided it meets the following requirements:

- (1) The portable RAP crusher shall remain at a location for a period not to exceed twelve (12) consecutive months.
  - (2) Any portable RAP crusher that replaces a portable RAP crusher at a location and that is intended to perform the same or similar function as the portable RAP crusher replaced, will be included in calculating the consecutive time period.
  - (3) For the purposes of this condition and pursuant to 40 CFR 1068.30 Nonroad Engine (2)(iii), a location is any single site at a building, structure, facility, or installation.
- (d) 40 CFR 60, Subpart JJJJ - NSPS for Stationary Spark Ignition Internal Combustion Engines  
The requirements of the New Source Performance Standard for Portable Spark Ignition Internal Combustion Engines, 40 CFR 60, Subpart JJJJ (4J) (326 IAC 12), are not included in the permit, because the diesel fuel-fired portable RAP crusher is compression ignition and meets the definition of a nonroad engine, as defined in 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is therefore not considered a portable internal combustion engine as defined in 40 CFR 60.4248.
- (e) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this proposed revision.

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

- (a) 40 CFR 61, Subpart M - NESHAPs for Asbestos  
The requirements of the National Emission Standard for Hazardous Air Pollutants (NESHAPs) for Asbestos, 40 CFR 61, Subpart M (326 IAC 14), are not included in the permit for the stationary drum hot-mix asphalt plant or portable RAP Crusher, since the Dave O'Mara does not intend to grind shingles at this plant and will only purchase pre-crushed/pre-sized, supplier certified, asbestos-free, post consumer waste and/or factory seconds, shingles for use in its aggregate mix.
- (b) 40 CFR 63, Subpart ZZZZ - NESHAP for Stationary Reciprocating Internal Combustion Engines  
The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Portable Reciprocating Internal Combustion Engines, 40 CFR 63.6580, Subpart ZZZZ (4Z) (326 IAC 20-84), are not included in the permit for the diesel fuel-fired portable RAP crusher, as follows:

Pursuant to 40 CFR 60.4219, *Stationary internal combustion engine (ICE)* means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary ICE is not a *nonroad engine* as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle or a vehicle used solely for competition. Stationary ICE include; reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

See line items (c)(2)(A) and (c)(2)(B) in the above New Source Performance Standards (NSPS) review for the definition of nonroad engine. IDEM, OAQ has determined that based on information submitted by Dave O'Mara the portable RAP crusher may be considered a nonroad engine for the purposes of 40 CFR 63, Subpart ZZZZ applicability, provided it meets the requirements of paragraph (2)(iii) of the definition of nonroad engine in 40 CFR 1068.30. Therefore, the requirements of 40 CFR 60, Subpart ZZZZ are not applicable to the portable RAP crusher, provided it meets the following requirements:

- (1) The portable RAP crusher shall remain at a location for a period not to exceed twelve (12) consecutive months.

- (2) Any portable RAP crusher that replaces a portable RAP crusher at a location and that is intended to perform the same or similar function as the portable RAP crusher replaced will be included in calculating the consecutive time-period.
  - (3) For the purposes of this condition and pursuant to 40 CFR 1068.30 Nonroad Engine (2)(iii), a location is any single site at a building, structure, facility, or installation.
- (c) 40 CFR 63, Subpart DDDDD - NESHAPs for Industrial, Commercial, and Institutional Boilers, and Process Heaters  
The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD (5D) (326 IAC 20), are not included in the permit, since this source is not a major source of HAPs, and is not located at nor is a part of a major source of HAP emissions.
- (d) 40 CFR 63, Subpart LLLLL - NESHAPs for Asphalt Processing and Asphalt Roofing Manufacturing  
The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63, Subpart LLLLL (5L) (326 IAC 20-71), are not included in the permit, since the existing stationary drum hot-mix asphalt plant is still not an asphalt processing plant or an asphalt roofing manufacturing facility because it does not engage in the preparation of asphalt flux or asphalt roofing materials. Additionally, it is not a major source of HAPs, and is not located at nor is a part of a major source of HAP emissions.
- (e) 40 CFR 63, Subpart CCCCC - NESHAP for the Source Category Identified as Gasoline Dispensing Facilities (GDF)  
The requirements of the National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities, 40 CFR 63, Subpart CCCCC (6C) (326 IAC 20), are not included in the permit, because this portable drum-mix, hot-mix asphalt plant, does not include any gasoline dispensing facilities, as defined under 40 CFR 63.11132.
- (f) 40 CFR 63, Subpart JJJJJ - NESHAPs for Industrial, Commercial, and Institutional Boilers Area Sources  
  - (1) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJ (6J), are not included in the permit for the dryer/mixer burner since although this existing source is an area source of hazardous air pollutants (HAP), as defined in §63.2, the dryer/mixer burner is a direct-fired process unit and not a boiler, as defined in 40 CFR 63.11237.
  - (2) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJ (6J), are not included in the permit for the No. 2 distillate fuel oil fired hot oil heater, because although this existing source is an area source of hazardous air pollutants (HAP), as defined in §63.2, and the hot oil heater fires No. 2 distillate fuel oil, it does not meet the definition of a boiler, as defined in §63.11237, since heat transfer oil and not water is used as the indirect heating media.
- (g) 40 CFR 63, Subpart AAAAAA - NESHAP for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing  
The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63, Subpart AAAAAA (7A) (326 IAC 20), are not included in the permit, because although the stationary drum hot-mix asphalt plant is an area source of hazardous air pollutant (HAP) emissions, as defined in §63.2, it does not meet the definition of an asphalt processing operation or an asphalt roofing manufacturing operation, as defined in §63.11566, since it does not engage in the preparation of asphalt flux or asphalt roofing materials.

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

*Compliance Assurance Monitoring (CAM)*

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 - Entire Source</b>
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The following state rules are applicable to the proposed revision:

- (a) 326 IAC 2-8-4 (FESOP)  
This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP). See the "PTE of the Entire Source After Issuance of the FESOP Revision" Section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))  
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be limited to less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See the "PTE of the Entire Source After Issuance of the FESOP Revision" Section above.
- (c) 326 IAC 2-3 (Emission Offset)  
This modification to an existing minor portable source under 326 IAC 2-3 (Emission Offset) will not change the minor status, because although this existing portable source is authorized to relocate to all areas of the state except for any area designated as severe non-attainment area for ozone, or to Lake, LaPorte, or Porter counties, the potential to emit of all nonattainment regulated pollutants from the entire source will continue to be limited to less than 100 tons per year. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply. See the "PTE of the Entire Source After Issuance of the FESOP Revision" Section above.
- (d) 326 IAC 1-7 (Stack Height)  
The requirements of 326 IAC 1-7 (Stack Height) are removed from the permit because although the unlimited and uncontrolled PM10 and SO2 emissions from this existing source, are each greater than one hundred (100) tons per year, asphalt concrete plants are still specifically exempted under 326 IAC 1-7-5(c).  
  
*This is a revised requirement for this source. This is a Title I change.*
- (e) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))  
The proposed revision is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the new and/or modified units 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.
- (f) 326 IAC 2-6 (Emission Reporting)  
Pursuant to 326 IAC 2-6-1, this portable 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 approved to relocate to Lake, Porter, or LaPorte Counties, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, pursuant to 326 IAC 2-6-1(b), the source is only subject to additional information requests as provided in 326 IAC 2-6-5.

*This is a revised requirement for this source. This is a Title I change.*

(g) 326 IAC 5-1 (Opacity Limitations)

This existing portable source is authorized to relocate to all areas of the state except for any area designated as severe non-attainment area for ozone, or to Lake, LaPorte, or Porter counties. Therefore, 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 the permit:

- (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4, when the source is located in any County except Lake, or the areas specified in (2)(A) through (G).
- (2) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4, when the source is located in the following areas listed in 326 IAC 5-1-1(c):
  - (A) Clark County (Jefferson Township - Cities of Jeffersonville, Clarksville, and Oak Park);
  - (B) Dearborn County (Lawrenceburg Township - Cities of Lawrenceburg and Greendale);
  - (C) Dubois County (Bainbridge Township - the City of Jasper);
  - (D) Marion County (except the area of Washington Township east of Fall Creek and the area of Franklin Township south of Thompson Road and east of Five Points Road);
  - (E) St. Joseph County (the area north of Kern Road and east of Pine Road);
  - (F) Vanderburgh County (the area included in the City of Evansville and Pigeon Township); and
  - (G) Vigo County (Indiana State University campus, 0.5 km radius around UTM Easting 464,519.00, Northing 4,369,208.00, Zone 16.
- (3) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period, when the source is located in any County.

*This is a revised requirement for this source. This is a Title I change.*

(h) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)

This existing portable source continues to be subject to the requirements of 326 IAC 6-4 (Fugitive Dust Emissions Limitations). Therefore, pursuant to 326 IAC 6-4, 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.

(i) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

This existing portable source continues to be subject to the requirements of 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations). Therefore, pursuant Pursuant to 326 IAC 6-5, fugitive particulate matter emissions shall continue to be controlled according to the Fugitive Dust Control Plan, included as Attachment A to the permit, when operating in the areas described in 326 IAC 6-5-1(a).

(j) 326 IAC 6.5 (PM Limitations Except Lake County)

This existing portable source is subject to the requirements of 326 IAC 6.5-1-2 because the potential to emit particulate matter (PM) before controls is greater than one hundred (100) tons per year and it has approval to relocate to Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne County. Therefore, pursuant to 6.5-1-2(a), PM emissions from the drum mixer, dryer burner, hot oil heater, any systems for crushing, conveying, handling, screening, weighing, and/or storing materials such as aggregate, reclaimed asphalt pavement, recycled asphalt shingles, mineral filler, and asphalt concrete, and the loading, transfer, and storage systems associated with emission control systems, shall not exceed seven hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)) when located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne County.

This limitation is more stringent than the applicable requirement of four hundredths (0.04) grains per dry standard cubic foot established by 326 IAC 12 (New Source Performance Standards) (40 CFR 60, Subpart I Standards of Performance for Hot Mix Asphalt Facilities). Therefore, compliance with 326 IAC 6.5-1-2(a) will satisfy the grain loading limitation specified in 326 IAC 12 and 40 CFR 60, Subpart I.

*This is a new requirement for this source. This is a Title I change.*

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

This existing portable source has approval to relocate to Clark and Floyd Counties, and has the potential to emit volatile organic compounds (VOCs) greater than one hundred (100) tons per year. However, this source is not a stationary source, and has elected to limit VOC emissions to less than one hundred (100) tons per year in a federally enforceable permit. Therefore, the requirements of 326 IAC 8-7 do not apply to the 10,519 gallon No. 2 fuel oil storage tank and are not included in the permit.

(l) 326 IAC 12 (New Source Performance Standards)

See the Federal Rule Applicability Section of this TSD.

(m) 326 IAC 20 (Hazardous Air Pollutants)

See the Federal Rule Applicability Section of this TSD.

<b>State Rule Applicability – Individual Facilities</b>
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*Drum Mix Asphalt Plant - Propane Combustion*

(a) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The potential to emit HAPs from the combustion of Propane in the existing dryer burner is less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) do not apply to this proposed revision, and are not included in the in the permit.

(b) 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)

The existing dryer burner is still not a source of indirect heating, as defined in 326 IAC 1-2-19 "Combustion for Indirect Heating". Therefore, the requirements of 326 IAC 6-2 still do not apply, and are not included in the permit.

(c) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

See the "Material Handling - Steel Slag and Recycled Shingles" section below for a discussion of the 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) applicability.

- (d) 326 IAC 6.5 (PM Limitations Except Lake County)  
See the "State Rule Applicability Determination - Entire Source" Section above.
- (e) 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)  
The potential to emit SO<sub>2</sub> from the combustion of propane in the existing dryer burner is less than twenty-five (25) tons/year, and ten (10) pounds/hour. However, the potential to emit SO<sub>2</sub> from the combustion of No. 2 and No. 4 distillate fuel oil, each, is equal to or greater than twenty-five (25) tons/year, or ten (10) pounds/hour. Therefore, the requirements of 326 IAC 7-1.1 still apply, and are included in the permit.  
  
*See Appendix A.3 for the detailed calculations.*
- (f) 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements)  
Pursuant to 326 IAC 7-2-1(c), the source shall continue to 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 the OAQ upon request.  
  
*See Appendix A.3 for the detailed calculations.*
- (g) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)  
The VOC potential to emissions from the combustion of propane in the existing dryer burner is less than twenty-five (25) tons/year. Therefore, the requirements of 326 IAC 8-1-6 do not apply to the combustion of propane in the existing dryer burner, and are still not included in the permit.  
  
*See Appendix A.3 for the detailed calculations.*
- (h) 326 IAC 9-1 (Carbon Monoxide Emission Limits)  
This existing portable, drum hot-mix asphalt plant is still not one of the source types listed in 326 IAC 9-1-2. Therefore, the requirements of 326 IAC 9-1 do not apply and are not included in the permit.
- (i) 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category)  
The existing 98.6 MMBtu/hr dryer burner still does not meet the definition of an affected facility, as defined in 326 IAC 10-3-1(a), because it still has a maximum a heat input of less than two hundred fifty million (250,000,000) British thermal units per hour (MMBtu/hr); therefore, it is still not subject to this rule and the requirements are not included in the permit.
- (j) 326 IAC 10-5 (Nitrogen Oxide Reduction Program for Internal Combustion Engines (ICE))  
The existing 98.6 MMBtu/hr dryer burner still does not meet the definition of an affected facility, as defined in 326 IAC 10-5-2(1), because it is still an external combustion unit and not an internal combustion engine.

*Material Handling - Steel Slag and Recycled Shingles*

- (a) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)  
The existing portable drum hot mix asphalt plant, including the systems for handling, screening, storing, weighing and/or conveying hot aggregate (which includes slag and recycled shingles), is subject to 40 CFR 60, Subpart I (Standards of Performance for Hot Mix Asphalt Facilities), which is incorporated by reference through 326 IAC 12. Therefore, pursuant to 326 IAC 6-3-1(c)(5), the dryer/mixer is not subject to the requirements of 326 IAC 6-3 because it is subject to the more stringent particulate limit established in 326 IAC 12.
- (b) 326 IAC 6.5 (PM Limitations Except Lake County)  
See the "State Rule Applicability Determination - Entire Source" Section above.

*Diesel Fuel-Fired Portable Crusher*

(a) 326 IAC 1-6-3 (Preventive Maintenance Plan (PMP))

A PMP is required for this unit and any associated control devices.

(b) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The potential to emit HAPs from the diesel fuel-fired, portable RAP crusher is less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) do not apply to this proposed revision, and are not included in the in the permit.

*See Appendix A.3 for the detailed calculations.*

(c) 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)

The diesel fuel-fired portable RAP crusher is not a source of indirect heating, as defined in 326 IAC 1-2-19 "Combustion for indirect heating". Therefore, the requirements of 326 IAC 6-2 do not apply, and are not included in this renewal.

(d) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the portable RAP crusher shall not exceed 58.51 pounds per hour when operating at a process weight rate of 200 tons (400,000 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:

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

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

*See Appendix A.3 for the detailed calculations.*

(e) 326 IAC 6.5 (PM Limitations Except Lake County)

See the "State Rule Applicability Determination - Entire Source" Section above.

(f) 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)

The unlimited potential to emit SO<sub>2</sub> from the diesel fuel-fired portable RAP crusher is less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations) do not apply to this proposed revision, and are not included in the permit.

*See Appendix A.3 for the detailed calculations.*

(g) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)

The unlimited VOC potential emissions from the diesel fuel-fired portable RAP crusher are less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 (General Reduction Requirements for New Facilities) do not apply to this proposed revision, and are not included in the permit.

*See Appendix A.3 for the detailed calculations.*

(h) There are no other 326 IAC 8 Rules applicable to the diesel fuel-fired portable crusher.

- (i) 326 IAC 9-1 (Carbon Monoxide Emission Limits)  
The diesel fuel-fired portable RAP crusher 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 to this proposed revision, and are not included in the permit.
- (j) 326 IAC 10-1 (Nitrogen Oxides Control in Clark and Floyd Counties)  
This existing portable source, authorized to relocate to Clark and Floyd counties, was constructed in 1998, after the effective date of May 13, 1996. However, potential and actual NOx emissions from the source are less than one hundred (100) tons per year, and it is subject to the requirements of 40 CFR 60, Subparts I and OOO. Therefore, the requirements of 326 IAC 10-1 do not apply, and are not included in the permit.
- (k) 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category)  
The diesel fuel-fired portable RAP crusher does not meet the definition of an affected facility, as defined in 326 IAC 10-3-1(a), because it has a maximum a heat input of less than two hundred fifty million (250,000,000) British thermal units per hour (MMBtu). Therefore, the requirements of 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category) do not apply to this proposed revision, and are not included in the permit.
- (l) 326 IAC 10-5 (Nitrogen Oxide Reduction Program for Internal Combustion Engines (ICE))  
The diesel fuel-fired portable RAP crusher, approved for construction in 2013, does not meet the definition of an affected engine, as defined in 326 IAC 10-5-2(1), because although it is an internal combustion engine, it is not a large NOx SIP Call engine, as defined in 326 IAC 10-5-2(4), or a stationary internal combustion engine, as defined in 326 IAC 10-5-2(10).

#### *Hot Oil Heater*

- (a) 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)  
The existing No. 2 distillate fuel oil fired hot oil heater, constructed in 1998, having maximum rated heat input capacity of 0.828 MMBtu/hr, is subject to 326 IAC 6-2-4 because the unit was constructed after the rule applicability date of September 21, 1983, and meets the definition of an indirect heating unit, as defined in 326 IAC 1-2-19, since it combusts fuel to produce usable heat that is to be transferred through a heat-conducting materials barrier or by a heat storage medium to a material to be heated so that the material being heated is not contacted by, and adds no substance to the products of combustion.

Pursuant to 326 IAC 6-2-4(a), for a total source maximum operating capacity rating of less than ten (10) MMBtu/hr, the pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input shall not exceed six tenths (0.6) pounds per MMBtu (lb/MMBtu).

Therefore, particulate emissions from the hot oil heater shall not exceed six tenths (0.6) pounds per MMBtu heat input.

*This is a new requirement for this source. This is a Title I change.*

- (b) 326 IAC 6.5 (PM Limitations Except Lake County)  
See the "State Rule Applicability Determination - Entire Source" Section above.

#### *Storage Tanks*

- (a) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)  
The potential to emit VOCs from the new 10,519 gallon No. 2 fuel oil storage tank is less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 do not apply to the tank, and are not included in the in the permit.

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

The 10,519 gallon No. 2 fuel oil storage tank has a maximum storage capacity of less than 39,000 gallons. Therefore, the requirements of 326 IAC 8-4-3 do not apply to this tank, and are not included in the permit.

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

Pursuant to 326 IAC 8-7(a)(3)(C) and 326 IAC 8-7(a)(3)(Q), volatile organic liquids storage facilities (tanks) are specifically exempted. Therefore, the requirements of 326 IAC 8-7 do not apply to the 10,519 gallon No. 2 fuel oil storage tank and are not included in the permit.

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

This existing portable source is currently located in Decatur County and the new 10,519 gallon No. 2 fuel oil storage tank has a maximum storage capacity of less than 39,000 gallons. However, this portable source is still authorized to relocate to Clark or Floyd Counties. Therefore, pursuant to 326 IAC 8-9-1(b), the storage tank is subject to the reporting and recordkeeping provisions of sections 6(a) and 6(b) of this rule, and is exempt from all other provisions of the rule, whenever the source is located in Clark or Floyd Counties.

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

- (A) the tank identification number;
- (B) the tank dimensions; and
- (C) the tank capacity.

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

Note: This rule also applies to the following existing storage tanks: one (1) 11,000 gallon #2 fuel oil storage tank, one (1) 15,000 gallon No. 4 fuel oil storage tank, and two (2) 25,000 gallon asphalt storage tanks. The permit has been updated to include these requirements.

*This is a new requirement for this source. This is a Title I change.*

(e) There are no other 326 IAC 8 Rules that are applicable to the new 10,519 gallon No. 2 fuel oil storage tank.

<b>Compliance Determination, Monitoring and Testing Requirements</b>
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(a) The compliance determination requirements applicable to this proposed revision are as follows:

(1) The fuel characteristics (i.e., sulfur content) and usage rate will be used to verify compliance with the SO<sub>2</sub> emission limitations.

*This is an existing requirement for this source.*

(2) Shingle supplier certifications are used to document that the shingles do not contain asbestos.

***This is a new requirement for this source. This is a Title I change.***

(b) The testing requirements applicable to this proposed revision are as follows:

Emission Unit	Control Device	Pollutant	Timeframe for Testing	Frequency of Testing
RAP Crusher and associated conveyors, screens, and material transfer points	N/A	PM/PM10/PM2.5 ( <i>opacity/fugitives</i> )	Within 180 days after initial use <sup>(3)</sup>	Once every five (5) years

These testing requirements are required for compliance with 40 CFR 60, Subpart OOO, and 326 IAC 2-8 (FESOP), for fugitive emissions from affected facilities without water sprays. Testing shall only be performed if the company has not previously performed testing on this unit at one of their other Indiana facilities. Additionally, 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.

(c) The compliance monitoring requirements applicable to this proposed revision are as follows:

Emission Unit & Control Device	Parameter	Frequency	Range/Rate	Excursions and Exceedances
RAP Crusher and associated conveyors, screens, and material transfer points	Visible Emissions	Once per day	normal/abnormal	Response Steps

These monitoring conditions are necessary to ensure compliance with 40 CFR 60, Subpart OOO, 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.

All other existing compliance determination, monitoring, and testing requirements will not change as a result of this revision. The source shall continue to comply with the applicable requirements and permit conditions as contained in FESOP Significant Permit Revision (SPR) No. F031-28784-05047, issued on May 12, 2010.

<b>Proposed Changes</b>
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(a) The following changes listed below are due to the proposed revision:

- (1) Section A.1 - General Information, the source description has been revised to include the use of slag and shingles in the aggregate mix, and to indicate that this portable drum-mix asphalt plant also produces cold-mix asphalt, and does not process blast furnace slag or grind shingles.
- (2) Sections A.2 - Emission Units and Pollution Control Equipment Summary and D.1 - Facility Operation Conditions (for the Drum-Mix Asphalt Plant), have been revised to include the use of slag and shingles in the aggregate mix in the asphalt plant emission unit descriptions.
- (3) Sections A.2 - Emission Units and Pollution Control Equipment Summary, and D.1 - Facility Operation Conditions (for the Drum-Mix Asphalt Plant), have been revised to include propane as an approved fuel for combustion in the dryer burner, and to add the new 10,519 gallon No. 2 Fuel Oil Storage Tank and portable RAP Crusher.
- (4) Section A.3 - Insignificant Activities, has been revised to include the new slag and shingles storage piles;
- (5) Section D.1 - Sulfur Dioxide (SO<sub>2</sub>) Limits has been renamed as D.1 - Sulfur Dioxide (SO<sub>2</sub>) and Hazardous Air Pollutant (HAP) Limits throughout the permit. Additionally, a Propane fuel usage limit has been added to subsection (c) Single Fuel Usage Limitations, a new subsection (e) Asphalt Shingle Usage Limitation has been added, and the compliance

statement at the end of the section has been reworded for clarity and updated to include reference to single and total HAPs.

- (6) A new Section D - Particulate Emission Limits has been added to incorporate the requirements of 326 IAC 6-3 for the portable RAP crusher.
  - (7) Section D.1 Multiple Fuel Usage / Sulfur Dioxide (SO<sub>2</sub>) Emissions, renamed as Multiple Fuel & Steel Slag Usage / Sulfur Dioxide (SO<sub>2</sub>) Emissions throughout the permit, has been revised to incorporate the addition of propane;
  - (8) A new Section D.1 - Shingle Asbestos Content has been added to provide guidance for complying with the "asbestos-free" requirement as provided for in Section D.1 - Sulfur Dioxide (SO<sub>2</sub>) and Hazardous Air Pollutant (HAP) Limits, subsection (e) Asphalt Shingle Usage Limitation.
  - (9) Section D.1 - Record Keeping Requirements has been revised to add the recordkeeping requirements necessary to document compliance status with the Shingle Usage Limitation and Shingle Asbestos Content limitations in the permit;
  - (10) A new Section D.3 - Facility Operation Conditions has been added to incorporate the requirements of 326 IAC 8-9 for each of the storage tanks when located in Clark or Floyd Counties;
  - (11) A New Section E.2: NSPS Requirements (for the Portable RAP Crusher) has been added to the permit to list the applicable sections of 40 CFR 60, Subpart OOO, for the portable RAP Crusher, and a copy of the rule has been attached to the back of the permit;
  - (12) A new Section E.3 - NSPS & NESHAPS Requirements (for the Portable RAP Crusher), has been added to remind Dave O'Mara that in order to render the requirements of 40 CFR 60, Subpart IIII, New Source Performance Standards (NSPS) for Stationary Compression Ignition Internal Combustion Engines, and 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Stationary Reciprocating Internal Combustion Engines, not applicable to the portable RAP Crusher, the on-site residence time of the unit must be limited;
  - (13) The FESOP Quarterly Report Forms for Single Fuel Usage and for Multiple fuel usage / Sulfur dioxide (SO<sub>2</sub>) emissions, renamed as Multiple Fuel & Steel Slag Usage / Sulfur Dioxide (SO<sub>2</sub>) Emissions, located at the back of the permit, have been revised to include Propane and updated to remove the formula instead referencing the Compliance Determination Requirements in Section D.1 - Multiple Fuel & Steel Slag Usage / Sulfur Dioxide (SO<sub>2</sub>) Emissions to remove redundancy;
  - (14) A new FESOP Quarterly Report Form has been added to assist Dave O'Mara in tracking the on-site residence time of the portable RAP crusher.
- (b) Upon further review, IDEM, OAQ has decided to make the following changes to the permit 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) Sections A.1 - General Information, A.2 - Emission Units and Pollution Control Equipment Summary, Section D.1 - Facility Operation Conditions (for the Drum-Mix Asphalt Plant), and Section E.1 - Facility Operation Conditions, renamed as NSPS Requirements (for the HMA Plant), have been revised to clarify which (regulated) materials are processed, crushed, and/or ground at this stationary source. Additionally, the statement pertaining to the source not processing blast furnace slag and not grinding shingles has been moved to Section A.1 for clarity.

- (2) Sections A.2 - Emission Units and Pollution Control Equipment Summary, D.1 - Facility Operation Conditions (for the Drum-Mix Asphalt Plant), and E.1 - Facility Operation Conditions, renamed as NSPS Requirements (for the Drum-Mix Asphalt Plant), have been revised to correct several emission unit descriptions to reflect actual operating conditions
- (3) On October 27, 2010, the Indiana Air Pollution Control Board issued revisions to 326 IAC 2. These revisions resulted in changes to the rule cites listed in the permit. These changes are not changes to the underlining provisions. IDEM, OAQ has clarified the rule cites for the Section B - Preventive Maintenance Plan. The change is only to the citations of these rules in Section B - Operational Flexibility.
- (4) IDEM, OAQ has added the Southwestern Regional Office to Section B - Emergency Provisions.
- (5) IDEM has revised Section C - Overall Source Limit to reflect that in order to remain a FESOP, the potential to emit greenhouse gases shall be limited to less than 100,000 tons per year of CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e).
- (6) IDEM has revised Section C - Opacity to reflect the portable status of the source and to include the requirements for Clark, Dearborn, Dubois, Marion, St. Joseph, Vanderburgh, and Vigo Counties.
- (7) IDEM, OAQ has removed Section C - Stack Height from the permit since the rule is not applicable to asphalt concrete plants.
- (8) IDEM, OAQ has clarified Section C - Instrument Specifications to indicate that the analog instrument must be capable of measuring the parameters outside the normal range.
- (9) IDEM, OAQ has clarified the Permittee's responsibility with regards to record keeping in Section C - General Record Keeping Requirements. Additionally, IDEM added "where applicable" to the lists in Section C - General Record Keeping Requirements to more closely match the underlying rule.
- (10) IDEM, OAQ has clarified the interaction of the Quarterly Deviation and Compliance Monitoring Report and the Emergency Provisions in Section C - General Reporting Requirements and the Quarterly Deviation and Compliance Monitoring Report Form at the back of the Permit.
- (11) IDEM has revised Section C - Relocation of Portable Sources to remove LaPorte County as an approved county of access.
- (12) Section D.1 - Facility Operation Conditions for the Drum Hot-Mix Asphalt Plant, has been revised to include a description of the insignificant 0.828 MMBtu/hr #2 fuel fired hot oil heater.
- (13) A new Section D - Particulate Emission Limits has been added to incorporate the requirements of 326 IAC 6-2 for the insignificant 0.828 MMBtu/hr #2 fuel fired hot oil heater.
- (14) A new Section D - Particulate Emission Limits has been added to incorporate the requirements of 326 IAC 6.5 for the dryer/mixer, hot oil heater, any systems for crushing, conveying, handling, screening, weighing, and/or storing materials such as aggregate, reclaimed asphalt pavement, recycled asphalt shingles, mineral filler, and asphalt concrete, and the loading, transfer, and storage systems associated with emission control systems.
- (15) IDEM, OAQ, has decided to clarify Section D.1 - Parametric Monitoring.

- (16) The FESOP Quarterly Report Form for Multiple fuel usage / Sulfur dioxide (SO<sub>2</sub>) emissions, renamed as Multiple Fuel & Steel Slag Usage / Sulfur Dioxide (SO<sub>2</sub>) Emissions, located at the back of the permit, has been revised to correct a typographical error. The rolling annual SO<sub>2</sub> emissions limitation is 93.29 tons per year after the addition of steel slag to the aggregate mix, where previously it was 93.24 tons per year without.

Unaffected permit conditions have been re-numbered and the Table of Contents updated, as applicable. The Permit has been revised as follows, with deleted language shown as ~~strikeouts~~ and new language **bolded**.

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

---

The Permittee owns and operates a portable hot drum-mix asphalt plant **and cold-mix asphalt production operation. Electric arc furnace steel mill slag (steel slag) and asbestos-free recycled asphalt shingles (RAS) are processed in the aggregate mix, and recycled asphalt pavement (RAP) is crushed on-site. This source does not process blast furnace slag or grind shingles.**

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

---

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

- (a) One (1) portable asphalt drum-mix plant, constructed in 1998, with a nominal capacity of 300 tons per hour, equipped with one (1) aggregate dryer burner with a maximum rated capacity of ~~96.872~~ million British thermal units (MMBtu) per hour, using natural gas, No. 2 fuel oil, ~~or~~ residual No. 4 fuel oil, **or propane, as available**, processing steel slag **and asbestos-free recycled asphalt shingles (RAS) in the aggregate mix**, and using one (1) pulse jet baghouse for particulate control, exhausting at one (1) stack, identified as #1. ~~This source does not process blast furnace slag;~~

- (b) ~~four (4)~~ **six (6)** compartment cold feed bins with feeders and collection conveyors;

\*\*\*\*\*

- (d) two (2) conveyors and one (1) screen to transfer aggregate from ~~two (2)~~ **two (2)** recycle bins to ~~the~~ **the** asphalt dryer;

- (e) one (1) **drag slat** conveyor to transfer product from asphalt dryer to ~~two (2)~~ **two (2)** 200 ton storage silos;

- (f) two (2) 25,000 gallon asphalt storage tanks; ~~and~~

\*\*\*\*\*

- (j) **One (1) 10,519 gallon No. 2 fuel oil storage tank, approved for construction in 2013; and**

\*\*\*\*\*

- (k) **One (1) 335 horsepower, diesel fuel-fired portable crusher for processing reclaimed asphalt pavement (RAP), identified as RAP Crusher, approved for construction in 2013, with a maximum throughput capacity of 200 tons of RAP per hour.**

**Under 40 CFR 60, 1068.30(2)(iii), General Compliance Provisions for Highway, Stationary, and Nonroad Programs, this unit this is considered a nonroad engine.**

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

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

---

This portable source also includes the following insignificant activities:

\*\*\*\*\*

- (d) Other categories with emissions below insignificant thresholds:
- (1) one (1) #2 fuel fired hot oil heater, with a rated capacity of 0.828 MMBtu/hr;  
**[326 IAC 6-2]**  
\*\*\*\*\*
  - (3) one (1) storage silo with seventy (70) ton storage capacity; ~~and~~  
\*\*\*\*\*
  - (5) **Recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) storage piles, with a maximum anticipated pile size of 0.50 acres; and**
  - (6) **Electric arc steel slag storage piles, with a maximum anticipated pile size of 1.00 acres.**

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

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\*\*\*\*\*

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

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- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, or Southeast Regional Office **and Southwest Regional Office**, 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

Southeast Regional Office phone: (812) 358-2027; fax: (812) 358-2058.

**Southwest Regional Office phone: (812) 380-2305; fax: (812) 380-2304.**

\*\*\*\*\*

\*\*\*\*\*

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)** ~~through (d)~~ without a prior permit revision, if each of the following conditions is met:

\*\*\*\*\*

- (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)(2), (c)(1), ~~and (d)(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)(2), (c)(1), ~~and (d)(b)(1) and (c)~~.

- (b) Emission Trades [326 IAC 2-8-15(e)(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(e)(b).

(c) Alternative Operating Scenarios [326 IAC 2-8-15(d)(c)]

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C.2 Overall Source Limit [326 IAC 2-8][326 IAC 2-2][326 IAC 2-3]

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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) **and greenhouse gases (GHGs)**, from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period. **This limitation shall also render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-3 (Emission Offset) not applicable;**

\*\*\*\*\*

- (4) **The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e) per twelve (12) consecutive month period.**

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C.3 Opacity [326 IAC 5-1]

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- (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, **when the source is located in any County except Lake or the areas specified in Conditions C.3(b)(1) through (7).**
- (b) **Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4, when the source is located in the following areas listed in 326 IAC 5-1-1(c):**
  - (1) **Clark County (Jefferson Township - Cities of Jeffersonville, Clarksville, Oak Park);**
  - (2) **Dearborn County (Lawrenceburg Township - Cities of Lawrenceburg and Greendale);**
  - (3) **Dubois County (Bainbridge Township - the City of Jasper);**
  - (4) **Marion County (except the area of Washington Township east of Fall Creek and the area of Franklin Township south of Thompson Road and east of Five Points Road);**
  - (5) **St. Joseph County (the area north of Kern Road and east of Pine Road);**
  - (6) **Vanderburgh County (the area included in the City of Evansville and Pigeon Township); and**
  - (7) **Vigo County (Indiana State University campus, 0.5km radius around UTM Easting 464,519.00, Northing 4,369,208.00, Zone 16.**

- (cb) 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.8 Reserved 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.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.**

\*\*\*\*\*

\*\*\*\*\*

**C.18 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]**

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- (a) Records of all required monitoring data, reports, and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. ~~These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.~~

**(1) Support information includes the following, where applicable:**

- (A) All calibration and maintenance records.**
- (B) All original strip chart recordings for continuous monitoring instrumentation.**
- (C) Copies of all reports required by the FESOP.**

**(2) Records of required monitoring information include the following, where applicable:**

- (A) The date, place, as defined in this permit, and time of sampling or measurements.**
- (B) The dates analyses were performed.**
- (C) The company or entity that performed the analyses.**
- (D) The analytical techniques or methods used.**
- (E) The results of such analyses.**
- (F) 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.**

\*\*\*\*\*

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.

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\*\*\*\*\*

C.20 Relocation of Portable Sources [326 IAC 2-14-4]

- (a) This permit is approved for operation in all areas of Indiana except in severe nonattainment areas for ozone and in Lake, **LaPorte**, and Porter Counties. This determination is based on the requirements of Prevention of Significant Deterioration in 326 IAC 2-2, and Emission Offset requirements in 326 IAC 2-3. Prior to locating in any severe nonattainment area, the Permittee must submit a request and obtain a permit modification.

\*\*\*\*\*

\*\*\*\*\*

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: **Portable Drum-Mix Asphalt Plant**

- (a) One (1) portable asphalt drum-mix plant, constructed in 1998, with a nominal capacity of 300 tons per hour, equipped with one (1) aggregate dryer burner with a maximum rated capacity of **96.872** million British thermal units (MMBtu) per hour, using natural gas, No. 2 fuel oil, ~~or~~ residual No. 4 fuel oil, **or propane, as available**, processing steel slag **and asbestos-free recycled asphalt shingles (RAS) in the aggregate mix**, and using one (1) pulse jet baghouse for particulate control, exhausting at one (1) stack, identified as #1. ~~This source does not process blast furnace slag;~~
- (b) ~~six (6)~~ **four (4)** compartment cold feed bins with feeders and collection conveyors;
- \*\*\*\*\*
- (d) two (2) conveyors and one (1) screen to transfer aggregate from **two (2)** recycle bins to the asphalt dryer;
- (e) one (1) **drag slat** conveyor to transfer product from asphalt dryer to **two (2) 200 ton** storage silos;
- (f) two (2) 25,000 gallon asphalt storage tanks; ~~and~~
- \*\*\*\*\*
- (j) **One (1) 10,519 gallon No. 2 fuel oil storage tank, approved for construction in 2013; and**

- (k) **One (1) 335 horsepower, diesel fuel-fired portable crusher for processing reclaimed aspha pavement (RAP), identified as RAP Crusher, approved for construction in 2013, with a maximum throughput capacity of 200 tons of RAP per hour.**

**Under 40 CFR 60, 1068.30(2)(iii), General Compliance Provisions for Highway, Stationary, and Nonroad Programs, this unit this is considered a nonroad engine.**

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

**Insignificant Activities: Boilers**

- (d) **Other categories with emissions below insignificant thresholds:**

- (1) **one (1) #2 fuel fired hot oil heater, with a rated capacity of 0.828 MMBtu/hr; [326 IAC 6-2]**

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**D.1.2 FESOP Limits [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-3] [326 IAC 8-1-6]**

**Pursuant to 326 IAC 2-8-4, and in order to render 326 IAC 2-7, 326 IAC 2-2, 326 IAC 2-3, and 326 IAC 8-1-6 not applicable, the Permittee shall comply with the following:**

\*\*\*\*\*

When combined with the limited potential to emit PM10, PM2.5, CO, and VOC from all other emission units at this source, compliance with these limits shall limit the source-wide total potential to emit of PM10, PM2.5, CO, and VOC to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permit Program), ~~and~~ 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), **and 326 IAC 2-3 (Emission Offset) not applicable.**

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**D.1.3 Sulfur Dioxide (SO<sub>2</sub>) and Hazardous Air Pollutant (HAP) Limits [326 IAC 2-8-4][326 IAC 2-2] [326 IAC 2-3][326 IAC 2-4.1]**

**Pursuant to 326 IAC 2-8-4, and in order to render 326 IAC 2-7, 326 IAC 2-2, 326 IAC 2-3, and 326 IAC 2-4.1 not applicable, the Permittee shall comply with the following:**

- (a) **Slag Usage Limitation**

Steel slag usage shall not exceed 75,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

\*\*\*\*\*

- (c) **Single Fuel Usage Limitations**

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

\*\*\*\*\*

- (4) **Propane usage shall not exceed 9,369,812 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.**

- (d) **Multiple Fuel & Slag Usage Limitations**

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\*\*\*\*\*

**(e) Asphalt Shingle Usage Limitation**

**Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAPs)) not applicable, the Permittee shall not grind recycled asphalt shingles on-site and shall only use certified asbestos-free recycled shingles, post consumer waste and/or factory seconds, as an additive in its aggregate mix.**

**Compliance with these limits, when combined with the limited potential to emit SO<sub>2</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> to less than 100 tons per twelve (12) consecutive month period, each, 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. ~~compliance with these limits shall limit the source-wide total potential to emit of SO<sub>2</sub> to less than 100 tons per 12 consecutive month period, each, and shall render the requirements 326 IAC 2-7 (Part 70 Permit Program) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), 326 IAC 2-3 (Emission Offset), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable.~~**

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

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Pursuant to 326 IAC 6-2-4, the particulate emissions from the 0.828 MMBtu/hr hot oil heater 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]**

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When not located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne County, pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the portable RAP crusher shall not exceed 58.51 pounds per hour when operating at a process weight rate of 200 tons (or 400,000 pounds) per hour. The pound per hour limitation was calculated as follows:

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:

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

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

**D.1.6 Particulate Emission Limits [326 IAC 6.5]**

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Pursuant to 326 IAC 6.5-1-2 (Particulate Matter Limitations except Lake County), particulate matter (PM) emissions from the drum mixer, dryer burner, hot oil heater, any systems for crushing, conveying, handling, screening, weighing, and/or storing materials such as aggregate, reclaimed asphalt pavement, recycled asphalt shingles, mineral filler, and asphalt concrete, and the loading, transfer, and storage systems associated with emission control systems, each, shall not exceed three-hundredths (0.03) grains per dry standard cubic foot of exhaust air, when located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne County.

**D.1.74 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 7-1.1-1][326 IAC 7-2-1]**

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**D.1.85 Preventive Maintenance Plan [326 IAC 2-8-4(9)]**

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**D.1.96 Particulate Matter (PM, PM10, and PM2.5) Control**

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**D.1.107 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]**

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**D.1.118 Sulfur Dioxide Emissions and Sulfur Content**

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**D.1.129 Multiple Fuel & Slag Usage / Sulfur Dioxide (SO<sub>2</sub>) Emissions**

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(a) In order to determine compliance with Condition D.1.3(d) - **Multiple Fuel & Slag Usage Limitations** Sulfur Dioxide (SO<sub>2</sub>) Limits, when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, and in conjunction with the use of steel slag in the aggregate mix, the Permittee shall use the following equation to determine the tons of SO<sub>2</sub> emitted per twelve (12) consecutive month period:

(1) Sulfur Dioxide emission calculation

$$S = \frac{F(E_F) + R(E_R) + N(E_N) + P(E_P) + L(E_L)}{2000 \text{ lbs/ton}}$$

Where:

\*\*\*\*\*

**P = gallons of Propane used in last twelve (12) months**

L = tons of steel slag used in last twelve (12) months with less than or equal to sixty-six hundredths percent (0.66%) sulfur content

Emission Factors:

\*\*\*\*\*

**E<sub>P</sub> = 0.00002 pounds per gallon of Propane**

E<sub>L</sub> = 0.0014 pounds per ton of slag

\*\*\*\*\*

**D.1.13 Shingle Asbestos Content**

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Pursuant to 326 IAC 2-8-4, compliance with Condition D.1.3(e) - Asphalt Shingle Usage Limitation shall be determined utilizing one of the following options:

- (1) Providing shingle supplier certification that the factory seconds and/or post consumer waste shingles do not contain asbestos; or
- (2) Analyzing a sample of the recycled asphalt shingles (factory seconds and/or post consumer waste, only) delivery to determine the asbestos content of the recycled asphalt 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.**

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**D.1.1440** Visible Emissions Notations

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**D.1.1544** Parametric Monitoring

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- (a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the aggregate dryer/mixer at least once per day when the drying/mixing process is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range, **the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 3.0 and 6.0 inches of water unless a different upper-bound or lower-bound value for this or a range established is determined** during the latest stack test, ~~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. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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**D.1.1642** Broken or Failed Bag Detection

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**D.1.1743** Record Keeping Requirements

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- (b) To document the compliance status with Conditions D.1.3(a) - **Slag Usage Limitation**, D.1.3(b) - **Slag and Fuel Specifications**, and D.1.3(d) - **Multiple Fuel & Slag Usage Limitations** Sulfur Dioxide (SO<sub>2</sub>) Limits, the Permittee shall maintain records in accordance with (1) through (4) below. Records necessary to demonstrate compliance shall be available no later than 30 days after the end of each compliance period.

\*\*\*\*\*

- (c) To document the compliance status with Conditions D.1.3 - Sulfur Dioxide (SO<sub>2</sub>) **and Hazardous Air Pollutant (HAP) Limits** and D.1.4 - Sulfur Dioxide (SO<sub>2</sub>), the Permittee shall maintain records in accordance with (1) through (54) below. Records necessary to determine compliance shall be available no later than 30 days after the end of each compliance period.

\*\*\*\*\*

- (d) To document the compliance status with Conditions D.1.3(e) - Asphalt Shingle Usage Limitation and D.1.13 - Shingle Asbestos Content, the Permittee shall maintain records in accordance with (1) through (3) below. Records necessary to determine compliance shall be available no later than 30 days after the end of each compliance period.

- (1) Calendar dates covered in the compliance determination period;
- (2) A certification, signed by the owner or operator, that the records of the shingle supplier certifications represent all of the shingles used during the period; and
- (3) If the shingle supplier certification is used to demonstrate compliance, the following, as a minimum, shall be maintained:
  - (A) Shingle supplier certifications;
  - (B) The name of the shingle supplier(s); and
  - (C) A statement from the shingle supplier(s) that certifies the asbestos content of the shingles from their company.

- (ed) To document the compliance status with Condition D.1.1410 - Visible Emission Notations, the Permittee shall maintain records of the daily visible emission notations of the aggregate dryer/burner stack exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (i.e., the process did not operate that day).

- (fe) To document the compliance status with Condition D.1.1544 - Parametric Monitoring, the Permittee shall maintain records of the once per day pressure drop during reading. The Permittee shall include in its daily record when the pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g. the process did not operate that day).

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

#### **D.1.1844 Reporting Requirements**

A quarterly summary of the information to document compliance status with Conditions D.1.1(a) - Particulate Matter (PM), D.1.2(a) - FESOP Limits, ~~and~~ D.1.3 - Sulfur Dioxide (SO<sub>2</sub>) **and Hazardous Air Pollutant (HAP) Limits, D.1.4 - Sulfur Dioxide (SO<sub>2</sub>), D.1.12 - Multiple Fuel Usage / Sulfur Dioxide (SO<sub>2</sub>) Emissions, and D.1.13 - Shingle Asbestos Content**, 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 D.3

### FACILITY OPERATION CONDITIONS

**Facility Description [326 IAC 2-8-4(10)]: Storage Vessels (Tanks)**

- (f) two (2) 25,000 gallon asphalt storage tanks; and
- (g) one (1) 11,000 gallon #2 fuel oil storage tank.
- (i) one (1) 15,000 gallon No. 4 fuel oil storage tank.
- (j) One (1) 10,519 gallon No. 2 fuel oil storage tank, approved for construction in 2013; and  
(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

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

##### D.3.1 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]

Pursuant to 326 IAC 8-9-1(b), the storage tanks are subject to reporting and recordkeeping provisions of section 6(a) and 6(b) of this rule when operating in Clark or Floyd Counties, as follows:

- (a) Pursuant to 326 IAC 8-9-6(a), the Permittee shall keep all records required by this section for three (3) years unless specified otherwise. Records required by subsection (b) shall be maintained for the life of the/each vessel.
- (b) Pursuant to 326 IAC 8-9-6(b), the Permittee shall maintain a record for each vessel (storage tank), and submit to the department a report containing the following information for each vessel (storage tank):
  - (1) The vessel (storage tank) identification number.
  - (2) The vessel (storage tank) dimensions.
  - (3) The vessel (storage tank) capacity.

\*\*\*\*\*

### SECTION E.1

### NSPS REQUIREMENTS FACILITY OPERATION CONDITIONS

**Facility Description [326 IAC 2-8-4(10)]: Portable Drum-Mix Asphalt Plant**

- (a) One (1) portable asphalt drum-mix plant, constructed in 1998, with a nominal capacity of 300 tons per hour, equipped with one (1) aggregate dryer burner with a maximum rated capacity of **96.872** million British thermal units (MMBtu) per hour, using natural gas, No. 2 fuel oil, or residual No. 4 fuel oil, **or propane, as available**, processing steel slag **and asbestos-free recycled asphalt shingles (RAS) in the aggregate mix**, and using one (1) pulse jet baghouse for particulate control, exhausting at one (1) stack, identified as #1. ~~This source does not process blast furnace slag;~~
- (b) ~~six (6)~~ **four (4)** compartment cold feed bins with feeders and collection conveyors;  
\*\*\*\*\*
- (d) two (2) conveyors and one (1) screen to transfer aggregate from **two (2)** recycle bins to the asphalt dryer;
- (e) one (1) **drag slat** conveyor to transfer product from asphalt dryer to **two (2) 200 ton** storage silos;

Insignificant Activities:

(d) Other categories with emissions below insignificant thresholds:  
\*\*\*\*\*

(5) Recycled asphalt shingles (certified asbestos-free, factory seconds and/or post consumer waste, only) storage piles, with a maximum anticipated pile size of 0.50 acres; and

(6) Electric arc steel slag storage piles, with a maximum anticipated pile size of 1.00 acres.

\*\*\*\*\*

(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 REQUIREMENTS

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

(k) One (1) 335 horsepower, diesel fuel-fired portable crusher for processing reclaimed asphalt pavement (RAP), identified as RAP Crusher, approved for construction in 2013, with a maximum throughput capacity of 200 tons of RAP per hour.

Under 40 CFR 60, 1068.30(2)(iii), General Compliance Provisions for Highway, Stationary, and Nonroad Programs, this unit this is considered a nonroad engine.

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

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

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

#### E.2.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

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

(b) Pursuant to 40 CFR 60.10, 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 NSPS Subpart OOO Requirements - Standards of Performance for Nonmetallic Mineral Processing Plants [40 CFR Part 60, Subpart OOO] [326 IAC 12-1]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart OOO (included as Attachment C of this permit), which are incorporated by reference as 326 IAC 12, except as otherwise specified in 40 CFR Part 60, Subpart OOO, for the RAP Crusher:

(1) 40 CFR 60.670(a), (d), (e), and (f) (6) 40 CFR 60.675(a), (c)(1)(i), (ii), (iii), (c)(3),

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

**E.2.3 Testing Requirements [40 CFR Part 60, Subpart OOO] [326 IAC 12-1] [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]**

In order to demonstrate compliance with Condition E.2.2, the Permittee shall perform testing for fugitive emissions from affected facilities without water sprays, as required under NSPS 40 CFR 60, Subpart OOO, not later than five (5) years from the most recent valid compliance demonstration, utilizing methods approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this 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.

\*\*\*\*\*

**SECTION E.3 NSPS & NESHAP REQUIREMENTS**

<p><b>Facility Description [326 IAC 2-8-4(10)]: Portable RAP Crusher</b></p> <p>(k) One (1) 335 horsepower, diesel fuel-fired portable crusher for processing reclaimed aspha pavement (RAP), identified as RAP Crusher, approved for construction in 2013, with a maximum throughput capacity of 200 tons of RAP per hour.</p> <p>Under 40 CFR 60, 1068.30(2)(iii), General Compliance Provisions for Highway, Stationary, and Nonroad Programs, this unit this is considered a nonroad engine.</p> <p>Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.</p> <p>(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)</p>
--

**New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAPs) Requirements [326 IAC 2-8-4(1)]**

**E.3.1 Nonroad Engines [326 IAC 12][40 CFR 60, Subpart IIII][326 IAC 20-82][40 CFR 63, Subpart ZZZZ] [40 CFR 1068.30]**

In order to render the requirements of the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR Part 60, Subpart IIII, which are incorporated by reference as 326 IAC 12, and the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ), which are incorporated by reference as 326 IAC 20-82, not applicable, and to ensure the portable RAP crusher is a nonroad engine, as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), the Permittee shall comply with the following:

- (a) The portable RAP crusher shall remain at a location for a period not to exceed twelve (12) consecutive months.

- (b) Any portable RAP crusher that replaces a portable RAP crusher at a location and that is intended to perform the same or similar function as the portable RAP crusher replaced will be included in calculating the consecutive time period.
- (c) For the purposes of this condition, and pursuant to 40 CFR 1069.30 Nonroad Engine (2)(iii), a location is any single site at a building, structure, facility, or installation.

Compliance with these limits shall render the requirements of the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR Part 60, Subpart IIII) and the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ) not applicable.

### E.3.2 Record Keeping Requirements

---

- (a) To document the compliance status with Condition E.3.1(a), the Permittee shall maintain records of the dates of installation and removal of the portable RAP crusher as the unit is installed and removed.
- (b) To document the compliance status with Condition E.3.1(b), the Permittee shall maintain records of the make, model, horsepower rating, manufacture date, and model year of each portable RAP crusher brought onto the site.
- (c) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required to be maintained by this condition.

### E.3.3 Reporting Requirements

---

A quarterly summary of the information to document compliance status with Conditions E.3.1(a) and E.3.1(b), shall be submitted using the reporting form located at the end of this permit, or its 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).

\*\*\*\*\*

#### FESOP Quarterly Report

Parameter: Single fuel usage

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

Fuel Type (units)	Fuel Usage Limit (per 12 consecutive month period)
Natural Gas (million cubic feet)	631
No. 2 fuel oil (gallons)	2,626,479
No. 4 fuel oil (gallons)	777,000
<b>Propane (gallons)</b>	<b>9,369,812</b>

\*\*\*\*\*

#### FESOP Quarterly Report

Parameter: Multiple Fuel & Slag Usage / Sulfur Dioxide (SO<sub>2</sub>) Emissions

Limit: SO<sub>2</sub> emissions from the dryer/mixer shall not exceed 93.2924 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. ~~When combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner and in conjunction with the use of steel slag in the aggregate mix, emissions from the dryer/mixer shall be limited as follows:~~

$$S = \frac{F(E_F) + R(E_R) + N(E_N) + L(E_L)}{2000 \text{ lbs/ton}}$$

<p><u>Where:</u></p> <p>S = tons of sulfur dioxide emissions for twelve (12) month consecutive period</p> <p>F = gallons of No. 2 fuel oil used in last twelve (12) months</p> <p>R = gallons of No. 4 fuel oil used in last twelve (12) months</p> <p>N = million cubic feet of natural gas used in last twelve (12) months</p> <p>L = tons of steel slag used in last twelve (12) months with less than or equal to sixty-six hundredths percent (0.66%) sulfur content</p>	<p><u>Emission Factors:</u></p> <p>E<sub>F</sub> = 0.071 pounds per gallon of No. 2 fuel oil</p> <p>E<sub>R</sub> = 0.24 pounds per gallon of No. 4 fuel oil</p> <p>E<sub>N</sub> = 0.6 pounds per million cubic feet of natural gas</p> <p>E<sub>L</sub> = 0.0014 pounds per ton of slag</p>
---	---

FESOP Fuel Usage and SO2 Emissions Quarterly Reporting Form

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

Month	Fuel Types/Slag (units)	Column 1	Column 2	Column 1 + Column 2	Total SO2 Emissions From All Fuels Used and Slag (tons per 12 month consecutive period)
		Usage This Month	Usage Previous 11 Months	Usage 12 Month Total	
Month 1	Natural gas (mmcf)				
	No. 2 fuel oil (gallons)				
	No. 4 fuel oil (gallons)				
	<b>Propane (gallons)</b>				
	Steel Slag (tons)				
Month 2	Natural gas (mmcf)				
	No. 2 fuel oil (gallons)				
	No. 4 fuel oil (gallons)				
	<b>Propane (gallons)</b>				
	Steel Slag (tons)				
Month 3	Natural gas (mmcf)				
	No. 2 fuel oil (gallons)				
	No. 4 fuel oil (gallons)				
	<b>Propane (gallons)</b>				
	Steel Slag (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**

**Source Name:** Dave O'Mara Contractor, Inc.  
**Current Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, IN 47240  
**FESOP Permit No.:** F031-25356-03326  
**Facility:** RAP Crusher  
**Parameter:** Residence Time  
**Limit:** The portable RAP crusher shall remain at a location for a period not to exceed twelve (12) consecutive months.

**Manufacture Date:** \_\_\_\_\_ **Installation Date:** \_\_\_\_\_

**Make:** \_\_\_\_\_ **Removal Date:** \_\_\_\_\_

**Model:** \_\_\_\_\_ **Model Year:** \_\_\_\_\_

**Horsepower Rating:** \_\_\_\_\_ **MMBtu/hr Rating:** \_\_\_\_\_

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

Month	Column 1	Column 2	Column 1 - Column 2
	Number of Days Onsite This Month	Number of Days Onsite Previous 11 Months	12 Month Total Number of Days Onsite
Month 1			
Month 2			
Month 3			

**Submitted by:** \_\_\_\_\_

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

**Signature:** \_\_\_\_\_

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

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

## QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

\*\*\*\*\*

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".

\*\*\*\*\*

No other changes have been made to the permit as a result of this revision.

### 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 April 4, 2013.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Significant Permit Revision No. 031-33048-05047. The staff recommends to the Commissioner that this FESOP Significant Permit Revision be approved.

### IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Ms. Hannah Desrosiers at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-9327 or toll free at 1-800-451-6027 extension 3-9327.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: [www.in.gov/idem](http://www.in.gov/idem)

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

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

**Asphalt Plant Maximum Capacity - Drum Mix**

Maximum Hourly Asphalt Production =	300	ton/hr									
Maximum Annual Asphalt Production =	2,628,000	ton/yr									
Maximum Annual Blast Furnace Slag Usage =	0	ton/yr	0.00	% sulfur							
Maximum Annual Steel Slag Usage =	1,103,760	ton/yr	0.66	% sulfur							
Maximum Dryer Fuel Input Rate =	96.8	MMBtu/hr									
Natural Gas Usage =	848	MMCF/yr									
No. 2 Fuel Oil Usage =	6,056,914	gal/yr, and	0.50	% sulfur							
No. 4 Fuel Oil Usage =	6,056,914	gal/yr, and	1.60	% sulfur							
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and	0.00	% sulfur							
Propane Usage =	9,369,812	gal/yr, and	0.20	gr/100 ft3 sulfur							
Butane Usage =	0	gal/yr, and	0.00	gr/100 ft3 sulfur							
Used/Waste Oil Usage =	0	gal/yr, and	0.00	% sulfur	0.00	% ash	0.000	% chlorine,	0.000	% lead	
Diesel Fuel Usage - Generator < 600 HP =	0	gal/yr, and									
Diesel Fuel Usage - Generator > 600 HP =	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 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	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							Greenhouse Gas Pollutants	Hazardous Air Pollutants	
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	CO <sub>2</sub> e	Total HAPs	Worst Case HAP
<b>Ducted Emissions</b>										
Dryer Fuel Combustion (worst case)	21.20	25.14	25.14	726.83	60.90	4.68	35.61	73,390.45	1.30	0.76 (hexane)
Dryer/Mixer (Process)	36,792.00	8,541.00	1,971.00	76.21	72.27	42.05	170.82	43,693.13	14.01	4.07 (formaldehyde)
Dryer/Mixer Slag Processing (worst case)	0	0	0	0.77	0	0	0	0	0	0
Hot Oil Heater Fuel Combustion/Process (worst case)	0.05	0.09	0.09	1.84	0.52	0.01	0.13	725.33	0.002	0.002 (hexane)
Diesel-Fired Generator < 600 HP * (crusher)	0	0	0	0	0	0	0	0	0	0
Diesel-Fired Generator > 600 HP	0	0	0	0	0	0	0	0	0	0
<b>Worst Case Emissions**</b>	<b>36,792.05</b>	<b>8,541.09</b>	<b>1,971.09</b>	<b>729.44</b>	<b>72.79</b>	<b>42.05</b>	<b>170.95</b>	<b>74,115.78</b>	<b>14.01</b>	<b>4.07 (hexane)</b>
<b>Fugitive Emissions</b>										
Asphalt Load-Out, Silo Filling, On-Site Yard	1.46	1.46	1.46	0	0	22.51	3.79	0	0.38	0.12 (formaldehyde)
Material Storage Piles	1.85	0.65	0.65	0	0	0	0	0	0	0
Material Processing and Handling	8.49	4.02	0.61	0	0	0	0	0	0	0
Material Crushing, Screening, and Conveying**	41.69	15.23	15.23	0	0	0	0	0	0	0
Unpaved and Paved Roads (worst case)	93.32	23.78	2.38	0	0	0	0	0	0	0
Cold Mix Asphalt Production	0	0	0	0	0	31,581.99	0	0	8,237.75	2,842.38 (xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0.00	0	0	0.00	0.00 (xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	0	negl	0
<b>Total Fugitive Emissions</b>	<b>146.81</b>	<b>45.13</b>	<b>20.32</b>	<b>0</b>	<b>0</b>	<b>31,604.50</b>	<b>3.79</b>	<b>0</b>	<b>8,238.13</b>	<b>2,842.38 (xylenes)</b>
<b>Totals Unlimited/Uncontrolled PTE</b>	<b>36,938.87</b>	<b>8,586.22</b>	<b>1,991.41</b>	<b>729.44</b>	<b>72.79</b>	<b>31,646.55</b>	<b>174.74</b>	<b>74,115.78</b>	<b>8,252.14</b>	<b>2,842.38 (xylenes)</b>

negl = negligible

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

Fuel component percentages provided by the source.

\* The diesel fuel-fired RAP Crusher has been determined a nonroad vehicle under 40 CFR 60, and 40 CFR 63, therefore, the fuel combustion emissions are not counted toward PSD and TV applicability.

\*\* 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 and Hot Oil Heating System + Diesel-Fired Generator < 600 HP + Diesel-Fired Generator > 600 HP

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

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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 Fuel Input Rate =	97	MMBtu/hr																		
Natural Gas Usage =	848	MMCF/yr																		
No. 2 Fuel Oil Usage =	6,056,914	gal/yr, and	0.50	% sulfur																
No. 4 Fuel Oil Usage =	6,056,914	gal/yr, and	1.60	% sulfur																
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and	0.00	% sulfur																
Propane Usage =	9,369,812	gal/yr, and	0.20	gr/100 ft3 sulfur																
Butane Usage =	0	gal/yr, and	0.00	gr/100 ft3 sulfur																
Used/Waste Oil Usage =	0	gal/yr, and	0.00	% sulfur	0.00	% ash	0.000	% chlorine	0.000	% 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	0.0	0.81	6.06	21.20	0.00	2.34	0.00	0.00	21.20
PM10/PM2.5	7.6	3.3	8.3	4.72	0.5	0.6	0	3.22	9.99	25.14	0.00	2.34	0.00	0.00	25.14
SO2	0.6	71.0	240.0	0.0	0.020	0.000	0.0	0.25	215.02	726.83	0.00	0.09	0.00	0.00	726.83
NOx	100	20.0	20.0	55.0	13.0	15.0	19.0	42.40	60.57	60.57	0.00	60.90	0.00	0.00	60.90
VOC	5.5	0.20	0.20	0.28	1.00	1.10	1.0	2.33	0.61	0.61	0.00	4.68	0.00	0.00	4.68
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	35.61	15.14	15.14	0.00	35.14	0.00	0.00	35.61
<b>Hazardous Air Pollutant</b>															
HCl							0.0							0.00	0.00
Antimony			5.25E-03	5.25E-03			negl			1.59E-02	0.00E+00			negl	0.02
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03			1.1E-01	8.5E-05	1.70E-03	4.00E-03	0.00E+00			0.00E+00	4.0E-03
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05			negl	5.1E-06	1.27E-03	8.42E-05	0.00E+00			negl	1.3E-03
Cadmium	1.1E-03	4.2E-04	3.38E-04	3.38E-04			9.3E-03	4.7E-04	1.27E-03	1.21E-03	0.00E+00			0.00E+00	1.3E-03
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02	5.9E-04	1.27E-03	2.56E-03	0.00E+00			0.00E+00	2.6E-03
Cobalt	8.4E-05		6.02E-03	6.02E-03			2.1E-04	3.6E-05		1.82E-02	0.00E+00			0.00E+00	0.02
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03			0	2.1E-04	3.82E-03	4.57E-03	0.00E+00			0.0E+00	0.00
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03			6.8E-02	1.6E-04	2.54E-03	9.09E-03	0.00E+00			0.00E+00	0.01
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04				1.1E-04	1.27E-03	3.42E-04	0.00E+00				1.3E-03
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02	8.9E-04	1.27E-03	2.56E-01	0.00E+00			0.00E+00	0.256
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl	1.0E-05	6.36E-03	2.07E-03	0.00E+00			negl	6.4E-03
1,1,1-Trichloroethane			2.36E-04	2.36E-04						7.15E-04	0.00E+00				7.1E-04
1,3-Butadiene															0.0E+00
Acetaldehyde															0.0E+00
Acrolein															0.0E+00
Benzene	2.1E-03		2.14E-04	2.14E-04				8.9E-04		6.48E-04	0.00E+00				8.9E-04
Bis(2-ethylhexyl)phthalate							2.2E-03							0.00E+00	0.0E+00
Dichlorobenzene	1.2E-03						8.0E-07	5.1E-04						0.00E+00	5.1E-04
Ethylbenzene			6.36E-05	6.36E-05						1.93E-04	0.00E+00				1.9E-04
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				3.2E-02	1.85E-01	9.99E-02	0.00E+00				0.185
Hexane	1.8E+00							0.76							0.763
Phenol							2.4E-03							0.00E+00	0.0E+00
Toluene	3.4E-03		6.20E-03	6.20E-03				1.4E-03		1.88E-02	0.00E+00				0.02
Total PAH Haps	negl		1.13E-03	1.13E-03			3.9E-02	negl		3.42E-03	0.00E+00			0.00E+00	3.4E-03
Polycyclic Organic Matter		3.30E-03							9.99E-03						0.01
Xylene			1.09E-04	1.09E-04						3.30E-04	0.00E+00				3.3E-04
<b>Total HAPs</b>							<b>0.80</b>	<b>0.22</b>	<b>0.44</b>	<b>0.00</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>1.30</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

**Abbreviations**

PM = Particulate Matter  
 PM10 = Particulate Matter (<10 um)  
 PM2.5 = Particulate Matter (< 2.5 um)  
 SO2 = Sulfur Dioxide  
 NOx = Nitrous Oxides  
 VOC = Volatile Organic Compounds  
 CO = Carbon Monoxide  
 HAP = Hazardous Air Pollutant  
 HCl = Hydrogen Chloride  
 PAH = Polyaromatic Hydrocarbon

\*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.

**Appendix A.1: Unlimited Emissions Calculations  
Greenhouse Gas (CO2e) Emissions from the  
Dryer/Mixer Fuel Combustion with Maximum Capacity < 100 MMBtu/hr**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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 Fuel Input Rate =	96.8	MMBtu/hr								
Natural Gas Usage =	848	MMCF/yr								
No. 2 Fuel Oil Usage =	6,056,914	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Usage =	6,056,914	gal/yr, and	1.60	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and	0.00	% sulfur						
Propane Usage =	9,369,812	gal/yr, and	0.20	gr/100 ft3 sulfur						
Butane Usage =	0	gal/yr, and	0.00	gr/100 ft3 sulfur						
Used/Waste Oil Usage =	0	gal/yr, and	0.00	% sulfur	0.00	% ash	0.000	% chlorine,	0.000	% lead

**Unlimited/Uncontrolled Emissions**

CO2e Fraction	Emission Factor (units)							Global Warming Potentials (GWP)		
	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)	Name	Chemical Formula	Global warming potential
CO2	120,161.84	22,501.41	24,153.46	24,835.04	12,500.00	14,506.73	22,024.15	Carbon dioxide	CO <sub>2</sub>	1
CH4	2.49	0.91	0.97	1.00	0.60	0.67	0.89	Methane	CH <sub>4</sub>	21
N2O	2.2	0.26	0.19	0.53	0.9	0.9	0.18	Nitrous oxide	N <sub>2</sub> O	310

CO2e Fraction	Unlimited/Uncontrolled Potential to Emit (tons/yr)						
	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)
CO2	50,946.70	68,144.56	73,147.73	0.00	58,561.33	0.00	0.00
CH4	1.06	2.76	2.92	0.00	2.82	0.00	0.00
N2O	0.93	0.79	0.58	0.00	4.22	0.00	0.00
<b>Total</b>	<b>50,948.69</b>	<b>68,148.11</b>	<b>73,151.24</b>	<b>0.00</b>	<b>58,568.36</b>	<b>0.00</b>	<b>0.00</b>

<b>CO2e for Worst Case Fuel* (tons/yr)</b>
<b>73,390.45</b>

CO2e Equivalent Emissions (tons/yr)	51,258.06	68,446.71	73,390.45	0.00	59,927.63	0.00	0.00
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**Methodology**

Fuel Usage from TSD Appendix A.1, page 1 of 14.  
 Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] \* [8,760 hrs/yr] \* [1 MMCF/1,000 MMBtu]  
 Fuel 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/0.0915 MMBtu]  
 Butane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] \* [8,760 hrs/yr] \* [1 gal/0.102 MMBtu]  
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.  
 Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)

**Abbreviations**

PTE = Potential to Emit  
 CO2 = Carbon Dioxide  
 CH4 = Methane  
 N2O = Nitrogen Dioxide

Natural Gas: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2

No. 2, No. 4, and Residual (No. 5 or No. 6) Fuel: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 5/10), Table 1.3-8

Propane: Emission Factor for CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, has been converted from kg/mmBtu to lb/kgal. Emission Factors for CO2 and N2O from AP-42 Chapter 1.5 (dated 7/08), Table 1.5-1

Butane: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.5 (dated 7/08), Table 1.5-1

Waste Oil: Emission Factors for CO2, CH4, and N2O from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal.

**Emission Factor (EF) Conversions**

Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) \* Conversion Factor (2.20462 lbs/kg) \* Heating Value of Natural Gas (MMBtu/scf) \* Conversion Factor (1,000,000 scf/MMCF)]  
 Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) \* Conversion Factor (2.20462 lbs/kg) \* Heating Value of the Fuel Oil (MMBtu/gal) \* Conversion Factor (1000 gal/kgal)]

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]

Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (310).

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

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East,  
 Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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

Maximum Hourly Asphalt Production = 300 ton/hr  
 Maximum Annual Asphalt Production = 2,628,000 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	36,792	36,792	36,792	<b>36,792</b>
PM10*	6.5	6.5	6.5	8,541	8,541	8,541	<b>8,541</b>
PM2.5*	1.5	1.5	1.5	1,971	1,971	1,971	<b>1,971</b>
SO2**	0.0034	0.011	0.058	4.5	14.5	76.2	<b>76.2</b>
NOx**	0.026	0.055	0.055	34.2	72.3	72.3	<b>72.3</b>
VOC**	0.032	0.032	0.032	42.0	42.0	42.0	<b>42.0</b>
CO***	0.13	0.13	0.13	170.8	170.8	170.8	<b>170.8</b>
<b>Hazardous Air Pollutant</b>							
HCl			2.10E-04			2.76E-01	<b>0.28</b>
Antimony	1.80E-07	1.80E-07	1.80E-07	2.37E-04	2.37E-04	2.37E-04	<b>2.37E-04</b>
Arsenic	5.60E-07	5.60E-07	5.60E-07	7.36E-04	7.36E-04	7.36E-04	<b>7.36E-04</b>
Beryllium	negl	negl	negl	negl	negl	negl	<b>0</b>
Cadmium	4.10E-07	4.10E-07	4.10E-07	5.39E-04	5.39E-04	5.39E-04	<b>5.39E-04</b>
Chromium	5.50E-06	5.50E-06	5.50E-06	7.23E-03	7.23E-03	7.23E-03	<b>7.23E-03</b>
Cobalt	2.60E-08	2.60E-08	2.60E-08	3.42E-05	3.42E-05	3.42E-05	<b>3.42E-05</b>
Lead	6.20E-07	1.50E-05	1.50E-05	8.15E-04	1.97E-02	1.97E-02	<b>0.02</b>
Manganese	7.70E-06	7.70E-06	7.70E-06	1.01E-02	1.01E-02	1.01E-02	<b>0.01</b>
Mercury	2.40E-07	2.60E-06	2.60E-06	3.15E-04	3.42E-03	3.42E-03	<b>3.42E-03</b>
Nickel	6.30E-05	6.30E-05	6.30E-05	0.08	0.08	0.08	<b>0.08</b>
Selenium	3.50E-07	3.50E-07	3.50E-07	4.60E-04	4.60E-04	4.60E-04	<b>4.60E-04</b>
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	0.05	0.05	0.05	<b>0.05</b>
Acetaldehyde			1.30E-03			1.71	<b>1.71</b>
Acrolein			2.60E-05			3.42E-02	<b>0.03</b>
Benzene	3.90E-04	3.90E-04	3.90E-04	0.51	0.51	0.51	<b>0.51</b>
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0.32	0.32	0.32	<b>0.32</b>
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	4.07	4.07	4.07	<b>4.07</b>
Hexane	9.20E-04	9.20E-04	9.20E-04	1.21	1.21	1.21	<b>1.21</b>
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0.06	0.06	0.06	<b>0.06</b>
MEK			2.00E-05			0.03	<b>0.03</b>
Propionaldehyde			1.30E-04			0.17	<b>0.17</b>
Quinone			1.60E-04			0.21	<b>0.21</b>
Toluene	1.50E-04	2.90E-03	2.90E-03	0.20	3.81	3.81	<b>3.81</b>
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0.25	1.16	1.16	<b>1.16</b>
Xylene	2.00E-04	2.00E-04	2.00E-04	0.26	0.26	0.26	<b>0.26</b>

**Total HAPs 14.01**

**Worst Single HAP 4.07 (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, 11.1-4, 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**

PM = Particulate Matter

SO2 = Sulfur Dioxide

CO = Carbon Monoxide

PAH = Polyaromatic Hydrocarbon

PM10 = Particulate Matter (<10 um)

NOx = Nitrous Oxides

HAP = Hazardous Air Pollutant

PM2.5 = Particulate Matter (< 2.5 um)

VOC - Volatile Organic Compounds

HCl = Hydrogen Chloride

**Appendix A.1: Unlimited Emissions Calculations  
Greenhouse Gas (CO<sub>2</sub>e) Emissions from the  
Drum-Mix Plant (Dryer/Mixer) Process Emissions**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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

Maximum Hourly Asphalt Production = 300 ton/hr  
 Maximum Annual Asphalt Production = 2,628,000 ton/yr

Criteria Pollutant	Emission Factor (lb/ton) Drum-Mix Plant (dryer/mixer)			Global Warming Potentials (GWP)	Unlimited/Uncontrolled Potential to Emit (tons/yr) Drum-Mix Plant (dryer/mixer)			CO <sub>2</sub> e for Worst Case Fuel (tons/yr)
	Natural Gas	No. 2 Fuel Oil	Waste Oil		Natural Gas	No. 2 Fuel Oil	Waste Oil	
CO <sub>2</sub>	33	33	33	1	43,362	43,362	43,362	<b>43,693.13</b>
CH <sub>4</sub>	0.0120	0.0120	0.0120	21	15.77	15.77	15.77	
N <sub>2</sub> O				310	0	0	0	
<b>Total</b>					<b>43,377.77</b>	<b>43,377.77</b>	<b>43,377.77</b>	
<b>CO<sub>2</sub>e Equivalent Emissions (tons/yr)</b>					<b>43,693.13</b>	<b>43,693.13</b>	<b>43,693.13</b>	

**Methodology**

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

There are no emission factors for N<sub>2</sub>O available in either the 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no N<sub>2</sub>O emission anticipated from this process.

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

Unlimited Potential to Emit CO<sub>2</sub>e (tons/yr) = Unlimited Potential to Emit CO<sub>2</sub> of "worst case" fuel (ton/yr) x CO<sub>2</sub> GWP (1) + Unlimited Potential to Emit CH<sub>4</sub> of "worst case" fuel (ton/yr) x CH<sub>4</sub> GWP (21) + Unlimited Potential to Emit N<sub>2</sub>O of "worst case" fuel (ton/yr) x N<sub>2</sub>O GWP (310).

**Abbreviations**

CO<sub>2</sub> = Carbon Dioxide

CH<sub>4</sub> = Methane

N<sub>2</sub>O = Nitrogen Dioxide

PTE = Potential to Emit

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

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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

Maximum Annual Blast Furnace Slag Usage =	0	ton/yr		0.00	% sulfur
Maximum Annual Steel Slag Usage =	1,103,760	ton/yr		0.66	% sulfur

Type of Slag	SO2 Emission Factor (lb/ton)	Unlimited Potential to Emit SO2 (tons/yr)
Blast Furnace Slag*	0.000	0
Steel Slag**	0.0014	0.77

**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:** Dave O'Mara Contractor, Inc.  
**Source Location:** New Point Stone at 992 South County Road 800 East,  
 Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

Maximum Hot Oil Heater Fuel Input Rate = 0.828 MMBtu/hr  
 Natural Gas Usage = 0 MMCF/yr  
 No. 2 Fuel Oil Usage = 51,809 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	0.052	0.05
PM10/PM2.5	7.6	3.3	0.000	0.085	0.09
SO2	0.6	71.0	0.000	1.839	1.84
NOx	100	20.0	0.000	0.518	0.52
VOC	5.5	0.20	0.000	0.005	0.01
CO	84	5.0	0.000	0.130	0.13
<b>Hazardous Air Pollutant</b>					
Arsenic	2.0E-04	5.6E-04	0.0E+00	1.45E-05	1.5E-05
Beryllium	1.2E-05	4.2E-04	0.0E+00	1.09E-05	1.1E-05
Cadmium	1.1E-03	4.2E-04	0.0E+00	1.09E-05	1.1E-05
Chromium	1.4E-03	4.2E-04	0.0E+00	1.09E-05	1.1E-05
Cobalt	8.4E-05		0.0E+00		0.0E+00
Lead	5.0E-04	1.3E-03	0.0E+00	3.26E-05	3.3E-05
Manganese	3.8E-04	8.4E-04	0.0E+00	2.18E-05	2.2E-05
Mercury	2.6E-04	4.2E-04	0.0E+00	1.09E-05	1.1E-05
Nickel	2.1E-03	4.2E-04	0.0E+00	1.09E-05	1.1E-05
Selenium	2.4E-05	2.1E-03	0.0E+00	5.44E-05	5.4E-05
Benzene	2.1E-03		0.0E+00		0.0E+00
Dichlorobenzene	1.2E-03		0.0E+00		0.0E+00
Ethylbenzene					0.0E+00
Formaldehyde	7.5E-02	6.10E-02	0.0E+00	1.58E-03	1.6E-03
Hexane	1.8E+00		0.0E+00		0.0E+00
Phenol					0.0E+00
Toluene	3.4E-03		0.0E+00		0.0E+00
Total PAH Haps	negl		negl		0.0E+00
Polycyclic Organic Matter		3.30E-03		8.55E-05	8.5E-05
<b>Total HAPs =</b>			<b>0.0E+00</b>	<b>1.8E-03</b>	<b>0.002</b>
<b>Worst Single HAP =</b>			<b>0.0E+00</b>	<b>1.6E-03</b>	<b>1.6E-03</b>
			<b>(Hexane)</b>	<b>(Formaldehyde)</b>	<b>(Hexane)</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)

PM2.5 = Particulate Matter (<2.5 um)

SO2 = Sulfur Dioxide

NOx = Nitrous Oxides

CO = Carbon Monoxide

HAP = Hazardous Air Pollutant

HCl = Hydrogen Chloride

PAH = Polyaromatic Hydrocarbon

VOC - Volatile Organic Compounds

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

**Greenhouse Gas (CO<sub>2</sub>e) Emissions from  
Hot Oil Heater Fuel Combustion with Maximum Capacity < 100 MMBtu/hr**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

Maximum Hot Oil Heater Fuel Input Rate = 0.828 MMBtu/hr  
 Natural Gas Usage = 0 MMCF/yr  
 No. 2 Fuel Oil Usage = 51,809 gal/yr, 0.50 % sulfur

**Unlimited/Uncontrolled Emissions**

Criteria Pollutant	Emission Factor (units)		Global Warming Potentials (GWP)	Unlimited/Uncontrolled Potential to Emit (tons/yr)	
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)		Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)
CO <sub>2</sub>	120,161.84	22,501.41	1	0.00	582.89
CH <sub>4</sub>	2.49	0.91	21	0.00	0.02
N <sub>2</sub> O	2.2	0.26	310	0.00	0.01
				0.00	582.92

<b>Worse Case CO<sub>2</sub>e Emissions (tons/yr)</b>
<b>585.47</b>

<b>CO<sub>2</sub>e Equivalent Emissions (tons/yr)</b>	0.00	585.47
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**Methodology**

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

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]

Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)

Natural Gas: Emission Factors for CO<sub>2</sub> and CH<sub>4</sub> from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N<sub>2</sub>O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2

No. 2 Fuel Oil: Emission Factors for CO<sub>2</sub> and CH<sub>4</sub> from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N<sub>2</sub>O from AP-42 Chapter 1.3 (dated 5/10), Table 1.3-8

**Emission Factor (EF) Conversions**

Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) \* Conversion Factor (2.20462 lbs/kg) \* Heating Value of Natural Gas (MMBtu/scf) \* Conversion Factor (1,000,000 scf/MMCF)]

Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) \* Conversion Factor (2.20462 lbs/kg) \* Heating Value of the Fuel Oil (MMBtu/gal) \* Conversion Factor (1000 gal/kgal)]

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]

Unlimited Potential to Emit CO<sub>2</sub>e (tons/yr) = Unlimited Potential to Emit CO<sub>2</sub> of "worst case" fuel (ton/yr) x CO<sub>2</sub> GWP (1) + Unlimited Potential to Emit CH<sub>4</sub> of "worst case" fuel (ton/yr) x CH<sub>4</sub> GWP (21) + Unlimited Potential to Emit N<sub>2</sub>O of "worst case" fuel (ton/yr) x N<sub>2</sub>O GWP (310).

**Abbreviations**

CO<sub>2</sub> = Carbon Dioxide  
 CH<sub>4</sub> = Methane

N<sub>2</sub>O = Nitrogen Dioxide  
 PTE = Potential to Emit

**Appendix A.1: Unlimited Emissions Calculations  
Hot Oil Heating System - Process Emissions**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East,  
 Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

The following calculations determine the unlimited/uncontrolled emissions from the combustion of natural gas and No. 2 fuel oil in the hot oil heating system, which is used to heat a specially designed transfer oil. The hot transfer oil is then pumped through a piping system that passes through the asphalt cement storage tanks, in order to keep the asphalt cement at the correct temperature.

Maximum Fuel Input Rate To Hot Oil Heater = 0.828 MMBtu/hr  
 Natural Gas Usage = 0 MMCF/yr, and  
 No. 2 Fuel Oil Usage = 51,809 gal/yr

Criteria Pollutant	Emission Factors		Unlimited/Uncontrolled Potential to Emit (tons/yr)		Worse Case PTE
	Natural Gas (lb/ft3)	No. 2 Fuel Oil (lb/gal)	Natural Gas	No. 2 Fuel Oil	
VOC	2.60E-08	2.65E-05	0.00E+00	0.001	<b>0.001</b>
CO	8.90E-06	0.0012	0.000	0.031	<b>0.031</b>
Greenhouse Gas as CO2e*					
CO2	0.20	28.00	0.00	725.33	<b>725.33</b>
Hazardous Air Pollutant					
Formaldehyde	2.60E-08	3.50E-06	0.00E+00	9.07E-05	<b>9.07E-05</b>
Acenaphthene		5.30E-07		1.37E-05	<b>1.37E-05</b>
Acenaphthylene		2.00E-07		5.18E-06	<b>5.18E-06</b>
Anthracene		1.80E-07		4.66E-06	<b>4.66E-06</b>
Benzo(b)fluoranthene		1.00E-07		2.59E-06	<b>2.59E-06</b>
Fluoranthene		4.40E-08		1.14E-06	<b>1.14E-06</b>
Fluorene		3.20E-08		8.29E-07	<b>8.29E-07</b>
Naphthalene		1.70E-05		4.40E-04	<b>4.40E-04</b>
Phenanthrene		4.90E-06		1.27E-04	<b>1.27E-04</b>
Pyrene		3.20E-08		8.29E-07	<b>8.29E-07</b>

**Total HAPs** 6.87E-04  
**Worst Single HAP** 4.40E-04 (Naphthalene)

**Methodology**

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

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

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

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

Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 (ton/yr) x CO2 GWP (1)

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

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

\*Note: There are no emission factors for CH4 and N2O available in either 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no CH4 and N2O emission anticipated from this process.

**Abbreviations**

CO = Carbon Monoxide

VOC = Volatile Organic Compound

CO2 = Carbon Dioxide

**Appendix A.1: Unlimited Emissions Calculations**  
**Reciprocating Internal Combustion Engines - Diesel Fuel**  
**Output Rating (<=600 HP)**  
**RAP Crusher**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

Output Horsepower Rating (hp)	0.0
Maximum Hours Operated per Year	8760
Potential Throughput (hp-hr/yr)	0
Maximum Diesel Fuel Usage (gal/yr)	0

Note: The diesel fuel-fired RAP Crusher has been determined a nonroad vehicle under 40 CFR 60, and 40 CFR 63, therefore, the fuel combustion emissions are not counted toward PSD and TV applicability.

	Pollutant						
	PM <sup>2</sup>	PM10 <sup>2</sup>	direct PM2.5 <sup>2</sup>	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Emission Factor in lb/kgal <sup>1</sup>	43.07	43.07	43.07	40.13	606.85	49.22	130.77
Potential Emission in tons/yr	0.00	0.00	0.00	0.00	0.00	0.00	0.00

<sup>1</sup> The AP-42 Chapter 3.3-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<sup>1</sup>Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) \* 1/7,000 (hp-hr/Btu) \* 19,300 (Btu/lb) \* 7.1 (lb/gal) \* 1,000 (gal/kgal)

<sup>2</sup>PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

**Hazardous Air Pollutants (HAPs)**

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs <sup>3</sup>
Emission Factor in lb/MMBtu	9.33E-04	4.09E-04	2.85E-04	3.91E-05	1.18E-03	7.67E-04	9.25E-05	1.68E-04
Emission Factor in lb/kgal <sup>4</sup>	1.28E-01	5.60E-02	3.91E-02	5.36E-03	1.62E-01	1.05E-01	1.27E-02	2.30E-02
Potential Emission in tons/yr	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

<sup>3</sup>PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

<sup>4</sup>The AP-42 Chapter 3.3-1 emission factors in lb/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<sup>4</sup>Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) \* 1/10<sup>6</sup> (MMBtu/Btu) \* 19,300 (Btu/lb) \* 7.1 (lb/gal) \* 1,000 (gal/kgal)

<b>Potential Emission of Total HAPs (tons/yr)</b>	<b>0.00E+00</b>
<b>Potential Emission of Worst Case HAPs (tons/yr)</b>	<b>0.00E+00</b>

**Green House Gas Emissions (GHG)**

	Pollutant		
	CO <sub>2</sub> <sup>5</sup>	CH <sub>4</sub> <sup>6</sup>	N <sub>2</sub> O <sup>6</sup>
Emission Factor in lb/hp-hr	1.15	NA	NA
Emission Factor in kg/MMBtu	NA	0.003	0.0006
Emission Factor in lb/kgal	22,512.07	0.91	0.18
Potential Emission in tons/yr	0.00	0.000	0.000

<sup>5</sup>The AP-42 Chapter 3.3-1 emission factor in lb/hp-hr was converted to lb/kgal emission factor using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<sup>5</sup>Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) \* 1/7,000 (hp-hr/Btu) \* 19,300 (Btu/lb) \* 7.1 (lb/gal) \* 1,000 (gal/kgal)

<sup>6</sup>The 40 CFR 98 Subpart C emission factors in kg/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<sup>6</sup>Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) \* 2.20462 (lb/kg) \* 1/10<sup>6</sup> (MMBtu/Btu) \* 19,300 (Btu/lb) \* 7.1 (lb/gal) \* 1,000 (gal/kgal)

<b>Summed Potential Emissions in tons/yr</b>	<b>0.00</b>
<b>CO<sub>2</sub>e Total in tons/yr</b>	<b>0.00</b>

**Methodology**

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] \* [Maximum Hours Operated per Year]

Maximum Diesel Fuel Usage (gal/yr) = Potential Throughput (hp-hr/yr) \* 7000 (Btu/hp-hr) \* 1/19300 (lb/Btu) \* 1/7.1 (gal/lb)

Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2 and have been converted to lb/kgal

CH<sub>4</sub> and N<sub>2</sub>O Emission Factor from 40 CFR 98 Subpart C Table C-2 and have been converted to lb/kgal

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Potential Emissions (tons/yr) = [Maximum Diesel Fuel Usage (gal/yr) x Emission Factor (lb/kgal)] / (1,000 ga/kgal) / (2,000 lb/ton)

CO<sub>2</sub>e (tons/yr) = CO<sub>2</sub> Potential Emission ton/yr x CO<sub>2</sub> GWP (1) + CH<sub>4</sub> Potential Emission ton/yr x CH<sub>4</sub> GWP (21) + N<sub>2</sub>O Potential Emission ton/yr x N<sub>2</sub>O GWP (310).

**Appendix A.1: Unlimited Emissions Calculations**  
**Large Reciprocating Internal Combustion Engines - Diesel Fuel**  
**Output Rating (>600 HP)**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

Output Horsepower Rating (hp)	0.0
Maximum Hours Operated per Year	8760
Potential Throughput (hp-hr/yr)	0
Maximum Diesel Fuel Usage (gal/yr)	0

Sulfur Content (S) of Fuel (% by weight) 0.00

	Pollutant						
	PM	PM10 <sup>2</sup>	direct PM2.5 <sup>2</sup>	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	7.00E-04			0.00E+00 (.00809S)	2.40E-02	7.05E-04	5.50E-03
Emission Factor in lb/MMBtu		0.0573	0.0573				
Emission Factor in lb/kgal <sup>1</sup>	13.70	7.85	7.85	0.00	469.82	13.80	107.67
Potential Emission in tons/yr	0.00	0.00	0.00	0.00	0.00	0.00	0.00

<sup>1</sup>The AP-42 Chapter 3.4-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<sup>1</sup>Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) \* 1/7,000 (hp-hr/Btu) \* 19,300 (Btu/lb) \* 7.1 (lb/gal) \* 1,000 (gal/kgal)

<sup>2</sup>Emission factors in lb/kgal were converted from the AP-42 Chapter 3.4-1 emission factors in lb/MMBtu using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<sup>2</sup>Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) \* 1/10<sup>6</sup> (MMBtu/Btu) \* 19,300 (Btu/lb) \* 7.1 (lb/gal) \* 1,000 (gal/kgal)

**Hazardous Air Pollutants (HAPs)**

	Pollutant						Total PAH HAPs <sup>3</sup>
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	
Emission Factor in lb/MMBtu	7.76E-04	2.81E-04	1.93E-04	7.89E-05	2.52E-05	7.88E-06	2.12E-04
Emission Factor in lb/kgal <sup>4</sup>	1.06E-01	3.85E-02	2.64E-02	1.08E-02	3.45E-03	1.08E-03	2.91E-02
Potential Emission in tons/yr	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

<sup>3</sup>PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

<sup>4</sup>Emission factors in lb/kgal were converted from the AP-42 Chapter 3.4-1 emission factors in lb/MMBtu using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<sup>4</sup>Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) \* 1/10<sup>6</sup> (MMBtu/Btu) \* 19,300 (Btu/lb) \* 7.1 (lb/gal) \* 1,000 (gal/kgal)

<b>Potential Emission of Total HAPs (tons/yr)</b>	<b>0.00E+00</b>
<b>Potential Emission of Worst Case HAPs (tons/yr)</b>	<b>0.00E+00</b>

**Green House Gas Emissions (GHG)**

	Pollutant		
	CO2 <sup>5</sup>	CH4 <sup>5,6</sup>	N2O <sup>7</sup>
Emission Factor in lb/hp-hr	1.16	6.35E-05	NA
Emission Factor in kg/MMBtu	NA	NA	0.0006
Emission Factor in lb/kgal	22,707.83	1.24	0.18
Potential Emission in tons/yr	0.00	0.00	0.00

<sup>5</sup>The AP-42 Chapter 3.4-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<sup>5</sup>Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) \* 1/7,000 (hp-hr/Btu) \* 19,300 (Btu/lb) \* 7.1 (lb/gal) \* 1,000 (gal/kgal)

<sup>6</sup>According to AP-42, Table 3.4-1, TOC (as CH4) is 9% methane by weight. As a result, the lb/hp-hr emission factor for TOC (as CH4) in AP-42 has been multiplied by 9% to determine the portion that is emitted as methane.

<sup>7</sup>The 40 CFR 98 Subpart C emission factors in kg/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<sup>7</sup>Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) \* 2.20462 (lb/kg) \* 1/10<sup>6</sup> (MMBtu/Btu) \* 19,300 (Btu/lb) \* 7.1 (lb/gal) \* 1,000 (gal/kgal)

<b>Summed Potential Emissions in tons/yr</b>	<b>0.00</b>
<b>CO2e Total in tons/yr</b>	<b>0.00</b>

**Methodology**

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] \* [Maximum Hours Operated per Year]

Maximum Diesel Fuel Usage (gal/yr) = Potential Throughput (hp-hr/yr) \* 7000 (Btu/hp-hr) \* 1/19300 (lb/Btu) \* 1/7.1 (gal/lb)

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1, 3.4-2, 3.4-3, and 3.4-4 and have been converted to lb/kgal.

N2O Emission Factor from 40 CFR 98 Subpart C Table C-2 and have been converted to lb/kgal.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Potential Emissions (tons/yr) = [Maximum Diesel Fuel Usage (gal/yr) x Emission Factor (lb/kgal)] / (1,000 gal/kgal) / (2,000 lb/ton)

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) +

N2O Potential Emission ton/yr x N2O GWP (310).

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

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East,  
Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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 =	2,628,000	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	0.69	0.77	NA	1.46
Organic PM	3.4E-04	2.5E-04	NA	0.45	0.334	NA	0.78
TOC	0.004	0.012	0.001	5.46	16.01	1.445	22.9
CO	0.001	0.001	3.5E-04	1.77	1.550	0.463	3.79

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

<b>PM/HAPs</b>	<b>0.032</b>	<b>0.038</b>	<b>0</b>	<b>0.069</b>
<b>VOC/HAPs</b>	<b>0.081</b>	<b>0.204</b>	<b>0.021</b>	<b>0.306</b>
<b>non-VOC/HAPs</b>	<b>4.2E-04</b>	<b>4.3E-05</b>	<b>1.1E-04</b>	<b>5.8E-04</b>
<b>non-VOC/non-HAPs</b>	<b>0.40</b>	<b>0.23</b>	<b>0.10</b>	<b>0.73</b>

<b>Total VOCs</b>	<b>5.14</b>	<b>16.01</b>	<b>1.4</b>	<b>22.5</b>
<b>Total HAPs</b>	<b>0.11</b>	<b>0.24</b>	<b>0.021</b>	<b>0.38</b>
<b>Worst Single HAP</b>				<b>0.117</b> (formaldehyde)

**Methodology**

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

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

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

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

Total PM/PM10/PM2.5 Ef =  $0.000181 + 0.00141(-V)e^{((0.0251)(T+460)-20.43)}$   
Organic PM Ef =  $0.00141(-V)e^{((0.0251)(T+460)-20.43)}$   
TOC Ef =  $0.0172(-V)e^{((0.0251)(T+460)-20.43)}$   
CO Ef =  $0.00558(-V)e^{((0.0251)(T+460)-20.43)}$

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

PM/PM10 Ef =  $0.000332 + 0.00105(-V)e^{((0.0251)(T+460)-20.43)}$   
Organic PM Ef =  $0.00105(-V)e^{((0.0251)(T+460)-20.43)}$   
TOC Ef =  $0.0504(-V)e^{((0.0251)(T+460)-20.43)}$   
CO Ef =  $0.00488(-V)e^{((0.0251)(T+460)-20.43)}$

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

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

**Abbreviations**

TOC = Total Organic Compounds  
CO = Carbon Monoxide  
PM = Particulate Matter

PM10 = Particulate Matter (<10 um)  
PM2.5 = Particulate Matter (<2.5 um)

HAP = Hazardous Air Pollutant  
VOC = Volatile Organic Compound

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

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

**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
<b>PAH HAPs</b>										
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	0.47%	1.2E-03	1.6E-03	NA	2.7E-03
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	1.3E-04	4.7E-05	NA	1.7E-04
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	3.1E-04	4.3E-04	NA	7.5E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	8.5E-05	1.9E-04	NA	2.7E-04
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	3.4E-05	0	NA	3.4E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	9.9E-06	0	NA	9.9E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	8.5E-06	0	NA	8.5E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	1.0E-05	0	NA	1.0E-05
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	3.5E-05	3.2E-05	NA	6.7E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	4.6E-04	7.0E-04	NA	1.2E-03
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	1.7E-06	0	NA	1.7E-06
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	2.2E-04		NA	2.2E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	3.4E-03	3.4E-03	NA	6.8E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	2.1E-06	0	NA	2.1E-06
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	1.1E-02	1.8E-02	NA	0.028
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	5.6E-03	6.1E-03	NA	1.2E-02
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	9.9E-05	1.0E-04	NA	2.0E-04
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	3.6E-03	6.0E-03	NA	9.6E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	6.7E-04	1.5E-03	NA	2.1E-03
<b>Total PAH HAPs</b>							<b>0.027</b>	<b>0.038</b>	<b>NA</b>	<b>0.064</b>
<b>Other semi-volatile HAPs</b>										
Phenol		PM/HAP	---	Organic PM	1.18%	0	5.3E-03	0	0	5.3E-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>5.14</b>	<b>16.01</b>	<b>1.36</b>	<b>22.51</b>
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	3.6E-01	4.2E-02	9.4E-02	0.491
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	2.5E-03	8.8E-03	6.6E-04	0.012
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	3.9E-02	1.8E-01	1.0E-02	0.225
<b>Total non-VOC/non-HAPS</b>					<b>7.30%</b>	<b>1.40%</b>	<b>0.399</b>	<b>0.224</b>	<b>0.106</b>	<b>0.73</b>
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	2.8E-03	5.1E-03	7.5E-04	8.7E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	5.2E-04	7.8E-04	1.4E-04	1.4E-03
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	2.7E-03	6.2E-03	7.1E-04	9.6E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	7.1E-04	2.6E-03	1.9E-04	3.5E-03
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	1.1E-05	6.4E-04	3.0E-06	6.6E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	8.2E-04	3.7E-03	2.2E-04	4.7E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	6.0E-03	0	1.6E-03	7.6E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	1.5E-02	6.1E-03	4.0E-03	0.025
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	4.8E-03	1.1E-01	1.3E-03	0.117
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	8.2E-03	1.6E-02	2.2E-03	0.026
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	9.8E-05	5.0E-05	2.6E-05	1.7E-04
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	4.3E-05	0	4.3E-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%	4.0E-04	8.6E-04	1.1E-04	1.4E-03
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	4.2E-04	0	1.1E-04	5.3E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	1.1E-02	9.9E-03	3.0E-03	0.024
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	7.1E-05	0	1.9E-05	9.0E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	2.2E-02	3.2E-02	5.9E-03	0.060
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	4.4E-03	9.1E-03	1.2E-03	1.5E-02
<b>Total volatile organic HAPs</b>					<b>1.50%</b>	<b>1.30%</b>	<b>0.082</b>	<b>0.208</b>	<b>0.022</b>	<b>0.312</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:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East,  
 Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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 %)  
 $p$  =  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	0.75	0.412	0.144
Limestone	1.6	1.85	0.75	0.253	0.089
RAP	0.5	0.58	0.75	0.079	0.028
Gravel	1.6	1.85	0.75	0.253	0.089
Shingles	0.5	0.58	0.50	0.053	0.018
Slag	3.8	4.40	1.00	0.803	0.281
<b>Totals</b>				<b>1.85</b>	<b>0.65</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

RAP - recycled asphalt pavement

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**  
**Material Processing, Handling, Crushing, Screening, and Conveying**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

**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.

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

where:  $E_f$  = Emission factor (lb/ton)

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

Maximum Annual Asphalt Production =	2,628,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	2,496,600	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	2.83	1.34	0.20
Front-end loader dumping of materials into feeder bins	2.83	1.34	0.20
Conveyor dropping material into dryer/mixer or batch tower	2.83	1.34	0.20
<b>Total (tons/yr)</b>	<b>8.49</b>	<b>4.02</b>	<b>0.61</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	6.74	3.00
Screening	0.025	0.0087	31.21	10.86
Conveying	0.003	0.0011	3.74	1.37
<b>Unlimited Potential to Emit (tons/yr) =</b>			<b>41.69</b>	<b>15.23</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:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

**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	= 2,628,000	tons/yr
Percent Asphalt Cement/Binder (weight %)	= 5.0%	
Maximum Material Handling Throughput	= 2,496,600	tons/yr
Maximum Asphalt Cement/Binder Throughput	= 131,400	tons/yr
Maximum No. 2 Fuel Oil Usage	= 6,056,914	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	1.1E+05	4.4E+06	300	0.057	6332.7
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	1.1E+05	1.9E+06	300	0.057	6332.7
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	3.7E+03	1.8E+05	300	0.057	207.4
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	3.7E+03	4.4E+04	300	0.057	207.4
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	6.4E+02	2.8E+04	300	0.057	36.4
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	6.4E+02	7.7E+03	300	0.057	36.4
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	5.9E+05	1.1E+07	300	0.057	33774.4
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	5.9E+05	8.9E+06	300	0.057	33774.4
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.0	1.1E+05	4.6E+06	300	0.057	6221.6
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.0	1.1E+05	1.9E+06	300	0.057	6221.6
<b>Total</b>					<b>1.6E+06</b>	<b>3.3E+07</b>			<b>9.3E+04</b>

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

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

	PM	PM10	PM2.5
where k =	4.9	1.5	0.15
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
Unmitigated Emission Factor, $E_f$	6.09	1.55	0.16
Mitigated Emission Factor, $E_{ext}$	4.01	1.02	0.10
Dust Control Efficiency	50%	50%	50%

lb/mile  
 lb/mile  
 (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)	19.30	4.92	0.49	12.69	3.23	0.32	6.34	1.62	0.16
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	19.30	4.92	0.49	12.69	3.23	0.32	6.34	1.62	0.16
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.632	0.161	0.02	0.416	0.106	0.01	0.208	0.053	0.01
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.632	0.161	0.02	0.416	0.106	0.01	0.208	0.053	0.01
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.111	0.028	0.00	0.073	0.019	0.00	0.036	0.009	0.00
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.111	0.028	0.00	0.073	0.019	0.00	0.036	0.009	0.00
Aggregate/RAP Loader Full	Front-end loader (3 CY)	102.93	26.23	2.62	67.68	17.25	1.72	33.84	8.62	0.86
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	102.93	26.23	2.62	67.68	17.25	1.72	33.84	8.62	0.86
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	18.96	4.83	0.48	12.47	3.18	0.32	6.23	1.59	0.16
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	18.96	4.83	0.48	12.47	3.18	0.32	6.23	1.59	0.16
<b>Totals</b>		<b>283.86</b>	<b>72.34</b>	<b>7.23</b>	<b>186.64</b>	<b>47.57</b>	<b>4.76</b>	<b>93.32</b>	<b>23.78</b>	<b>2.38</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)      PTE = Potential to Emit

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

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

**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	= 2,628,000	tons/yr
Percent Asphalt Cement/Binder (weight %)	= 5.0%	
Maximum Material Handling Throughput	= 2,496,600	tons/yr
Maximum Asphalt Cement/Binder Throughput	= 131,400	tons/yr
Maximum No. 2 Fuel Oil Usage	= 6,056,914	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	1.1E+05	4.4E+06	300	0.057	6332.7
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.00	1.1E+05	1.9E+06	300	0.057	6332.7
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.00	3.7E+03	1.8E+05	300	0.057	207.4
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	3.7E+03	4.4E+04	300	0.057	207.4
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.00	6.4E+02	2.8E+04	300	0.057	36.4
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	6.4E+02	7.7E+03	300	0.057	36.4
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.20	5.9E+05	1.1E+07	300	0.057	33774.4
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	5.9E+05	8.9E+06	300	0.057	33774.4
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.00	1.1E+05	4.5E+06	300	0.057	6221.6
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.00	1.1E+05	1.9E+06	300	0.057	6221.6
<b>Total</b>					<b>1.6E+06</b>	<b>3.3E+07</b>			<b>9.3E+04</b>

Average Vehicle Weight Per Trip	= 20.3	tons/trip
Average Miles Per Trip	= 0.057	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	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	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	= E * [1 - (p/4N)]	
where p =	125	days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N =	365	days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, 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)	0.47	0.09	0.02	0.43	0.09	0.02	0.22	0.04	0.01
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.47	0.09	0.02	0.43	0.09	0.02	0.22	0.04	0.01
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.015	0.003	7.6E-04	0.014	0.003	6.9E-04	0.007	1.4E-03	3.5E-04
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.015	0.003	7.6E-04	0.014	0.003	6.9E-04	0.007	1.4E-03	3.5E-04
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	2.7E-03	5.4E-04	1.3E-04	2.5E-03	4.9E-04	1.2E-04	1.2E-03	2.5E-04	6.1E-05
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	2.7E-03	5.4E-04	1.3E-04	2.5E-03	4.9E-04	1.2E-04	1.2E-03	2.5E-04	6.1E-05
Aggregate/RAP Loader Full	Front-end loader (3 CY)	2.51	0.50	0.12	2.30	0.46	0.11	1.15	0.23	0.06
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	2.51	0.50	0.12	2.30	0.46	0.11	1.15	0.23	0.06
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.46	0.09	0.02	0.42	0.08	0.02	0.21	0.04	0.01
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.46	0.09	0.02	0.42	0.08	0.02	0.21	0.04	0.01
<b>Totals</b>		<b>6.93</b>	<b>1.39</b>	<b>0.34</b>	<b>6.33</b>	<b>1.27</b>	<b>0.31</b>	<b>3.17</b>	<b>0.63</b>	<b>0.16</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)      PTE = Potential to Emit

**Appendix A.1: Unlimited Emissions Calculations  
Cold Mix Asphalt Production and Stockpiles**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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 =	2,628,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Asphalt Cement/Binder Throughput =	131,400	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%	33,244.2	31,582.0
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	37,580.4	26,306.3
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	26,280.0	6,570.0
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	19,710.0	9,145.4
Other asphalt with solvent binder	25.9%	2.5%	34,032.6	850.8
<b>Worst Case PTE of VOC =</b>				<b>31,582.0</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>PTE of Total HAPs (tons/yr) =</b>	<b>8,237.75</b>
<b>PTE of Single HAP (tons/yr) =</b>	<b>2,842.38 Xylenes</b>

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

Volatile Organic HAP	CAS#	Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents				
		Gasoline	Kerosene	Diesel (#2) Fuel Oil	No. 2 Fuel Oil	No. 6 Fuel Oil
1,3-Butadiene	106-99-0	3.70E-5%				
2,2,4-Trimethylpentane	540-84-1	2.40%				
Acenaphthene	83-32-9		4.70E-5%		1.80E-4%	
Acenaphthylene	208-96-8		4.50E-5%		6.00E-5%	
Anthracene	120-12-7		1.20E-6%	5.80E-5%	2.80E-5%	5.00E-5%
Benzene	71-43-2	1.90%		2.90E-4%		
Benzo(a)anthracene	56-55-3			9.60E-7%	4.50E-7%	5.50E-4%
Benzo(a)pyrene	50-32-8			2.20E-6%	2.10E-7%	4.40E-5%
Benzo(g,h,i)perylene	191-24-2			1.20E-7%	5.70E-8%	
Biphenyl	92-52-4			6.30E-4%	7.20E-5%	
Chrysene	218-01-9			4.50E-7%	1.40E-6%	6.90E-4%
Ethylbenzene	100-41-4	1.70%		0.07%	3.40E-4%	
Fluoranthene	206-44-0		7.10E-6%	5.90E-5%	1.40E-5%	2.40E-4%
Fluorene	86-73-7		4.20E-5%	8.60E-4%	1.90E-4%	
Indeno(1,2,3-cd)pyrene	193-39-5			1.60E-7%		1.00E-4%
Methyl-tert-butylether	1634-04-4	0.33%				
Naphthalene	91-20-3	0.25%	0.31%	0.26%	0.22%	4.20E-5%
n-Hexane	110-54-3	2.40%				
Phenanthrene	85-01-8		8.60E-6%	8.80E-4%	7.90E-4%	2.10E-4%
Pyrene	129-00-0		2.40E-6%	4.60E-5%	2.90E-5%	2.30E-5%
Toluene	108-88-3	8.10%		0.18%	6.20E-4%	
Total Xylenes	1330-20-7	9.00%		0.50%	0.23%	
<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:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East,  
 Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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:

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

**Volatile Organic Compounds**

Emission Source	Emission Factor (lb/kgal of throughput)	PTE of VOC (tons/yr)*
Filling storage tank (balanced submerged filling)	0.3	0.00
Tank breathing and emptying	1.0	0.00
Vehicle refueling (displaced losses - controlled)	1.1	0.00
Spillage	0.7	0.00
<b>Total</b>		<b>0.00</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>0.00</b>
<b>Limited PTE of Single HAP (tons/yr) =</b>	<b>0.00 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.2: Limited Emissions Summary**  
**Entire Source - Drum Mix**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana  
**Permit Number:** 031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

**Asphalt Plant Limitations - Drum Mix**

Maximum Hourly Asphalt Production =	300	ton/hr											
Annual Asphalt Production Limitation =	750,000	ton/yr											
Blast Furnace Slag Usage Limitation =	0	ton/yr				0	% sulfur						
Steel Slag Usage Limitation =	75,000					0.66	% sulfur						
Maximum Dryer Fuel Input Rate =	96.8	MMBtu/hr											
Natural Gas Limitation =	631	MMCF/yr											
No. 2 Fuel Oil Limitation =	2,626,479	gal/yr, and				0.50	% sulfur						
No. 4 Fuel Oil Limitation =	777,000	gal/yr, and				1.60	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and				0.00	% sulfur						
Propane Limitation =	9,369,812	gal/yr, and				0.20	gr/100 ft3 sulfur						
Butane Limitation =	0	gal/yr, and				0.00	gr/100 ft3 sulfur						
Used/Waste Oil Limitation =	0	gal/yr, and				0.00	% sulfur	0.00	% ash	0.000	% chlorine,	0.000	% lead
Diesel Fuel Limitation - Generator < 600 HP =	0	gal/yr, and											
Diesel Fuel Limitation - Generator > 600 HP =	0	gal/yr				0.00	% sulfur						
PM Dryer/Mixer Limitation =	0.538	lb/ton of asphalt production											
PM10 Dryer/Mixer Limitation =	0.218	lb/ton of asphalt production											
PM2.5 Dryer/Mixer Limitation =	0.237	lb/ton of asphalt production											
CO Dryer/Mixer Limitation =	0.190	lb/ton of asphalt production											
VOC Dryer/Mixer Limitation =	0.049	lb/ton of asphalt production											
Blast Furnace Slag SO2 Dryer/Mixer Limitation =	0.000	lb/ton of slag processed											
Steel Slag SO2 Dryer/Mixer Limitation =	0.0014	lb/ton of slag processed											
Cold Mix Asphalt VOC Limitation =	66.82	tons/yr											
HCl Limitation =	0.0	lb/kgal											

**Limited/Controlled Emissions**

Process Description	Limited/Controlled Potential Emissions (tons/year)									
	Criteria Pollutants							Greenhouse Gas Pollutants	Hazardous Air Pollutants	
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	CO <sub>2</sub> e	Total HAPs	Worst Case HAP
<b>Ducted Emissions</b>										
Dryer Fuel Combustion (worst case)	2.72	4.33	4.33	93.24	60.90	4.68	35.14	59,927.63	0.70	0.57 (hexane)
Dryer/Mixer (Process)	201.75	81.75	88.88	21.75	20.63	18.38	71.25	12,469.50	4.00	1.16 (formaldehyde)
Dryer/Mixer Slag Processing	0	0	0	0.05	0	0	0	0	0	0
Hot Oil Heater Fuel Combustion/Process (worst case)	0.05	0.09	0.09	1.84	0.52	0.01	0.13	725.33	1.84E-03	1.58E-03 (formaldehyde)
Diesel-Fired Generator < 600 HP * (crusher)	0	0	0	0	0	0	0	0	0	0
Diesel-Fired Generator > 600 HP	0	0	0	0	0	0	0	0	0	0
<b>Worst Case Emissions**</b>	<b>201.80</b>	<b>81.84</b>	<b>88.96</b>	<b>95.13</b>	<b>61.42</b>	<b>18.38</b>	<b>71.38</b>	<b>60,652.96</b>	<b>4.00</b>	<b>1.16</b> (hydrogen chloride)
<b>Fugitive Emissions</b>										
Asphalt Load-Out, Silo Filling, On-Site Yard	0.42	0.42	0.42	0	0	6.42	1.08	0	0.11	0.03 (formaldehyde)
Material Storage Piles	1.85	0.65	0.65	0	0	0	0	0	0	0
Material Processing and Handling	2.42	1.15	0.17	0	0	0	0	0	0	0
Material Crushing, Screening, and Conveying	11.90	4.35	4.35	0	0	0	0	0	0	0
Unpaved and Paved Roads (worst case)	28.65	6.79	0.68	0	0	0	0	0	0	0
Cold Mix Asphalt Production	0	0	0	0	0	66.82	0	0	17.43	6.01 (xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0	0	0	0	0 (xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	0	negl	negl
<b>Total Fugitive Emissions</b>	<b>43.24</b>	<b>13.35</b>	<b>6.26</b>	<b>0</b>	<b>0</b>	<b>73.24</b>	<b>1.08</b>	<b>0.00</b>	<b>17.54</b>	<b>6.01</b> (xylenes)
<b>Totals Limited/Controlled Emissions</b>	<b>245.04</b>	<b>95.18</b>	<b>95.22</b>	<b>95.13</b>	<b>61.42</b>	<b>91.62</b>	<b>72.46</b>	<b>60,652.96</b>	<b>21.54</b>	<b>6.01</b> (xylenes)

negl = negligible

Fuel component percentages provided by the source.

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

\* The diesel fuel-fired RAP Crusher has been determined a nonroad vehicle under 40 CFR 60, and 40 CFR 63, therefore, the fuel combustion emissions are not counted toward PSD and TV applicability.

\*\* 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 and Hot Oil Heating System + Diesel-Fired Generator < 600 HP + Diesel-Fired Generator > 600 HP

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

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana  
**Permit Number:** 031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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.

**Fuel Limitations**

Maximum Fuel Input Rate =	97	MMBtu/hr
Natural Gas Limitation =	631	MMCF/yr
No. 2 Fuel Oil Limitation =	2,626,479	gal/yr, and
No. 4 Fuel Oil Limitation =	777,000	gal/yr, and
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and
Propane Limitation =	9,369,812	gal/yr, and
Butane Limitation =	0	gal/yr, and
Used/Waste Oil Limitation =	0	gal/yr, and
	0.50	% sulfur
	1.60	% sulfur
	0.00	% sulfur
	0.20	gr/100 ft3 sulfur
	0.00	gr/100 ft3 sulfur
	0.00	% sulfur
	0.00	% ash
	0.000	% chlorine
	0.000	% lead

**Limited Emissions**

Criteria Pollutant	Emission Factor (units)							Limited Potential to Emit (tons/yr)							Worse Case Fuel (tons/yr)
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/Waste Oil (lb/kgal)	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)	
PM	1.9	2.0	7.0	3.22	0.5	0.6	0.0	0.60	2.63	2.72	0.00	2.34	0.00	0.00	2.72
PM10/PM2.5	7.6	3.3	8.3	4.72	0.5	0.6	0	2.40	4.33	3.22	0.00	2.34	0.00	0.00	4.33
SO2	0.6	71.0	240.0	0.0	0.02	0.00	0.0	0.19	93.24	93.24	0.00	0.09	0.00	0.00	93.24
NOx	100	20.0	20.0	55.0	13.0	15.0	19.0	31.55	26.26	7.77	0.00	60.90	0.00	0.00	60.90
VOC	5.5	0.20	0.20	0.28	1.0	1.10	1.0	1.74	0.26	0.08	0.00	4.68	0.00	0.00	4.68
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	26.50	6.57	1.94	0.00	35.14	0.00	0.00	35.14
<b>Hazardous Air Pollutant</b>															
HCl							0.0								0.00
Antimony			5.25E-03	5.25E-03			negl			2.04E-03	0.00E+00			negl	2.0E-03
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03			1.1E-01	6.3E-05	7.35E-04	5.13E-04	0.00E+00			0.00E+00	7.4E-04
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05			negl	3.8E-06	5.52E-04	1.08E-05	0.00E+00			negl	5.5E-04
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04			9.3E-03	3.5E-04	5.52E-04	1.55E-04	0.00E+00			0.00E+00	5.5E-04
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02	4.4E-04	5.52E-04	3.28E-04	0.00E+00			0.00E+00	5.5E-04
Cobalt	8.4E-05		6.02E-03	6.02E-03			2.1E-04	2.7E-05		2.34E-03	0.00E+00			0.00E+00	2.3E-03
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03			0	1.6E-04	1.65E-03	5.87E-04	0.00E+00			0.0E+00	0.00
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03			6.8E-02	1.2E-04	1.10E-03	1.17E-03	0.00E+00			0.00E+00	0.00
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04				8.2E-05	5.52E-04	4.39E-05	0.00E+00				5.5E-04
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02	6.6E-04	5.52E-04	3.28E-02	0.00E+00			0.00E+00	0.033
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl	7.6E-06	2.76E-03	2.65E-04	0.00E+00			negl	2.8E-03
1,1,1-Trichloroethane			2.36E-04	2.36E-04						9.17E-05	0.00E+00				9.2E-05
1,3-Butadiene															0.0E+00
Acetaldehyde															0.0E+00
Acrolein															0.0E+00
Benzene	2.1E-03		2.14E-04	2.14E-04				6.6E-04		8.31E-05	0.00E+00				6.6E-04
Bis(2-ethylhexyl)phthalate							2.2E-03							0.00E+00	0.0E+00
Dichlorobenzene	1.2E-03						8.0E-07	3.8E-04						0.00E+00	3.8E-04
Ethylbenzene			6.36E-05	6.36E-05						2.47E-05	0.00E+00				2.5E-05
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				2.4E-02	8.01E-02	1.28E-02	0.00E+00				0.080
Hexane	1.8E+00							0.57							0.568
Phenol							2.4E-03							0.00E+00	0.0E+00
Toluene	3.4E-03		6.20E-03	6.20E-03				1.1E-03		2.41E-03	0.00E+00				2.4E-03
Total PAH Haps	negl		1.13E-03	1.13E-03			3.9E-02	negl		4.39E-04	0.00E+00			0.00E+00	4.4E-04
Polycyclic Organic Matter		3.30E-03							4.33E-03						4.3E-03
Xylene			1.09E-04	1.09E-04						4.23E-05	0.00E+00				4.2E-05
<b>Total HAPs =</b>								<b>0.60</b>	<b>0.09</b>	<b>0.06</b>	<b>0.00</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0.70</b>
<b>Worst Single HAP =</b>															<b>0.57 (Hexane)</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)
- PM2.5 = Particulate Matter (< 2.5 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  
Greenhouse Gas (CO<sub>2</sub>e) Emissions from the  
Dryer/Mixer Fuel Combustion with Maximum Capacity < 100 MMBtu/hr**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana  
**Permit Number:** 031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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.

**Fuel Limitations**

Maximum Fuel Input Rate =	97	MMBtu/hr								
Natural Gas Limitation =	631	MMCF/yr								
No. 2 Fuel Oil Limitation =	2,626,479	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Limitation =	777,000	gal/yr, and	1.60	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and	0.00	% sulfur						
Propane Limitation =	9,369,812	gal/yr, and	0.20	gr/100 ft3 sulfur						
Butane Limitation =	0	gal/yr, and	0.00	gr/100 ft3 sulfur						
Used/Waste Oil Limitation =	0	gal/yr, and	0.00	% sulfur	0.00	% ash	0.000	% chlorine,	0.000	% lead

**Limited Emissions**

CO <sub>2</sub> e Fraction	Emission Factor (units)							Global Warming Potentials (GWP)		
	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)	Name	Chemical Formula	Global warming potential
CO <sub>2</sub>	120,161.84	22,501.41	24,153.46	24,835.04	12,500.00	14,506.73	22,024.15	Carbon dioxide	CO <sub>2</sub>	1
CH <sub>4</sub>	2.49	0.91	0.97	1.00	0.60	0.67	0.89	Methane	CH <sub>4</sub>	21
N <sub>2</sub> O	2.20	0.26	0.19	0.53	0.90	0.90	0.18	Nitrous oxide	N <sub>2</sub> O	310

CO <sub>2</sub> e Fraction	Limited Potential to Emit (tons/yr)						
	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)
CO <sub>2</sub>	37,911.06	29,549.74	9,383.62	0.00	58,561.33	0.00	0.00
CH <sub>4</sub>	0.79	1.20	0.38	0.00	2.82	0.00	0.00
N <sub>2</sub> O	0.69	0.34	0.08	0.00	4.22	0.00	0.00
<b>Total</b>	<b>37,912.54</b>	<b>29,551.28</b>	<b>9,384.07</b>	<b>0.00</b>	<b>58,568.36</b>	<b>0.00</b>	<b>0.00</b>
<b>CO<sub>2</sub>e Equivalent Emissions (tons/yr)</b>	<b>38,142.75</b>	<b>29,680.76</b>	<b>9,414.76</b>	<b>0.00</b>	<b>59,927.63</b>	<b>0.00</b>	<b>0.00</b>

<b>CO<sub>2</sub>e for Worst Case Fuel* (tons/yr)</b>
<b>59,927.63</b>

**Methodology**

Fuel Limitations from TSD Appendix A.2, page 1 of 15.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)

Natural Gas: Emission Factors for CO<sub>2</sub> and CH<sub>4</sub> from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N<sub>2</sub>O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2

No. 2, No. 4, and Residual (No. 5 or No. 6) Fuel Emission Factors for CO<sub>2</sub> and CH<sub>4</sub> from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N<sub>2</sub>O from AP-42 Chapter 1.3 Oil: (dated 5/10), Table 1.3-8

Propane and Butane: Emission Factors for CO<sub>2</sub> and CH<sub>4</sub> from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N<sub>2</sub>O from AP-42 Chapter 1.5 (dated 7/08), Table 1.5-1

Waste Oil: Emission Factors for CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal.

**Emission Factor (EF) Conversions**

Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) \* Conversion Factor (2.20462 lbs/kg) \* Heating Value of Natural Gas (MMBtu/scf) \* Conversion Factor (1,000,000 scf/MMCF)]

Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) \* Conversion Factor (2.20462 lbs/kg) \* Heating Value of the Fuel Oil (MMBtu/gal) \* Conversion Factor (1000 gal/kgal)]

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)

Limited CO<sub>2</sub>e Emissions (tons/yr) = CO<sub>2</sub> Potential Emission of "worst case" fuel (ton/yr) x CO<sub>2</sub> GWP (1) + CH<sub>4</sub> Potential Emission of "worst case" fuel (ton/yr) x CH<sub>4</sub> GWP (21) + N<sub>2</sub>O Potential Emission of "worst case" fuel (ton/yr) x N<sub>2</sub>O GWP (310).

**Abbreviations**

CH<sub>4</sub> = Methane

CO<sub>2</sub> = Carbon Dioxide

N<sub>2</sub>O = Nitrogen Dioxide

PTE = Potential to Emit

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

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East,  
Greensburg, Indiana  
**Permit Number:** 031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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

Maximum Hourly Asphalt Production =	300	ton/hr
Annual Asphalt Production Limitation =	750,000	ton/yr
PM Dryer/Mixer Limitation =	0.538	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation =	0.218	lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation =	0.237	lb/ton of asphalt production
CO Dryer/Mixer Limitation =	0.190	lb/ton of asphalt production
VOC Dryer/Mixer Limitation =	0.049	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*	0.538	0.538	0.538	201.8	201.8	201.8	<b>201.8</b>
PM10*	0.218	0.218	0.218	81.8	81.8	81.8	<b>81.8</b>
PM2.5*	0.237	0.237	0.237	88.9	88.9	88.9	<b>88.9</b>
SO2**	0.003	0.011	0.058	1.3	4.1	21.8	<b>21.8</b>
NOx**	0.026	0.055	0.055	9.8	20.6	20.6	<b>20.6</b>
VOC**	0.049	0.049	0.049	18.4	18.4	18.4	<b>18.4</b>
CO***	0.190	0.190	0.190	71.3	71.3	71.3	<b>71.3</b>
<b>Hazardous Air Pollutant</b>							
HCl			2.10E-04			0.08	<b>0.08</b>
Antimony	1.80E-07	1.80E-07	1.80E-07	6.75E-05	6.75E-05	6.75E-05	<b>6.75E-05</b>
Arsenic	5.60E-07	5.60E-07	5.60E-07	2.10E-04	2.10E-04	2.10E-04	<b>2.10E-04</b>
Beryllium	negl	negl	negl	negl	negl	negl	<b>0</b>
Cadmium	4.10E-07	4.10E-07	4.10E-07	1.54E-04	1.54E-04	1.54E-04	<b>1.54E-04</b>
Chromium	5.50E-06	5.50E-06	5.50E-06	2.06E-03	2.06E-03	2.06E-03	<b>2.06E-03</b>
Cobalt	2.60E-08	2.60E-08	2.60E-08	9.75E-06	9.75E-06	9.75E-06	<b>9.75E-06</b>
Lead	6.20E-07	1.50E-05	1.50E-05	2.33E-04	5.63E-03	5.63E-03	<b>5.63E-03</b>
Manganese	7.70E-06	7.70E-06	7.70E-06	2.89E-03	2.89E-03	2.89E-03	<b>2.89E-03</b>
Mercury	2.40E-07	2.60E-06	2.60E-06	9.00E-05	9.75E-04	9.75E-04	<b>9.75E-04</b>
Nickel	6.30E-05	6.30E-05	6.30E-05	2.36E-02	2.36E-02	2.36E-02	<b>0.02</b>
Selenium	3.50E-07	3.50E-07	3.50E-07	1.31E-04	1.31E-04	1.31E-04	<b>1.31E-04</b>
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	1.50E-02	1.50E-02	1.50E-02	<b>0.02</b>
Acetaldehyde			1.30E-03			0.49	<b>0.49</b>
Acrolein			2.60E-05			9.75E-03	<b>9.75E-03</b>
Benzene	3.90E-04	3.90E-04	3.90E-04	0.15	0.15	0.15	<b>0.15</b>
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0.09	0.09	0.09	<b>0.09</b>
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	1.16	1.16	1.16	<b>1.16</b>
Hexane	9.20E-04	9.20E-04	9.20E-04	0.35	0.35	0.35	<b>0.35</b>
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0.02	0.02	0.02	<b>0.02</b>
MEK			2.00E-05			0.01	<b>0.01</b>
Propionaldehyde			1.30E-04			0.05	<b>0.05</b>
Quinone			1.60E-04			0.06	<b>0.06</b>
Toluene	1.50E-04	2.90E-03	2.90E-03	0.06	1.09	1.09	<b>1.09</b>
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0.07	0.33	0.33	<b>0.33</b>
Xylene	2.00E-04	2.00E-04	2.00E-04	0.08	0.08	0.08	<b>0.08</b>
<b>Total HAPs</b>						<b>4.00</b>	
<b>Worst Single HAP</b>						<b>1.16</b>	<b>(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**

PM = Particulate Matter      SO2 = Sulfur Dioxide      CO = Carbon Monoxide      PAH = Polyaromatic Hydrocarbon  
PM10 = Particulate Matter (<10 um)      NOx = Nitrous Oxides      HAP = Hazardous Air Pollutant  
PM2.5 = Particulate Matter (< 2.5 um)      VOC = Volatile Organic Compounds      HCl = Hydrogen Chloride

**Appendix A.2: Limited Emissions Summary  
Greenhouse Gas (CO<sub>2</sub>e) Emissions from the  
Drum-Mix Plant (Dryer/Mixer) Process Emissions**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana  
**Permit Number:** 031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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

Maximum Hourly Asphalt Production =  ton/hr  
 Annual Asphalt Production Limitation =  ton/yr

Criteria Pollutant	Emission Factor (lb/ton) Drum-Mix Plant (dryer/mixer)			Global Warming Potentials (GWP)	Limited Potential to Emit (tons/yr) Drum-Mix Plant (dryer/mixer)			CO <sub>2</sub> e for Worst Case Fuel (tons/yr)
	Natural Gas	No. 2 Fuel Oil	Waste Oil		Natural Gas	No. 2 Fuel Oil	Waste Oil	
CO <sub>2</sub>	33	33	33	1	12,375.00	12,375.00	12,375.00	12,469.50
CH <sub>4</sub>	0.0120	0.0120	0.0120	21	4.50	4.50	4.50	
N <sub>2</sub> O				310	0	0	0	
Total					12,379.50	12,379.50	12,379.50	
CO <sub>2</sub> e Equivalent Emissions (tons/yr)					12,469.50	12,469.50	12,469.50	

**Methodology**

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

There are no emission factors for N<sub>2</sub>O available in either the 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no N<sub>2</sub>O emission anticipated from this process.

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

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.

Limited CO<sub>2</sub>e Emissions (tons/yr) = CO<sub>2</sub> Potential Emission of "worst case" fuel (ton/yr) x CO<sub>2</sub> GWP (1) + CH<sub>4</sub> Potential Emission of "worst case" fuel (ton/yr) x CH<sub>4</sub> GWP (21) + N<sub>2</sub>O Potential Emission of "worst case" fuel (ton/yr) x N<sub>2</sub>O GWP (310).

**Abbreviations**

CO<sub>2</sub> = Carbon Dioxide

CH<sub>4</sub> = Methane

N<sub>2</sub>O = Nitrogen Dioxide

PTE = Potential to Emit

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

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana  
**Permit Number:** 031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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

Limited Blast Furnace Slag Usage = 

0
---

 ton/yr                      

0.00
------

 % sulfur  
 Limited Annual Steel Slag Usage = 

75,000
--------

 ton/yr                      

0.66
------

 % sulfur

Type of Slag	SO2 Emission Factor (lb/ton)	Limited Potential to Emit SO2 (tons/yr)
Blast Furnace Slag*	0.000	0.0
Steel Slag**	0.0014	0.05

**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:** Dave O'Mara Contractor, Inc.  
**Source Location:** New Point Stone at 992 South County Road 800 East,  
 Greensburg, Indiana  
**Permit Number:** 031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

Maximum Hot Oil Heater Fuel Input Rate = 0.828 MMBtu/hr  
 Natural Gas Usage = 0 MMCF/yr  
 No. 2 Fuel Oil Usage = 51,809 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	0.052	0.05
PM10/PM2.5	7.6	3.3	0.000	0.085	0.09
SO2	0.6	71.0	0.000	1.839	1.84
NOx	100	20.0	0.000	0.518	0.52
VOC	5.5	0.20	0.000	0.005	0.01
CO	84	5.0	0.000	0.130	0.13
<b>Hazardous Air Pollutant</b>					
Arsenic	2.0E-04	5.6E-04	0.0E+00	1.45E-05	1.5E-05
Beryllium	1.2E-05	4.2E-04	0.0E+00	1.09E-05	1.1E-05
Cadmium	1.1E-03	4.2E-04	0.0E+00	1.09E-05	1.1E-05
Chromium	1.4E-03	4.2E-04	0.0E+00	1.09E-05	1.1E-05
Cobalt	8.4E-05		0.0E+00		0.0E+00
Lead	5.0E-04	1.3E-03	0.0E+00	3.26E-05	3.3E-05
Manganese	3.8E-04	8.4E-04	0.0E+00	2.18E-05	2.2E-05
Mercury	2.6E-04	4.2E-04	0.0E+00	1.09E-05	1.1E-05
Nickel	2.1E-03	4.2E-04	0.0E+00	1.09E-05	1.1E-05
Selenium	2.4E-05	2.1E-03	0.0E+00	5.44E-05	5.4E-05
Benzene	2.1E-03		0.0E+00		0.0E+00
Dichlorobenzene	1.2E-03		0.0E+00		0.0E+00
Ethylbenzene					0
Formaldehyde	7.5E-02	6.10E-02	0.0E+00	1.58E-03	1.6E-03
Hexane	1.8E+00		0.00		0.00
Phenol					0
Toluene	3.4E-03		0.0E+00		0.0E+00
Total PAH Haps	negl		negl		0
Polycyclic Organic Matter		3.30E-03		8.55E-05	8.5E-05

**Total HAPs = 0.0E+00      1.8E-03      1.84E-03**  
**Worst Single HAP = 0.0E+00      1.6E-03      1.6E-03**  
 (Hexane)      (Formaldehyde)      (Formaldehyde)

**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	VOC - Volatile Organic Compounds
PM10 = Particulate Matter (<10 um)	CO = Carbon Monoxide
PM2.5 = Particulate Matter (<2.5 um)	HAP = Hazardous Air Pollutant
SO2 = Sulfur Dioxide	HCl = Hydrogen Chloride
NOx = Nitrous Oxides	PAH = Polyaromatic Hydrocarbon

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

**Greenhouse Gas (CO<sub>2</sub>e) Emissions from  
Hot Oil Heater Fuel Combustion with Maximum Capacity < 100 MMBtu/hr**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana  
**Permit Number:** 031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

Maximum Hot Oil Heater Fuel Input Rate = 0.83 MMBtu/hr  
 Natural Gas Usage = 0 MMCF/yr  
 No. 2 Fuel Oil Usage = 51,809 gal/yr, 0.50 % sulfur

**Unlimited/Uncontrolled Emissions**

Criteria Pollutant	Emission Factor (units)		Global Warming Potentials (GWP)	Unlimited/Uncontrolled Potential to Emit (tons/yr)	
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)		Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)
CO <sub>2</sub>	120,161.84	22,501.41	1	0.00	582.89
CH <sub>4</sub>	2.49	0.91	21	0.000	2.36E-02
N <sub>2</sub> O	2.20	0.26	310	0.000	6.74E-03
			Total	0.00	582.92

<b>Worse Case CO<sub>2</sub>e Emissions (tons/yr)</b>
<b>585.47</b>

CO <sub>2</sub> e Equivalent Emissions (tons/yr)	0.00	585.47
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**Methodology**

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)

Natural Gas : Emission Factors for CO<sub>2</sub> and CH<sub>4</sub> from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N<sub>2</sub>O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2

No. 2 Fuel Oil: Emission Factors for CO<sub>2</sub> and CH<sub>4</sub> from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N<sub>2</sub>O from AP-42 Chapter 1.3 (dated 5/10), Table 1.3-8

**Emission Factor (EF) Conversions**

Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) \* Conversion Factor (2.20462 lbs/kg) \* Heating Value of Natural Gas (MMBtu/scf) \* Conversion Factor (1,000,000 scf/MMCF)]

Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) \* Conversion Factor (2.20462 lbs/kg) \* Heating Value of the Fuel Oil (MMBtu/gal) \* Conversion Factor (1000 gal/kgal)]

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]

Unlimited Potential to Emit CO<sub>2</sub>e (tons/yr) = Unlimited Potential to Emit CO<sub>2</sub> of "worst case" fuel (ton/yr) x CO<sub>2</sub> GWP (1) + Unlimited Potential to Emit CH<sub>4</sub> of "worst case" fuel (ton/yr) x CH<sub>4</sub> GWP (21) + Unlimited Potential to Emit N<sub>2</sub>O of "worst case" fuel (ton/yr) x N<sub>2</sub>O GWP (310).

**Abbreviations**

CH<sub>4</sub> = Methane  
 CO<sub>2</sub> = Carbon Dioxide  
 N<sub>2</sub>O = Nitrogen Dioxide  
 PTE = Potential to Emit

**Appendix A.2: Limited Emissions Summary  
Hot Oil Heating System - Process Emissions**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana  
**Permit Number:** 031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

The following calculations determine the unlimited/uncontrolled emissions from the combustion of natural gas and No. 2 fuel oil in the hot oil heating system, which is used to heat a specially designed transfer oil. The hot transfer oil is then pumped through a piping system that passes through the asphalt cement storage tanks, in order to keep the asphalt cement at the correct temperature.

Maximum Fuel Input Rate To Hot Oil Heater = 0.83 MMBtu/hr  
 Natural Gas Usage = 0 MMCF/yr, and  
 No. 2 Fuel Oil Usage = 51,809 gal/yr

Criteria Pollutant	Emission Factors		Unlimited/Uncontrolled Potential to Emit (tons/yr)		Worse Case PTE
	Natural Gas (lb/ft3)	No. 2 Fuel Oil (lb/gal)	Natural Gas	No. 2 Fuel Oil	
VOC	2.60E-08	2.65E-05	0.00E+00	0.001	0.001
CO	8.90E-06	0.0012	0.000	0.031	0.031
Greenhouse Gas as CO2e*					
CO2	0.20	28.00	0.00	725.33	725.33
Hazardous Air Pollutant					
Formaldehyde	2.60E-08	3.50E-06	0.00E+00	9.07E-05	9.07E-05
Acenaphthene		5.30E-07		1.37E-05	1.37E-05
Acenaphthylene		2.00E-07		5.18E-06	5.18E-06
Anthracene		1.80E-07		4.66E-06	4.66E-06
Benzo(b)fluoranthene		1.00E-07		2.59E-06	2.59E-06
Fluoranthene		4.40E-08		1.14E-06	1.14E-06
Fluorene		3.20E-08		8.29E-07	8.29E-07
Naphthalene		1.70E-05		4.40E-04	4.40E-04
Phenanthrene		4.90E-06		1.27E-04	1.27E-04
Pyrene		3.20E-08		8.29E-07	8.29E-07

**Total HAPs 6.87E-04**  
**Worst Single HAP 4.40E-04 (Naphthalene)**

**Methodology**

Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] \* [8,760 hrs/yr] \* [1 MMCF/1,000 MMBtu]  
 No. 2 Fuel Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] \* [8,760 hrs/yr] \* [1 gal/0.140 MMBtu]  
 Natural Gas: Potential to Emit (tons/yr) = (Natural Gas Usage (MMCF/yr))\*(Emission Factor (lb/CF))\*(1000000 CF/MMCF)\*(ton/2000 lbs)  
 No. 2 Fuel Oil: Potential to Emit (tons/yr) = (No. 2 Fuel Oil Usage (gals/yr))\*(Emission Factor (lb/gal))\*(ton/2000 lbs)  
 Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 (ton/yr) x CO2 GWP (1)  
 1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu  
 Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Table 11.1-13

\*Note: There are no emission factors for CH4 and N2O available in either 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no CH4 and N2O emission anticipated from this process.

**Abbreviations**

CO = Carbon Monoxide

VOC = Volatile Organic Compound

CO2 = Carbon Dioxide

**Appendix A.2: Limited Emissions Summary**  
**Reciprocating Internal Combustion Engines - Diesel Fuel**  
**Output Rating (<=600 HP)**  
**RAP Crusher**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana  
**Permit Number:** 031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

Output Horsepower Rating (hp)	0.0	<i>Note: The diesel fuel-fired RAP Crusher has been determined a nonroad vehicle under 40 CFR 60, and 40 CFR 63, therefore, the fuel combustion emissions are not counted toward PSD and TV applicability.</i>
Limited Hours Operated per Year	0	
Limited Throughput (hp-hr/yr)	0	
Limited Diesel Fuel Usage (gal/yr)	0	

	Pollutant						
	PM <sup>2</sup>	PM10 <sup>2</sup>	direct PM2.5 <sup>2</sup>	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	0.0022	0.0022	0.0022	0.0021	0.0310	0.0025	0.0067
Emission Factor in lb/kgal <sup>1</sup>	43.07	43.07	43.07	40.13	606.85	49.22	130.77
Limited Emission in tons/yr	0.00	0.00	0.00	0.00	0.00	0.00	0.00

<sup>1</sup>The AP-42 Chapter 3.3-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<sup>1</sup>Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) \* 1/7,000 (hp-hr/Btu) \* 19,300 (Btu/lb) \* 7.1 (lb/gal) \* 1,000 (gal/kgal)

<sup>2</sup>PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

**Hazardous Air Pollutants (HAPs)**

	Pollutant							Total PAH HAPs <sup>3</sup>
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	
Emission Factor in lb/MMBtu	9.33E-04	4.09E-04	2.85E-04	3.91E-05	1.18E-03	7.67E-04	9.25E-05	1.68E-04
Emission Factor in lb/kgal <sup>4</sup>	1.28E-01	5.60E-02	3.91E-02	5.36E-03	1.62E-01	1.05E-01	1.27E-02	2.30E-02
Limited Emission in tons/yr	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

<sup>3</sup>PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

<sup>4</sup>The AP-42 Chapter 3.3-1 emission factors in lb/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<sup>4</sup>Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) \* 1/10<sup>6</sup> (MMBtu/Btu) \* 19,300 (Btu/lb) \* 7.1 (lb/gal) \* 1,000 (gal/kgal)

<b>Limited Emission of Total HAPs (tons/yr)</b>	<b>0.00E+00</b>
<b>Limited Emission of Worst Case HAPs (tons/yr)</b>	<b>0.00E+00</b>

**Green House Gas Emissions (GHG)**

	Pollutant		
	CO2 <sup>5</sup>	CH4 <sup>6</sup>	N2O <sup>6</sup>
Emission Factor in lb/hp-hr	1.15	NA	NA
Emission Factor in kg/MMBtu	NA	0.003	0.0006
Emission Factor in lb/kgal	22,512.07	0.91	0.18
Limited Emission in tons/yr	0.00	0.000	0.000

<sup>5</sup>The AP-42 Chapter 3.3-1 emission factor in lb/hp-hr was converted to lb/kgal emission factor using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<sup>5</sup>Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) \* 1/7,000 (hp-hr/Btu) \* 19,300 (Btu/lb) \* 7.1 (lb/gal) \* 1,000 (gal/kgal)

<sup>6</sup>The 40 CFR 98 Subpart C emission factors in kg/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<sup>6</sup>Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) \* 2.20462 (lb/kg) \* 1/10<sup>6</sup> (MMBtu/Btu) \* 19,300 (Btu/lb) \* 7.1 (lb/gal) \* 1,000 (gal/kgal)

<b>Summed Limited Emissions in tons/yr</b>	<b>0.00</b>
<b>CO2e Total in tons/yr</b>	<b>0.00</b>

**Methodology**

Limited Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] \* [Limited Hours Operated per Year]

Limited Diesel Fuel Usage (gal/yr) = Limited Throughput (hp-hr/yr) \* 7000 (Btu/hp-hr) \* 1/19300 (lb/Btu) \* 1/7.1 (gal/lb)

Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2 and have been converted to lb/kgal

CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2 and have been converted to lb/kgal

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Limited Emissions (tons/yr) = [Limited Diesel Fuel Usage (gal/yr) x Emission Factor (lb/kgal)] / (1,000 gal/kgal) / (2,000 lb/ton)

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

**Appendix A.2: Limited Emissions Summary**  
**Large Reciprocating Internal Combustion Engines - Diesel Fuel**  
**Output Rating (>600 HP)**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana  
**Permit Number:** 031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

Output Horsepower Rating (hp)	0.0
Limited Hours Operated per Year	0
Limited Throughput (hp-hr/yr)	0
Limited Diesel Fuel Usage (gal/yr)	0

Sulfur Content (S) of Fuel (% by weight) 0.00

	Pollutant						
	PM	PM10 <sup>2</sup>	direct PM2.5 <sup>2</sup>	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	7.00E-04			0.00E+00 (.00809S)	2.40E-02	7.05E-04	5.50E-03
Emission Factor in lb/MMBtu		0.0573	0.0573				
Emission Factor in lb/kgal <sup>1</sup>	13.70	7.85	7.85	0.00	469.82	13.80	107.67
Limited Emission in tons/yr	0.00	0.00	0.00	0.00	0.00	0.00	0.00

<sup>1</sup> The AP-42 Chapter 3.4-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<sup>2</sup> Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) \* 1/7,000 (hp-hr/Btu) \* 19,300 (Btu/lb) \* 7.1 (lb/gal) \* 1,000 (gal/kgal)

<sup>2</sup> Emission factors in lb/kgal were converted from the AP-42 Chapter 3.4-1 emission factors in lb/MMBtu using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<sup>2</sup> Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) \* 1/10<sup>6</sup> (MMBtu/Btu) \* 19,300 (Btu/lb) \* 7.1 (lb/gal) \* 1,000 (gal/kgal)

**Hazardous Air Pollutants (HAPs)**

	Pollutant						
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs <sup>3</sup>
Emission Factor in lb/MMBtu	7.76E-04	2.81E-04	1.93E-04	7.89E-05	2.52E-05	7.88E-06	2.12E-04
Emission Factor in lb/kgal <sup>4</sup>	1.06E-01	3.85E-02	2.64E-02	1.08E-02	3.45E-03	1.08E-03	2.91E-02
Limited Emission in tons/yr	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

<sup>3</sup> PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

<sup>4</sup> Emission factors in lb/kgal were converted from the AP-42 Chapter 3.4-1 emission factors in lb/MMBtu using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<sup>4</sup> Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) \* 1/10<sup>6</sup> (MMBtu/Btu) \* 19,300 (Btu/lb) \* 7.1 (lb/gal) \* 1,000 (gal/kgal)

<b>Limited Emission of Total HAPs (tons/yr)</b>	<b>0.00E+00</b>
<b>Limited Emission of Worst Case HAPs (tons/yr)</b>	<b>0.00E+00</b>

**Green House Gas Emissions (GHG)**

	Pollutant		
	CO2 <sup>5</sup>	CH4 <sup>5,6</sup>	N2O <sup>7</sup>
Emission Factor in lb/hp-hr	1.16	6.35E-05	NA
Emission Factor in kg/MMBtu	NA	NA	0.0006
Emission Factor in lb/kgal	22,707.83	1.24	0.18
Limited Emission in tons/yr	0.00	0.00	0.00

<sup>5</sup> The AP-42 Chapter 3.4-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<sup>5</sup> Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) \* 1/7,000 (hp-hr/Btu) \* 19,300 (Btu/lb) \* 7.1 (lb/gal) \* 1,000 (gal/kgal)

<sup>6</sup> According to AP-42, Table 3.4-1, TOC (as CH4) is 9% methane by weight. As a result, the lb/hp-hr emission factor for TOC (as CH4) in AP-42 has been multiplied by 9% to determine the portion that is emitted as methane.

<sup>7</sup> The 40 CFR 98 Subpart C emission factors in kg/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<sup>7</sup> Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) \* 2.20462 (lb/kg) \* 1/10<sup>6</sup> (MMBtu/Btu) \* 19,300 (Btu/lb) \* 7.1 (lb/gal) \* 1,000 (gal/kgal)

<b>Summed Potential Emissions in tons/yr</b>	<b>0.00</b>
<b>CO2e Total in tons/yr</b>	<b>0.00</b>

**Methodology**

Limited Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] \* [Limited Hours Operated per Year]

Limited Diesel Fuel Usage (gal/yr) = Limited Throughput (hp-hr/yr) \* 7000 (Btu/hp-hr) \* 1/19300 (lb/Btu) \* 1/7.1 (gal/lb)

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1, 3.4-2, 3.4-3, and 3.4-4 and have been converted to lb/kgal.

N2O Emission Factor from 40 CFR 98 Subpart C Table C-2 and have been converted to lb/kgal.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Limited Emissions (tons/yr) = [Limited Diesel Fuel Usage (gal/yr) x Emission Factor (lb/kgal)] / (1,000 gal/kgal) / (2,000 lb/ton)

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O

Potential Emission ton/yr x N2O GWP (310).

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

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana  
**Permit Number:** 031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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 =	750,000	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	0.20	0.22	NA	0.42
Organic PM	3.4E-04	2.5E-04	NA	0.13	0.095	NA	0.22
TOC	0.004	0.012	0.001	1.56	4.57	0.413	6.5
CO	0.001	0.001	3.5E-04	0.51	0.442	0.132	1.08

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

<b>PM/HAPs</b>	<b>0.009</b>	<b>0.011</b>	<b>0</b>	<b>0.020</b>
<b>VOC/HAPs</b>	<b>0.023</b>	<b>0.058</b>	<b>0.006</b>	<b>0.087</b>
<b>non-VOC/HAPs</b>	<b>1.2E-04</b>	<b>1.2E-05</b>	<b>3.2E-05</b>	<b>1.6E-04</b>
<b>non-VOC/non-HAPs</b>	<b>0.11</b>	<b>0.06</b>	<b>0.03</b>	<b>0.21</b>

<b>Total VOCs</b>	<b>1.47</b>	<b>4.57</b>	<b>0.4</b>	<b>6.4</b>
<b>Total HAPs</b>	<b>0.03</b>	<b>0.07</b>	<b>0.006</b>	<b>0.11</b>
		<b>Worst Single HAP</b>		<b>0.033</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:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana  
**Permit Number:** 031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

**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%	3.3E-04	4.5E-04	NA	7.8E-04
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	3.6E-05	1.3E-05	NA	4.9E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	8.9E-05	1.2E-04	NA	2.1E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	2.4E-05	5.3E-05	NA	7.8E-05
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	9.7E-06	0	NA	9.7E-06
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	2.8E-06	0	NA	2.8E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	2.4E-06	0	NA	2.4E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	2.9E-06	0	NA	2.9E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	1.0E-05	9.0E-06	NA	1.9E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	1.3E-04	2.0E-04	NA	3.3E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	4.7E-07	0	NA	4.7E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	6.4E-05	1.4E-04	NA	2.1E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	9.8E-04	9.6E-04	NA	1.9E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	6.0E-07	0	NA	6.0E-07
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	3.0E-03	5.0E-03	NA	0.008
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	1.6E-03	1.7E-03	NA	3.3E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	2.8E-05	2.9E-05	NA	5.7E-05
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	1.0E-03	1.7E-03	NA	2.7E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	1.9E-04	4.2E-04	NA	6.1E-04
<b>Total PAH HAPs</b>							<b>0.008</b>	<b>0.011</b>	<b>NA</b>	<b>0.018</b>
<b>Other semi-volatile HAPs</b>										
Phenol		PM/HAP	---	Organic PM	1.18%	0	1.5E-03	0	0	1.5E-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)**

**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>1.47</b>	<b>4.57</b>	<b>0.39</b>	<b>6.42</b>
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	1.0E-01	1.2E-02	2.7E-02	0.140
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	7.2E-04	2.5E-03	1.9E-04	0.003
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	1.1E-02	5.0E-02	2.9E-03	0.064
<b>Total non-VOC/non-HAPS</b>					<b>7.30%</b>	<b>1.40%</b>	<b>0.114</b>	<b>0.064</b>	<b>0.030</b>	<b>0.21</b>
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	8.1E-04	1.5E-03	2.1E-04	2.5E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	1.5E-04	2.2E-04	4.0E-05	4.1E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	7.6E-04	1.8E-03	2.0E-04	2.7E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	2.0E-04	7.3E-04	5.4E-05	9.9E-04
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	3.3E-06	1.8E-04	8.7E-07	1.9E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	2.3E-04	1.1E-03	6.2E-05	1.3E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	1.7E-03	0	4.5E-04	2.2E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	4.4E-03	1.7E-03	1.2E-03	0.007
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	1.4E-03	3.2E-02	3.6E-04	0.033
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	2.3E-03	4.6E-03	6.2E-04	0.008
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	2.8E-05	1.4E-05	7.4E-06	5.0E-05
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	1.2E-05	0	1.2E-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%	1.1E-04	2.5E-04	3.0E-05	3.9E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	1.2E-04	0	3.2E-05	1.5E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	3.3E-03	2.8E-03	8.7E-04	0.007
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	2.0E-05	0	5.4E-06	2.6E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	6.4E-03	9.1E-03	1.7E-03	0.017
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	1.2E-03	2.6E-03	3.3E-04	4.2E-03
<b>Total volatile organic HAPs</b>					<b>1.50%</b>	<b>1.30%</b>	<b>0.023</b>	<b>0.059</b>	<b>0.006</b>	<b>0.089</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:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana  
**Permit Number:** 031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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

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

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

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	0.75	0.412	0.144
Limestone	1.6	1.85	0.75	0.253	0.089
RAP	0.5	0.58	0.75	0.079	0.028
Gravel	1.6	1.85	0.75	0.253	0.089
Shingles	0.5	0.58	0.50	0.053	0.018
Slag	3.8	4.40	1.00	0.803	0.281
<b>Totals</b>				<b>1.85</b>	<b>0.65</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**

RAP = recycled asphalt pavement  
 PM = Particulate Matter

PM10 = Particulate Matter (<10 um)  
 PM2.5 = Particulate Matter (<2.5 um)

PTE = Potential to Emit

**Appendix A.2: Limited Emissions Summary**  
**Material Processing, Handling, Crushing, Screening, and Conveying**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana  
**Permit Number:** 031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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

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

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

where:  $E_f$  = Emission factor (lb/ton)

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

Annual Asphalt Production Limitation =	750,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	712,500	tons/yr

Type of Activity	Limited PTE of PM (tons/yr)	Limited PTE of PM10 (tons/yr)	Limited PTE of PM2.5 (tons/yr)
Truck unloading of materials into storage piles	0.81	0.38	0.06
Front-end loader dumping of materials into feeder bins	0.81	0.38	0.06
Conveyor dropping material into dryer/mixer or batch tower	0.81	0.38	0.06
<b>Total (tons/yr)</b>	<b>2.42</b>	<b>1.15</b>	<b>0.17</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	1.92	0.86
Screening	0.025	0.0087	8.91	3.10
Conveying	0.003	0.0011	1.07	0.39
<b>Limited Potential to Emit (tons/yr) =</b>			<b>11.90</b>	<b>4.35</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 um)  
 PM2.5 = Particulate Matter (<2.5 um)  
 PTE = Potential to Emit

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

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana  
**Permit Number:** 031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

**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	=	750,000	tons/yr
Percent Asphalt Cement/Binder (weight %)	=	5.0%	
Maximum Material Handling Throughput	=	712,500	tons/yr
Maximum Asphalt Cement/Binder Throughput	=	37,500	tons/yr
No. 2 Fuel Oil Limitation	=	2,626,479	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	3.2E+04	1.3E+06	300	0.057	1807.3
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	3.2E+04	5.4E+05	300	0.057	1807.3
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	1.0E+03	5.0E+04	300	0.057	59.2
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	1.0E+03	1.3E+04	300	0.057	59.2
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	2.8E+02	1.2E+04	300	0.057	15.8
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	2.8E+02	3.3E+03	300	0.057	15.8
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	1.7E+05	3.3E+06	300	0.057	9638.8
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	1.7E+05	2.5E+06	300	0.057	9638.8
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.0	3.1E+04	1.3E+06	300	0.057	1775.6
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.0	3.1E+04	5.3E+05	300	0.057	1775.6
<b>Total</b>					<b>4.7E+05</b>	<b>9.5E+06</b>			<b>2.7E+04</b>

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

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

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

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

	PM	PM10	PM2.5	
Unmitigated Emission Factor, $E_f$	6.10	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)	5.51	1.40	0.14	3.62	0.92	0.09	1.81	0.46	0.05
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	5.51	1.40	0.14	3.62	0.92	0.09	1.81	0.46	0.05
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.180	0.046	0.00	0.119	0.030	3.0E-03	0.059	0.015	1.5E-03
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.180	0.046	0.00	0.119	0.030	3.0E-03	0.059	0.015	1.5E-03
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.048	0.012	1.2E-03	0.032	0.008	8.1E-04	0.016	0.004	4.0E-04
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.048	0.012	1.2E-03	0.032	0.008	8.1E-04	0.016	0.004	4.0E-04
Aggregate/RAP Loader Full	Front-end loader (3 CY)	29.38	7.49	0.75	19.32	4.92	0.49	9.66	2.46	0.25
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	29.38	7.49	0.75	19.32	4.92	0.49	9.66	2.46	0.25
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	5.41	1.38	0.14	3.56	0.91	0.09	1.78	0.45	0.05
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	5.41	1.38	0.14	3.56	0.91	0.09	1.78	0.45	0.05
<b>Totals</b>		<b>81.05</b>	<b>20.66</b>	<b>2.07</b>	<b>53.29</b>	<b>13.58</b>	<b>1.36</b>	<b>26.65</b>	<b>6.79</b>	<b>0.68</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)      PTE = Potential to Emit

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

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana  
**Permit Number:** 031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

**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	=	750,000	tons/yr
Percent Asphalt Cement/Binder (weight %)	=	5.0%	
Maximum Material Handling Throughput	=	712,500	tons/yr
Maximum Asphalt Cement/Binder Throughput	=	37,500	tons/yr
No. 2 Fuel Oil Limitation	=	2,626,479	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	3.2E+04	1.3E+06	300	0.057	1807.3
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.00	3.2E+04	5.4E+05	300	0.057	1807.3
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.00	1.0E+03	5.0E+04	300	0.057	59.2
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	1.0E+03	1.3E+04	300	0.057	59.2
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.00	2.8E+02	1.2E+04	300	0.057	15.8
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	2.8E+02	3.3E+03	300	0.057	15.8
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.20	1.7E+05	3.3E+06	300	0.057	9638.8
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	1.7E+05	2.5E+06	300	0.057	9638.8
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.00	3.1E+04	1.3E+06	300	0.057	1775.6
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.00	3.1E+04	5.3E+05	300	0.057	1775.6
<b>Total</b>					<b>4.7E+05</b>	<b>9.5E+06</b>			<b>2.7E+04</b>

Average Vehicle Weight Per Trip	=	20.3	tons/trip
Average Miles Per Trip	=	0.057	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	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,  $E_{ext} = E_f * [1 - (p/4N)]$

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

	PM	PM10	PM2.5	
Unmitigated Emission Factor, $E_f$	0.15	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)	0.13	0.03	0.01	0.12	0.02	0.01	0.06	0.01	0.00
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.13	0.03	0.01	0.12	0.02	0.01	0.06	0.01	0.00
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.004	0.001	2.2E-04	0.004	0.001	2.0E-04	0.002	4.0E-04	9.9E-05
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.004	0.001	2.2E-04	0.004	0.001	2.0E-04	0.002	4.0E-04	9.9E-05
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	1.2E-03	2.3E-04	5.8E-05	1.1E-03	2.1E-04	5.3E-05	5.4E-04	1.1E-04	2.6E-05
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	1.2E-03	2.3E-04	5.8E-05	1.1E-03	2.1E-04	5.3E-05	5.4E-04	1.1E-04	2.6E-05
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0.72	0.14	0.04	0.66	0.13	0.03	0.33	0.07	0.02
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0.72	0.14	0.04	0.66	0.13	0.03	0.33	0.07	0.02
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.13	0.03	0.01	0.12	0.02	0.01	0.06	0.01	0.00
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.13	0.03	0.01	0.12	0.02	0.01	0.06	0.01	0.00
<b>Totals</b>		<b>1.98</b>	<b>0.40</b>	<b>0.10</b>	<b>1.81</b>	<b>0.36</b>	<b>0.09</b>	<b>0.90</b>	<b>0.18</b>	<b>0.04</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)      PTE = Potential to Emit

**Appendix A.2: Limited Emissions Summary  
Cold Mix Asphalt Production and Stockpiles**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana  
**Permit Number:** 031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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

**Volatile Organic Compounds**

	Maximum weight % of VOC solvent in binder	Weight % VOC solvent in binder that evaporates	VOC Solvent Usage Limitation (tons/yr)	Limited PTE of VOC (tons/yr)	Liquid Binder Adjustment Ratio
Cut back asphalt rapid cure (assuming gasoline or naphtha solvent)	25.3%	95.0%	70.3	66.8	1.053
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	95.5	66.8	1.429
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	267.3	66.8	4.000
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	144.0	66.8	2.155
Other asphalt with solvent binder	25.9%	2.5%	2672.8	66.8	40.0
<b>Worst Case Limited PTE of VOC =</b>				<b>66.8</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>17.43</b>
<b>Limited PTE of Single HAP (tons/yr) =</b>	<b>6.01 Xylenes</b>

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

Volatile Organic HAP	CAS#	Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents				
		Gasoline	Kerosene	Diesel (#2) Fuel Oil	No. 2 Fuel Oil	No. 6 Fuel Oil
1,3-Butadiene	106-99-0	3.70E-5%				
2,2,4-Trimethylpentane	540-84-1	2.40%				
Acenaphthene	83-32-9		4.70E-5%		1.80E-4%	
Acenaphthylene	208-96-8		4.50E-5%		6.00E-5%	
Anthracene	120-12-7		1.20E-6%	5.80E-5%	2.80E-5%	5.00E-5%
Benzene	71-43-2	1.90%		2.90E-4%		
Benzo(a)anthracene	56-55-3			9.60E-7%	4.50E-7%	5.50E-4%
Benzo(a)pyrene	50-32-8			2.20E-6%	2.10E-7%	4.40E-5%
Benzo(g,h,i)perylene	191-24-2			1.20E-7%	5.70E-8%	
Biphenyl	92-52-4			6.30E-4%	7.20E-5%	
Chrysene	218-01-9			4.50E-7%	1.40E-6%	6.90E-4%
Ethylbenzene	100-41-4	1.70%		0.07%	3.40E-4%	
Fluoranthene	206-44-0		7.10E-6%	5.90E-5%	1.40E-5%	2.40E-4%
Fluorene	86-73-7		4.20E-5%	8.60E-4%	1.90E-4%	
Indeno(1,2,3-cd)pyrene	193-39-5			1.60E-7%		1.00E-4%
Methyl-tert-butylether	1634-04-4	0.33%				
Naphthalene	91-20-3	0.25%	0.31%	0.26%	0.22%	4.20E-5%
n-Hexane	110-54-3	2.40%				
Phenanthrene	85-01-8		8.60E-6%	8.80E-4%	7.90E-4%	2.10E-4%
Pyrene	129-00-0		2.40E-6%	4.60E-5%	2.90E-5%	2.30E-5%
Toluene	108-88-3	8.10%		0.18%	6.20E-4%	
Total Xylenes	1330-20-7	9.00%		0.50%	0.23%	
<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:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana  
**Permit Number:** 031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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:

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

**Volatile Organic Compounds**

Emission Source	Emission Factor (lb/kgal of throughput)	PTE of VOC (tons/yr)*
Filling storage tank (balanced submerged filling)	0.3	0.00
Tank breathing and emptying	1.0	0.00
Vehicle refueling (displaced losses - controlled)	1.1	0.00
Spillage	0.7	0.00
<b>Total</b>		<b>0.00</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>0.00</b>	
<b>Limited PTE of Single HAP (tons/yr) =</b>	<b>0.00</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.3: Unlimited Potential to Emit of the Revision

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

Process Description	Unlimited/Uncontrolled Potential to Emit (tons/year)										
	Criteria Pollutants							Greenhouse Gas Pollutants	Hazardous Air Pollutants		
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	CO <sub>2</sub> e	Total HAPs	Worst Case HAP	
<b>Ducted Emissions</b>											
Dryer Fuel Combustion - Existing Fuels (worst case)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	73,390.45	N/A	N/A	N/A
Dryer Fuel Combustion - Propane	2.34	2.34	2.34	0.09	60.90	4.68	35.14	59,927.63	0.000	0.000	N/A
Hot Oil Heater Fuel Combustion/Process (worst case)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	725.33	N/A	N/A	N/A
Diesel-Fired Generator Fuel Combustion (< 600 HP) (200 ton/hr RAP Crusher) *	0	0	0	0	0	0	0	0	0	0	N/A
<b>Worst Case Emissions**</b>	<b>2.34</b>	<b>2.34</b>	<b>2.34</b>	<b>0.09</b>	<b>60.90</b>	<b>4.68</b>	<b>35.14</b>	<b>74,115.78</b>	<b>0.00</b>	<b>0.00</b>	<b>N/A</b>
<b>Fugitive Emissions</b>											
Material Crushing	4.73	2.10	2.10	0	0	0	0	0	0	0	N/A
Material Storage Piles (steel slag and recycled asphalt shingles)	0.80	0.28	0.28	0	0	0	0	0	0	0	N/A
<b>Total Fugitive Emissions</b>	<b>5.53</b>	<b>2.38</b>	<b>2.38</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>N/A</b>
<b>Totals Unlimited/Uncontrolled PTE</b>	<b>7.88</b>	<b>4.73</b>	<b>4.73</b>	<b>0.09</b>	<b>60.90</b>	<b>4.68</b>	<b>35.14</b>	<b>74,115.78</b>	<b>0.00</b>	<b>0.00</b>	<b>N/A</b>

N/A = not applicable

RAP = recycled asphalt pavement (RAP).

\* The diesel fuel-fired RAP Crusher has been determined a nonroad vehicle under 40 CFR 60, and 40 CFR 63, therefore, the fuel combustion emissions are not counted toward PSD and TV applicability.

\*\* Worst Case Emissions (tons/yr) = Emissions from Dryer Fuel Combustion (Worst Case Existing vs Propane) + Worst Case Emissions from Hot Oil Heater Fuel Combustion

**Appendix A.3: Unlimited Potential to Emit of the Revision  
Dryer/Mixer Fuel Combustion with Maximum Capacity < 100 MMBtu/hr**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East,  
 Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

The following calculations determine the unlimited/uncontrolled emissions created from the combustion of propane in the dryer/mixer.

**Maximum Capacity**

Maximum Fuel Input Rate =	96.8	MMBtu/hr	
Propane Usage =	9,369,812	gal/yr, and	0.20 gr/100 ft3 sulfur

**Unlimited/Uncontrolled Emissions**

Criteria Pollutant	Emission Factor (lb/kgal)	Unlimited/Uncontrolled Potential to Emit (tons/yr)
PM	0.5	2.342
PM10/PM2.5	0.5	2.342
SO2	0.020	0.094
NOx	13.0	60.90
VOC	1.00	4.68
CO	7.5	35.14
<b>Hazardous Air Pollutant</b>		
HCl		
Antimony		
Arsenic		
Beryllium		
Cadmium		
Chromium		
Cobalt		
Lead		
Manganese		
Mercury		
Nickel		
Selenium		
1,1,1-Trichloroethane		
1,3-Butadiene		
Acetaldehyde		
Acrolein		
Benzene		
Bis(2-ethylhexyl)phthalate		
Dichlorobenzene		
Ethylbenzene		
Formaldehyde		
Hexane		
Phenol		
Toluene		
Total PAH Haps		
Polycyclic Organic Matter		
Xylene		

**Total HAPs                    0**

**Methodology**

Propane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] \* [8,760 hrs/yr] \* [1 gal/0.0905 MMBtu]

Sources of AP-42 Emission Factors for fuel combustion:

Propane and Butane: AP-42 Chapter 1.5 (dated 7/08), Tables 1.5-1 (assuming PM = PM10)

**Abbreviations**

- |                                       |                                  |
|---------------------------------------|----------------------------------|
| PM = Particulate Matter               | VOC - Volatile Organic Compounds |
| PM10 = Particulate Matter (<10 um)    | CO = Carbon Monoxide             |
| PM2.5 = Particulate Matter (< 2.5 um) | HAP = Hazardous Air Pollutant    |
| SO2 = Sulfur Dioxide                  | HCl = Hydrogen Chloride          |
| NOx = Nitrous Oxides                  | PAH = Polyaromatic Hydrocarbon   |

**Appendix A.3: Unlimited Potential to Emit of the Revision  
Greenhouse Gas (CO2e) Emissions from the  
Dryer/Mixer Fuel Combustion with Maximum Capacity < 100 MMBtu/hr**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East, Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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 Fuel Input Rate =	96.8	MMBtu/hr						
Natural Gas Usage =	848	MMCF/yr						
No. 2 Fuel Oil Usage =	6,056,914	gal/yr, and	0.50	% sulfur				
No. 4 Fuel Oil Usage =	6,056,914	gal/yr, and	1.60	% sulfur				
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and	0	% sulfur				
Propane Usage =	9,369,812	gal/yr, and	0.20	gr/100 ft3 sulfur				
Butane Usage =	0	gal/yr, and	0	gr/100 ft3 sulfur				
Used/Waste Oil Usage =	0	gal/yr, and	0	% sulfur	0	% ash	0	% chlorine, 0
								0
								0
								0

**Unlimited/Uncontrolled Emissions**

CO2e Fraction	Emission Factor (units)							Global Warming Potentials (GWP)		
	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)	Name	Chemical Formula	Global warming potential
CO2	120,161.84	22,501.41	24,153.46	24,835.04	12,500.00	14,506.73	22,024.15	Carbon dioxide	CO <sub>2</sub>	1
CH4	2.49	0.91	0.97	1.00	0.60	0.67	0.89	Methane	CH <sub>4</sub>	21
N2O	2.2	0.26	0.19	0.53	0.9	0.9	0.18	Nitrous oxide	N <sub>2</sub> O	310

CO2e Fraction	Unlimited/Uncontrolled Potential to Emit (tons/yr)						
	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)
CO2	50,946.70	68,144.56	73,147.73	0.00	58561.33	0.00	0.00
CH4	1.06	2.76	2.92	0.00	2.82	0.00	0.00
N2O	0.93	0.79	0.58	0.00	4.22	0.00	0.00
<b>Total</b>	<b>50,948.69</b>	<b>68,148.11</b>	<b>73,151.24</b>	<b>0.00</b>	<b>58,568.36</b>	<b>0.00</b>	<b>0.00</b>
CO2e Equivalent Emissions (tons/yr)	51,258.06	68,446.71	73,390.45	0.00	59,927.63	0.00	0.00

<b>CO2e for Worst Case Fuel* (tons/yr)</b>
<b>73,390.45</b>

**Methodology**

Fuel Usage from TSD Appendix A.1, page 1 of 14.  
 Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] \* [8,760 hrs/yr] \* [1 MMCF/1,000 MMBtu]  
 Fuel 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/0.0915 MMBtu]  
 Butane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] \* [8,760 hrs/yr] \* [1 gal/0.102 MMBtu]  
 Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.  
 Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)  
 Natural Gas: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2  
 No. 2, No. 4, and Residual (No. 5 or No. 6) Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter Fuel Oil: 1.3 (dated 5/10), Table 1.3-8  
 Propane: Emission Factor for CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, has been converted from kg/mmBtu to lb/kgal. Emission Factors for CO2 and N2O from AP-42 Chapter 1.5 (dated 7/08), Table 1.5-1  
 Butane: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.5 (dated 7/08), Table 1.5-1  
 Waste Oil: Emission Factors for CO2, CH4, and N2O from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal.

**Abbreviations**

PTE = Potential to Emit  
 CO2 = Carbon Dioxide  
 CH4 = Methane  
 N2O = Nitrogen Dioxide

**Emission Factor (EF) Conversions**

Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) \* Conversion Factor (2.20462 lbs/kg) \* Heating Value of Natural Gas (MMBtu/scf) \* Conversion Factor (1,000,000 scf/MMCF)]  
 Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) \* Conversion Factor (2.20462 lbs/kg) \* Heating Value of the Fuel Oil (MMBtu/gal) \* Conversion Factor (1000 gal/kgal)]  
 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]  
 Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (310).

**Appendix A.1: Unlimited Emissions Calculations  
Greenhouse Gas (CO<sub>2</sub>e) Emissions from  
Hot Oil Heater Fuel Combustion with Maximum Capacity < 100 MMBtu/hr**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East,  
 Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

Maximum Hot Oil Heater Fuel Input Rate = 0.828 MMBtu/hr  
 Natural Gas Usage = 0 MMCF/yr  
 No. 2 Fuel Oil Usage = 51,809 gal/yr, 0.50 % sulfur

**Unlimited/Uncontrolled Emissions**

Criteria Pollutant	Emission Factor (units)		Global Warming Potentials (GWP)	Potential to Emit (tons/yr)	
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)		Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)
CO <sub>2</sub>	120,161.84	22,501.41	1	0.00	582.89
CH <sub>4</sub>	2.49	0.91	21	0.00	0.02
N <sub>2</sub> O	2.2	0.26	310	0.00	0.01
				0.00	582.92

<b>Worse Case CO<sub>2</sub>e Emissions (tons/yr)</b>
<b>585.47</b>

CO <sub>2</sub> e Equivalent Emissions (tons/yr)	0.00	585.47
--	------	--------

**Methodology**

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

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]

Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)

Natural Gas: Emission Factors for CO<sub>2</sub> and CH<sub>4</sub> from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N<sub>2</sub>O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2

No. 2 Fuel Oil: Emission Factors for CO<sub>2</sub> and CH<sub>4</sub> from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N<sub>2</sub>O from AP-42 Chapter 1.3 (dated 5/10), Table 1.3-8

Emission Factor (EF) Conversions

Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) \* Conversion Factor (2.20462 lbs/kg) \* Heating Value of Natural Gas (MMBtu/scf) \* Conversion Factor (1,000,000 scf/MMCF)]

Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) \* Conversion Factor (2.20462 lbs/kg) \* Heating Value of the Fuel Oil (MMBtu/gal) \* Conversion Factor (1000 gal/kgal)]

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]

Unlimited Potential to Emit CO<sub>2</sub>e (tons/yr) = Unlimited Potential to Emit CO<sub>2</sub> of "worst case" fuel (ton/yr) x CO<sub>2</sub> GWP (1) + Unlimited Potential to Emit CH<sub>4</sub> of "worst case" fuel (ton/yr) x CH<sub>4</sub> GWP (21) + Unlimited Potential to Emit N<sub>2</sub>O of "worst case" fuel (ton/yr) x N<sub>2</sub>O GWP (310).

**Abbreviations**

CO<sub>2</sub> = Carbon Dioxide  
 CH<sub>4</sub> = Methane

N<sub>2</sub>O = Nitrogen Dioxide  
 PTE = Potential to Emit

**Appendix A.1: Unlimited Emissions Calculations  
Hot Oil Heating System - Process Emissions**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East,  
 Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

The following calculations determine the unlimited/uncontrolled emissions from the combustion of natural gas and No. 2 fuel oil in the hot oil heating system, which is used to heat a specially designed transfer oil. The hot transfer oil is then pumped through a piping system that passes through the asphalt cement storage tanks, in order to keep the asphalt cement at the correct temperature.

Maximum Fuel Input Rate To Hot Oil Heater = 0.828 MMBtu/hr  
 Natural Gas Usage = 0 MMCF/yr, and  
 No. 2 Fuel Oil Usage = 51,809 gal/yr

Criteria Pollutant	Emission Factors		Potential to Emit		Worse Case PTE
	Natural Gas (lb/ft3)	No. 2 Fuel Oil (lb/gal)	Natural Gas	No. 2 Fuel Oil	
Greenhouse Gas as CO2e*					
CO2	0.20	28.00	0.00	725.33	<b>725.33</b>

**Methodology**

Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] \* [8,760 hrs/yr] \* [1 MMCF/1,000 MMBtu]  
 No. 2 Fuel Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] \* [8,760 hrs/yr] \* [1 gal/0.140 MMBtu]  
 Natural Gas: Potential to Emit (tons/yr) = (Natural Gas Usage (MMCF/yr))\*(Emission Factor (lb/CF))\*(1000000 CF/MMCF)\*(ton/2000 lbs)  
 No. 2 Fuel Oil: Potential to Emit (tons/yr) = (No. 2 Fuel Oil Usage (gals/yr))\*(Emission Factor (lb/gal))\*(ton/2000 lbs)  
 Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 (ton/yr) x CO2 GWP (1)  
 1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu  
 Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Table 11.1-13  
 \*Note: There are no emission factors for CH4 and N2O available in either 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no CH4 and N2O emission anticipated from this process.

**Abbreviations**

CO = Carbon Monoxide

VOC = Volatile Organic Compound

CO2 = Carbon Dioxide

**Appendix A.3: Unlimited Potential to Emit of the Revision  
Material Crushing Emissions  
RAP Crusher**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East,  
Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

**Material Screening and Conveying (AP-42 Section 11.19.2)**

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

Maximum Material Throughput = 200 tons/hr

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)**
RAP Crushing	0.0054	0.0024	4.73	2.10
			<b>4.73</b>	<b>2.10</b>

**Methodology**

Maximum Material Throughput (tons/hr) = [Maximum Capacity of the Equipment]

Unlimited Potential to Emit (tons/yr) = [Maximum Material Throughput (tons/hr)] \* [Emission Factor (lb/ton)] \* [ton/2000 lbs] \* [8760 hrs/yr]

Raw materials include the following recycled asphalt materials (RAM): recycled asphalt pavement (RAP) and/or recycled asphalt shingles (RAS).

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

PM2.5 = Particulate matter (< 2.5 um)

PM10 = Particulate Matter (<10 um)

PTE = Potential to Emit

**326 IAC 6-3-2(e) Allowable Rate of Emissions**

Operation	Process Rate (lbs/hr)	Process Weight Rate * (tons/hr)	Allowable Emissions (lbs/hr)
RAP Crushing	400,000	200.00	<b>58.51</b>

**Methodology**

\* Process weight; weight rate: Total weight of all materials introduced into any source operation (326 IAC 1-2-59(a)).

Allowable Emissions (lb/hr) = 55.0(Process Weight Rate (lb/hr)<sup>0.11</sup> - 40

**326 IAC 6-3 Compliance Determination**

Operation	Annual PM Emissions (tons/yr)	Conversion Factor	Hourly PM Emission Rate (lbs/hr)
RAP Crushing	4.73	0.23	<b>1.08</b>

**Methodology**

Hourly PM Emission Rate (lbs/hr) = Annual PM Emissions (ton/yr) × Conversion Factor (2000 lbs/ton / 8760 hrs/yr)

**Appendix A.3: Unlimited Potential to Emit of the Revision  
Material Storage Piles**

**Company Name:** Dave O'Mara Contractor, Inc.  
**Source Address:** New Point Stone at 992 South County Road 800 East,  
Greensburg, Indiana 47240  
**Permit Number:** F031-33048-05047  
**Reviewer:** Hannah L. Desrosiers

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.

$E_f = 1.7 * (s/1.5) * (365-p) / 235 * (f/15)$ <p>where <math>E_f</math> = emission factor (lb/acre/day)  <math>s</math> = silt content (wt %)  <math>p</math> = <input type="text" value="125"/> days of rain greater than or equal to 0.01 inches  <math>f</math> = <input type="text" value="15"/> % of wind greater than or equal to 12 mph</p>
---

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10/PM2.5 (tons/yr)
Shingles	0.5	0.58	0.5	0.053	0.018
Steel Slag	3.8	4.40	1.00	0.803	0.281
<b>Totals</b>				<b>0.80</b>	<b>0.28</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



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

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**Michael R. Pence**  
*Governor*

**Thomas W. Easterly**  
*Commissioner*

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

TO: Amy Boswell  
Dave O'Mara Contractor, Inc.  
1100 East O & M Avenue  
North Vernon, IN 47265

DATE: November 6, 2013

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

SUBJECT: Final Decision  
Significant Permit Revision  
031-33048-05047

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

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

A copy of the final decision and supporting materials has also been sent via standard mail to:  
Willis Mack Overton – Wilcox Environmental Engineering  
OAQ Permits Branch Interested Parties List

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

Final Applicant Cover letter.dot 6/13/2013



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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**Michael R. Pence**  
*Governor*

**Thomas W. Easterly**  
*Commissioner*

November 6, 2013

TO: Greensburg Decatur County Public Library

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

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

**Applicant Name: Dave O'Mara Contractor, Inc.**  
**Permit Number: 031-33048-05047**

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

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

Enclosures  
Final Library.dot 6/13/2013

# Mail Code 61-53

IDEM Staff	GHOTOPP 11/6/2013 Dave OMara Contractor 031-33048-05047 Final		Type of Mail:  <b>CERTIFICATE OF MAILING ONLY</b>	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		

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		Amy Boswell Dave OMara Contractor 1100 East O & M Ave North Vernon IN 47265 (Source CAATS) via confirmed delivery										
2		Greensburg Decatur Co Public Library 1110 East Main Greensburg IN 47240 (Library)										
3		Decatur County Commissioners 150 Courthouse Square Greensburg IN 47240 (Local Official)										
4		Greensburg City Council & Mayors office 314 W Washington Street Greensburg IN 47240 (Local Official)										
5		Decatur County Health Department 801 N. Lincoln St Greensburg IN 47240-1397 (Health Department)										
6		Mr. Leonard Rohls 8504 North County Road 300 West Batesville IN 47006 (Affected Party)										
7		Melanie Brassell 606 Nelsons Parkway, P.O. Box 465 Wakarusa IN 46573 (Affected Party)										
8		Willis Mack Overton Wilcox Environmental Engineering 5757 W. 74th Street Indianapolis IN 46278 (Consultant)										
9												
10												
11												
12												
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14												
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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.
<b>7</b>			