



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: July 2, 2012

RE: Gohmann Asphalt & Construction, Inc./051-31690-05167

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

Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures
FNPER.dot12/03/07



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Ms. Diana M. Green
Gohmann Asphalt & Construction, Inc.
PO Box 2428
Clarksville, IN 47131-2428

July 2, 2012

Re: 051-31690-05167
First Significant Revision to
FESOP Renewal F147-29141-05167

Dear Ms. Green:

Gohmann Asphalt & Construction, Inc. was issued a Federally Enforceable State Operating Permit (FESOP) Renewal No. F147-29141-05167 on November 16, 2010, for a portable asphalt pavement production plant, currently located at 12380 E County Road 50 N, Oakland City, Indiana 47660, in Gibson County. On April 2, 2012, the Office of Air Quality (OAQ) received an application from the source requesting to add asbestos free shingles to the aggregate mix, its stock pile, four bins and one storage tank. The attached Technical Support Document (TSD) provides additional explanation of the changes to the 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.
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. If you have any questions on this matter, please contact Ms. Renee Traivaranon, of my staff, at 317-234-5615 or 1-800-451-6027, and ask for extension 4-5615.

Sincerely,



Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

Attachments: Technical Support Document and revised permit
IC/rt

cc: File - Gibson County
Gibson County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch
Billing, Licensing and Training Section



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Federally Enforceable State Operating Permit Renewal
OFFICE OF AIR QUALITY

Gohmann Asphalt & Construction 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. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-8-11.1, applicable to those conditions

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.

Table with 2 columns: Operation Permit No.: F147-29141-05167; Issuance Date: November 16, 2010; Expiration Date: November 16, 2020.

First Portable Source Relocation No.: 051-30850-05167, issued on September 8, 2011

Table with 2 columns: Significant Permit Revision No.: 051-31690-05167; Issued by: Iryn Calilung, Section Chief, Permits Branch, Office of Air Quality; Issuance Date: July 2, 2012; Expiration Date: November 16, 2020.

TABLE OF CONTENTS

A.SOURCESUMMARY.....	5
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.....	8
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.4 Term of Conditions [326 IAC 2-1.1-9.5]	
B.4 Enforceability [326 IAC 2-8-6] [IC 13-17-12]	
B.5 Severability [326 IAC 2-8-4(4)]	
B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]	
B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]	
B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]	
B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]	
B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]	
B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]	
B.12 Emergency Provisions [326 IAC 2-8-12]	
B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]	
B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]	
B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]	
B.16 Permit Renewal [326 IAC 2-8-3(h)]	
B.17 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]	
B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]	
B.19 Source Modification Requirement [326 IAC 2-8-11.1]	
B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2] [IC 13-30-3-1]	
B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]	
B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16] [326 IAC 2-1.1-7]	
B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]	
C. SOURCE OPERATION CONDITIONS.....	18
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 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]	

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

- C.9 Performance Testing [326 IAC 3-6]

Compliance Requirements [326 IAC 2-1.1-11]

- C.10 Compliance Requirements [326 IAC 2-1.1-11]

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

- C.11 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]
- C.12 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.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
- C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]
- C.15 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]
- C.16 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.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]
- C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

Portable Source Requirement

- C.19 Relocation of Portable Sources [326 IAC 2-14-4]

Stratospheric Ozone Protection

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

D.1. EMISSIONS UNIT OPERATION CONDITIONS.....26

Emission Limitations and Standards

- D.1.1 Particulate Matter (PM) [326 IAC 2-2]
- D.1.2 FESOP Limits: PM10, PM2.5, CO and VOC [326 IAC 2-8-4] [326 IAC 2-2][326 IAC 8-1-6]
- D.1.3 Hazardous Air Pollutants (HAPs) [326 IAC 2-8-4][326 IAC 2-4.1]
- D.1.4 FESOP Limits: NOx, SO₂ and HCl Emission Limitation [326 IAC 2-8-4][326 IAC 2-2]
- D.1.5 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-2]
- D.1.6 Particulate Matter (PM) [326 IAC 6.5-1-2]
- D.1.7 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]
- D.1.8 Preventative Maintenance Plan [326 IAC 2-8-4(9)]

Compliance Determination Requirements

- D.1.9 Testing Requirements [326 IAC 2-8-5(a)(1),(4)][326 IAC 2-1.1-11]
- D.1.10 Particulate Control
- D.1.11 Multiple Fuel Usage and Slag Limitation
- D.1.12 Sulfur Dioxide (SO₂) Emissions and Sulfur Content
- D.1.13 Ash, Chlorine, and Lead Content

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

- D.1.14 Visible Emissions 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 Requirements
- D.1.18 Reporting Requirements

E.1. FACILITY OPERATION CONDITIONS 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 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.1.3 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

Certification Form.....38

Emergency Occurrence Form.....39

FESOP Quarterly Report Form.....41

FESOP Quarterly Report Form.....42

Multiple Fuel / Slag Usage Quarterly Report Form.....43

Quarterly Deviation and Compliance Monitoring Report Form.....45

Attachment A: Fugitive Dust Control Plan

Attachment B: New Source Performance Standards (NSPS) [40 CFR 60, Subpart I]

SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a portable drum hot mix asphalt plant.

Initial Source Address:	HWY 68, Dale, Indiana 47523
General Source Phone Number:	812-246-3359
SIC Code:	2951 (Asphalt Paving Mixtures and Blocks)
County Location:	Gibson (Columbia Township)
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

- (a) One (1) hot mix asphalt drum mixer/dryer, identified as EU-01, constructed in 1998, approved for modification in 2012, capable of processing a maximum of 450 tons per hour of raw material, equipped with one (1) 120 million British thermal units (MMBtu) per hour natural gas fired burner, using waste oil and #2 fuel oil as primary oil and #4 distillate fuel oil, propane, and natural gas as backup fuels, processing steel slag, and asbestos-free shingles in the aggregate mix; equipped with one (1) baghouse for particulate control and exhausting through one (1) stack, identified as stack SV-1. This source does not produce or use cold mix asphalt. No crushers are used.
- (b) Feeding, conveying and loading operations consisting of the following:
 - (1) Two (2) asphalt storage silos, rated at 200 tons;
 - (2) One (1) asphalt storage silos, rated at 100 tons;
 - (3) Twelve (12) storage piles, including:
 - (i) Two (2) reclaimed asphalt pavement (RAP) piles, total capacity 20,000 tons;
 - (ii) Five (5) lime stone aggregate pile, total capacity 156,000 tons;
 - (iii) One (1) sandstone pile, total capacity 2,000 tons;
 - (iv) Two (2) sand piles, total capacity 20,000 tons;
 - (v) One (1) steel slag pile, total capacity 6,000 tons;
 - (vi) One (1) recycle shingles (RAS) stockpile, total capacity 2,500 tons.
 - (4) Five (5) cold feed bins for coarse to fine aggregate;
 - (5) Two (2) Recycled Asphalt Cold Feed Bins;

- (6) Two (2) Blending Bins;
- (7) Four (4) conveyors, including:
 - (i) Three (3) transporting coarse to fine aggregate to the drum mixer;
 - (ii) One (1) transporting recycled asphalt pavement to the drum mixer;
- (c) One (1) 2.0 million British Thermal Units (MMBtu) per hour hot oil heater firing natural gas as the primary fuel and # 2 distillate fuel oil as the backup fuel, and exhausting to stack SV-2;
- (d) Three (3) storage tanks exhausting at stacks SV-3, SV-4, and SV-5, including:
 - (1) One (1) liquid asphalt storage tank, identified as Tank-01, with a capacity of 35,000 gallons; and
 - (2) One (1) #4 waste oil fuel storage tank, identified as Tank-02, with a capacity of 15,000 gallons.
 - (3) One (1) #2 diesel fuel storage tank, identified as Tank-03, with a capacity of 1,000 gallons.
- (e) One (1) 30,000 gallon liquid asphalt storage tank, identified as Tank-04.

Under 40 CFR 60, Subpart I, the above units are considered an affected source.

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) Process vessel degassing and cleaning to prepare for internal repairs.
- (b) Combustion related activities, space heaters, process heaters, or boilers including the following:
 - (1) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu/hr and firing fuel containing less than five-tenths (0.5) percent;
 - (2) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu/hr;
 - (3) Equipment powered by diesel fuel fired or natural gas fired internal combustion engines of capacity equal to or less than five hundred thousand (500,000) Btu/hour, except where total capacity of equipment operated by one stationary source exceeds two million (2,000,000) Btu/hour;
- (c) Combustion source flame safety purging on startup;
- (d) Air compressors and pneumatically operated equipment, including hand tools;
- (e) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per day or less.
- (f) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;

- (g) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings;
- (h) Cleaners and solvents characterized as follows:
 - (1) having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38°C (100°F) or;
 - (2) having a vapor pressure equal to or less than 0.7 kPa; 5 mm Hg; or 0.1psi measured at 20°C(68°F); the use of which for all cleaners and solvents combined does not exceed one hundred forty-five (145) gallons per twelve (12) months;
- (i) Activities related to ventilation, venting equipment and refrigeration;
- (j) Storage tanks, vessels, and containers holding or storing liquid substances that do not contain any VOC or HAP;
- (k) Pressurized storage tanks and associated piping for the Acetylenes and the Liquid petroleum gas (LPG);
- (l) Storage of drums containing maintenance raw materials;
- (m) The equipment related to manufacturing activities not resulting in the emission of HAPs, cutting torches, soldering equipments, welding equipment.
- (n) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;
- (o) portable dust collectors
- (p) Manual loading and unloading operations
- (q) A laboratory as defined in 326 IAC 2-7-1(21)(D);
- (r) Vehicle travel on paved roads, unpaved roads, and parking lots; and
- (s) Painting, including interior and exterior painting of buildings, and solvent use, excluding degreasing operations utilizing halogenated organic solvents.
- (t) Lubrication, including hand held spray can lubrication, dipping metal parts into lubricating oil, and manual or automated addition of cutting oil in machining operations.
- (u) Safety and emergency equipment, except engine driven fire pumps, including fire suppression systems and emergency road flares.
- (v) Closed loop heating and cooling systems;

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]

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

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

- (a) This permit, F147-29141-05167, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- (a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

- (b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:
- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

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

The Permittee shall implement the PMPs.

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

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

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

- (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 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
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 F147-29141-05167 and issued pursuant to permitting programs approved into the state implementation plan have been either:
- (1) incorporated as originally stated,
 - (2) revised, or

(3) deleted.

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

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

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

**B.15 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]

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

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

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

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

B.18 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) and (c) without a prior permit revision, if each of the following conditions is met:
- (1) The changes are not modifications under any provision of Title I of the Clean Air Act;
 - (2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
 - (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
 - (4) The Permittee notifies the:

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

and

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

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

- (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b)(1) and (c). The Permittee shall make such records available, upon reasonable request, for public review.

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

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

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

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]

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

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

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

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

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

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

Any such application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.22 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ no later than thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.23 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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.
 - (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 CO₂ equivalent emissions (CO₂e) 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 Condition 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, when the source is located in any County.

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

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least

thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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

C.9 Performance Testing [326 IAC 3-6]

- (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.10 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.11 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

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

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

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

C.13 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

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

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

C.14 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

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

C.15 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

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

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.
- (b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following:
 - (AA) All calibration and maintenance records.
 - (BB) All original strip chart recordings for continuous monitoring instrumentation.
 - (CC) Copies of all reports required by the FESOP.

Records of required monitoring information include the following:

- (AA) The date, place, as defined in this permit, and time of sampling or measurements.
- (BB) The dates analyses were performed.
- (CC) The company or entity that performed the analyses.
- (DD) The analytical techniques or methods used.
- (EE) The results of such analyses.
- (FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

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

C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.
- (b) The address for report submittal is:
- Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

Portable Source Requirement

C.19 Relocation of Portable Sources [326 IAC 2-14-4] [326 IAC 2-1.1-5]

- (a) This permit is approved for operation in all areas of Indiana except Lake County because of additional requirements for this county and except in severe and serious ozone nonattainment counties. Prior to relocate to Lake County and in severe and serious ozone nonattainment counties, the Permittee must submit a request and obtain a permit modification.
- (b) A request to relocate shall be submitted to IDEM, OAQ at least thirty (30) days prior to the intended date of relocation. This submittal shall include the following:

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

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

Stratospheric Ozone Protection

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

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) hot mix asphalt drum mixer/dryer, identified as EU-01, constructed in 1998, approved for modification in 2012, capable of processing a maximum of 450 tons per hour of raw material, equipped with one (1) 120 million British thermal units (MMBtu) per hour natural gas fired burner, using waste oil and #2 fuel oil as primary oil and #4 distillate fuel oil, propane, and natural gas as backup fuels, processing steel slag, and asbestos-free shingles in the aggregate mix; equipped with one (1) baghouse for particulate control and exhausting through one (1) stack, identified as stack SV-1. This source does not produce or use cold mix asphalt. No crushers are used.
- (b) Feeding, conveying and loading operations consisting of the following:
- (1) Two (2) asphalt storage silos, rated at 200 tons;
 - (2) One (1) asphalt storage silos, rated at 100 tons;
 - (3) Twelve (12) storage piles, including:
 - (i) Two (2) reclaimed asphalt pavement (RAP) piles, total capacity 20,000 tons;
 - (ii) Five (5) lime stone aggregate pile, total capacity 156,000 tons;
 - (iii) One (1) sandstone pile, total capacity 2,000 tons;
 - (iv) Two (2) sand piles, total capacity 20,000 tons;
 - (v) One (1) steel slag pile, total capacity 6,000 tons;
 - (vi) One (1) recycle shingles (RAS) stockpile, total capacity 2,500 tons.
 - (4) Five (5) cold feed bins for coarse to fine aggregate;
 - (5) Two (2) Recycled Asphalt Cold Feed Bins;
 - (6) Two (2) Blending Bins;
 - (7) Four (4) conveyors, including:
 - (i) Three (3) transporting coarse to fine aggregate to the drum mixer;
 - (ii) One (1) transporting recycled asphalt pavement to the drum mixer;
- (c) One (1) 2.0 million British Thermal Units (MMBtu) per hour hot oil heater firing natural gas as the primary fuel and # 2 distillate fuel oil as the backup fuel, and exhausting to stack SV-2;
- (d) Three (3) storage tanks exhausting at stacks SV-3, SV-4, and SV-5, including:
- (1) One (1) liquid asphalt storage tank, identified as Tank-01, with a capacity of 35,000 gallons; and
 - (2) One (1) #4 waste oil fuel storage tank, identified as Tank-02, with a capacity of 15,000 gallons.
 - (3) One (1) #2 diesel fuel storage tank, identified as Tank-03, with a capacity of 1,000 gallons.
- (e) One (1) 30,000 gallon liquid asphalt storage tank, identified as Tank-04;

Under 40 CFR 60, Subpart I, the above units are considered an affected source.

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

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

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

In order to render 326 IAC 2-2 not applicable;

- (a) the amount of asphalt processed shall not exceed 600,000 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 0.641 pounds per ton of asphalt processed.

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

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

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

- (a) The amount of asphalt processed shall not exceed 600,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The PM10 emissions from the dryer/mixer shall not exceed 0.275 pounds per ton of asphalt processed.
- (c) The PM2.5 emissions from the dryer/mixer shall not exceed 0.310 pounds per ton of asphalt processed.
- (d) The CO emissions from the dryer/mixer shall not exceed 0.130 pounds per ton of asphalt processed.
- (e) The VOC emissions from the dryer/mixer shall not exceed 0.032 pounds per ton of asphalt processed.

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

Compliance with the limit in (a) and (e) shall limit the PTE VOC from the dryer/mixer to less than twenty-five (25) tons per 12 consecutive month period and shall render 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities) not applicable.

D.1.3 Hazardous Air Pollutants (HAPs) [326 IAC 2-8-4] [326 IAC 2-4.1]

Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following fuel and feedstock limitations for fuels combusted in the dryer/mixer burner and feedstock used in the dryer/mixer:

- (a) The HCl emissions shall not exceed 13.2 pounds of HCl per 1,000 gallons of waste oil burned.
- (b) The waste oil combusted shall not contain more than 0.30% ash, 0.10% chlorine, and 0.1% Lead.
- (c) Only certified asbestos-free factory seconds, post consumer waste and/or factory seconds, shall be used as an additive in its aggregate mix.

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

D.1.4 FESOP Limits: NO_x, SO₂ and HCl Emission Limitations [326 IAC 2-8-4][326 IAC 2-2]
[326 IAC 2-4.1]

Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following fuel limitations combusted in the dryer/mixer burner:

(a) Sulfur Content Specifications

- (1) The sulfur content of No.2 and No.4 fuel oil shall not exceed 0.50 percent by weight.
- (2) The sulfur content of the waste fuel oil shall not exceed 0.50 percent by weight.
- (3) The sulfur content of the Steel slag shall not exceed 0.66 percent by weight.
- (4) The SO₂ emissions from the dryer/mixer shall not exceed 0.0014 pounds per ton of Steel slag processed in the aggregate mix.

(b) Single Fuel Usage and Slag Usage Limitations:

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

- (1) Natural gas usage shall not exceed 180 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 2,663,353 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 2,521,307 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (4) Propane usage shall not exceed 15,038,242 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (5) Waste oil usage shall not exceed 1,375,484 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (6) The Steel slag usage shall not exceed 12,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(c) Multiple Fuel Usage and Slag Usage Limitation:

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, emissions from the dryer/mixer shall be limited as follows:

- (1) NO_x emissions from the dryer/mixer shall be less than 97.75 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (2) SO₂ emissions from the dryer/mixer shall be less than 94.56 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (3) HCl emissions from the dryer/mixer burner shall not exceed 9.08 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

D.1.5 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-2]

Pursuant to 326 IAC 7-1.1-2, the Permittee shall comply with the following:

- (a) The sulfur dioxide (SO₂) emissions from the dryer/mixer burner shall not exceed five-tenths (0.5) pounds per MMBtu when using distillate oil.
- (b) The sulfur dioxide (SO₂) emissions from the dryer/mixer burner shall not exceed one and six tenths (1.6) pounds per MMBtu heat input when using residual oil.
- (c) Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

Note: No. 2 and No.4 fuel oil are considered distillate oil, and waste oil is considered residual oil.

D.1.6 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a), particulate emissions from the aggregate dryer/mixer and material conveying and handling operation, exhausting to Stack SV-1, shall not exceed 0.03 grain per dry standard cubic foot when operating in the counties listed in 326 IAC 6.5-1-1(a).

D.1.7 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]

Pursuant to 326 IAC 8-9-1(b), the storage tanks; Tank-01, Tank-02, Tank-03, and Tank-04 are subject to reporting and recordkeeping of the following information, when operating in Clark, Floyd, Porter Counties.

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

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

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 required by this condition. Preventive maintenance plan is attached as Attachment B.

Compliance Determination Requirements

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

In order to demonstrate compliance with Conditions D.1.1(b), D.1.2(b), and D.1.2(c), the Permittee shall perform PM, PM10, and PM2.5 testing for the aggregate dryer/mixer utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. PM10 and PM2.5 includes filterable and condensable particulate matter. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

D.1.10 Particulate Control

- (a) In order to comply with Conditions D.1.1(b), D.1.2(b), D.1.2(c) and D.1.6, the baghouse for the dryer/mixer shall be in operation and control emissions from the emission unit at all times when the dryer/mixer is in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.1.11 Multiple Fuel Usage and Slag Limitation

In order to comply with Condition D.1.4(c) 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, the Permittee shall limit fuel usage in the dryer/mixer burner according to the following formulas:

- (1) NO_x emissions from the dryer/mixer shall be less than 97.75 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

where:

N = tons of nitrogen oxide emissions for a 12-month consecutive period
G = million cubic feet of natural gas used in the last 12 months
O = gallons of No. 2 fuel oil used in last 12 months
F = gallons of No. 4 fuel oil used in last 12 months
P = gallons of Propane used in last 12 months
W = gallons of Waste oil used for last 12 months
E_G = 190 lb/million cubic feet of natural gas
E_O = 24 lb/1000 gallons of No. 2 fuel oil
E_F = 47 lb/1000 gallons of No. 4 fuel oil
E_W = 19 lb/1000 gallons of Waste oil
E_P = 13 lb/1000 gallons of Propane

- (2) SO₂ emissions from the dryer/mixer shall be less than 94.56 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

$$S = \frac{G(E_G) + O(E_O) + F(E_F) + W(E_W) + P(E_P) + T(E_T)}{2000 \text{ lbs/ton}}$$

where:

- S = tons of sulfur dioxide emissions for a 12-month consecutive period
- G = million cubic feet of natural gas used in the last 12 months
- O = gallons of No. 2 fuel oil used in last 12 months
- F = gallons of No. 4 fuel oil used in last 12 months
- W = gallons of Waste oil used in last 12 months
- P = gallons of Propane used in last 12 months
- T = tons of Steel slag used in last 12 months
- E_G = 0.60 lb/million cubic feet of natural gas
- E_O = 71.00 lb/1000 gallons of No. 2 fuel oil
- E_F = 75.00 lb/1000 gallons of No. 4 fuel oil
- E_W = 73.5 lb/1000 gallons of Waste oil
- E_P = 0.02 lb/1000 gallons of Propane
- E_T = 0.0014 lb/ton of Steel slag used

- (3) In order to comply with Condition D.1.4(c)(3) when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, the HCl emissions in the dryer/mixer burner shall be limited according to the following formulas:

$$\text{HCl} = \frac{W(E_W)}{2,000 \text{ lbs/ton}}$$

where:

- HCl = tons of Hydrogen Chloride emissions for twelve (12) month consecutive period
- W = gallons of waste oil used in the last 12 months
- E_W = 13.2 lb/1000 gallons of waste oil

D.1.12 Sulfur Dioxide (SO₂) Emissions and Sulfur Content

Steel Slag

- (a) Pursuant to 326 IAC 2-8-4 compliance with the Steel slag limitations established in Condition D.1.4(a)(3) shall be determined utilizing one of the following options.
- (1) Maintaining all records of vendor analyses or certifications of slag delivered; or
 - (2) Analyzing a sample of the Steel slag delivery if no vendor analyses or certifications are available, at least once per quarter, to determine the sulfur content of the Steel slag, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.
 - (3) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the one hundred twenty (120) million British thermal units 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.

Fuel Oil and Waste Oil

- (b) Pursuant to 326 IAC 2-8-4 compliance with the fuel limitations established in Conditions D.1.4(a)(1), D.1.4(a)(2), and D.1.5 shall be determined utilizing one of the following options.
- (A) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or
 - (B) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (i) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (ii) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
 - (C) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the one hundred twenty (120) million British thermal units 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.1.13 Ash, Chlorine, and Lead Content

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

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

D.1.14 Visible Emissions Notations

- (a) Daily visible emission notations of the aggregate dryer, mixer, and burner baghouse stack exhaust and the conveying, material transfer points, and screening shall be performed during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) 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. Failure to take response steps shall be considered a deviation from this permit.

D.1.15 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouse used in conjunction with the aggregate dryer/mixer, once per day when the process is in operation and venting to the atmosphere. When, for any one reading, the pressure drop across the baghouse is outside of the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 2.0 and 6.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions and 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 shall be considered a deviation from this permit.

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.

D.1.16 Broken or Failed Bag Detection

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

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

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

D.1.17 Record Keeping Requirements

- (a) To document the compliance status with Conditions D.1.1(a), and D.1.2(a), the Permittee shall keep records of the amount of asphalt processed through the dryer/mixer. Records necessary to demonstrate compliance shall be available within thirty (30) days of the end of each compliance period.
- (b) To document the compliance status with condition D.1.3(c) when shingles are used in the dryer/mixer, the Permittee shall maintain records:
 - (A) Shingle supplier certifications;
 - (B) The name of the shingle supplier(s);
 - (C) A statement from the shingle supplier(s) that certifies the asbestos content of the shingles from their company; and

- (D) 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
- (c) To document the compliance status with Conditions D.1.4(a)(3), D.1.4(a)(4), and D.1.4(b)(6), the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be complete and sufficient to establish compliance with the SO₂ emission limits established in Conditions D.1.4(a)(3) and D.1.4(a)(4) and D.1.4(b)(6).
- (1) Calendar dates covered in the compliance determination period;
 - (2) Actual slag usage, sulfur content and equivalent sulfur dioxide emission rates for all slag used at the source per month;
 - (3) A certification, signed by the owner or operator, that the records of the slag supplier certifications represent all of the slag used during the period; and
- If the slag supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:
- (4) Slag supplier certifications;
 - (5) The name of the slag supplier; and
 - (6) A statement from the slag supplier that certifies the sulfur content of the slag.
- (d) To document the compliance status with Conditions D.1.3(a), D.1.3(b), D.1.4(a)(1), D.1.4(a)(2), D.1.4(b)(1)- D.1.4(b)(5), and D.1.5, the Permittee shall maintain records in accordance with (1) through (7) below.
- (1) Calendar dates covered in the compliance determination period;
 - (2) Actual fuel usage, sulfur content, heat content, and equivalent sulfur dioxide emission for each fuel used at the source since the last compliance determination period;
 - (3) Actual waste oil ash, chlorine, and lead content, for waste oil used at the source since the last compliance determination period;
 - (4) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and
- If the fuel supplier certification is used to demonstrate compliance, the following, as a minimum, shall be maintained:
- (5) Fuel supplier certifications;
 - (6) The name of the fuel suppliers; and
 - (7) A statement from the fuel supplier that certifies the sulfur content of the No. 2 fuel oil, No. 4 fuel oil, and/or the Waste oil.

- (e) To document the compliance status with Conditions D.1.4(c) and D.1.11 when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, the Permittee shall maintain records of actual fuel usage, and equivalent nitrogen oxides and sulfur dioxide emission at the source since the last compliance determination period.
- (f) To document the compliance status with Condition D.1.14, the Permittee shall maintain daily records of the visible emission notations from stack (SV-1) exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the plant did not operate that day).
- (g) To document the compliance status with Condition D.1.15, the Permittee shall maintain the daily records of the pressure drop across the baghouse controlling the dryer/mixer. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g., the dryer/mixer did not operate that day).
- (h) Section C - General Record Keeping Requirements, contains the Permittee's obligation with regard to the records required by this condition.

D.1.18 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1(a), D.1.2(a), D.1.4(b), and D.1.4(c), 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 meet the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) hot mix asphalt drum mixer/dryer, identified as EU-01, constructed in 1998, approved for modification in 2012, capable of processing a maximum of 450 tons per hour of raw material, equipped with one (1) 120 million British thermal units (MMBtu) per hour natural gas fired burner, using waste oil and #2 fuel oil as primary oil and #4 distillate fuel oil, propane, and natural gas as backup fuels, processing steel slag and asbestos-free shingles in the aggregate mix; equipped with one (1) baghouse for particulate control and exhausting through one (1) stack, identified as stack SV-1. This source does not produce or use cold mix asphalt. No crushers are used.
- (b) Feeding, conveying and loading operations consisting of the following:
- (1) Two (2) asphalt storage silos, rated at 200 tons;
 - (2) One (1) asphalt storage silos, rated at 100 tons;
 - (3) Twelve (12) storage piles, including:
 - (i) Two (2) reclaimed asphalt pavement (RAP) piles, total capacity 20,000 tons;
 - (ii) Five (5) lime stone aggregate pile, total capacity 156,000 tons;
 - (iii) One (1) sandstone pile, total capacity 2,000 tons;
 - (iv) Two (2) sand piles, total capacity 20,000 tons;
 - (v) One (1) steel slag pile, total capacity 6,000 tons;
 - (vi) One (1) recycle shingles (RAS) stockpile, total capacity 2,500 tons.
 - (4) Five (5) cold feed bins for coarse to fine aggregate;
 - (5) Two (2) Recycled Asphalt Cold Feed Bins;
 - (6) Two (2) Blending Bins;
 - (7) Four (4) conveyors, including:
 - (i) Three (3) transporting coarse to fine aggregate to the drum mixer;
 - (ii) One (1) transporting recycled asphalt pavement to the drum mixer;
- (c) One (1) 2.0 million British Thermal Units (MMBtu) per hour hot oil heater firing natural gas as the primary fuel and # 2 distillate fuel oil as the backup fuel, and exhausting to stack SV-2;
- (d) Three (3) storage tanks exhausting at stacks SV-3, SV-4, and SV-5, including:
- (1) One (1) liquid asphalt storage tank, identified as Tank-01, with a capacity of 35,000 gallons; and
 - (2) One (1) #4 waste oil fuel storage tank, identified as Tank-02, with a capacity of 15,000 gallons.
 - (3) One (1) #2 diesel fuel storage tank, identified as Tank-03, with a capacity of 1,000 gallons.
- (e) One (1) 30,000 gallon liquid asphalt storage tank, identified as Tank-04;

Under 40 CFR 60, Subpart I, the above units are considered an affected source.

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

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

E.1.1 General Provisions Relating to 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]

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

E.1.3 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

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

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

Source Name: Gohmann Asphalt & Construction Inc. (Portable)
Initial Source Address: HWY 68, Dale, Indiana 47523
FESOP Permit No.: F147-29141-05167

<p>This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.</p> <p>Please check what document is being certified:</p> <p><input type="checkbox"/> Annual Compliance Certification Letter</p> <p><input type="checkbox"/> Test Result (specify)_____</p> <p><input type="checkbox"/> Report (specify)_____</p> <p><input type="checkbox"/> Notification (specify)_____</p> <p><input type="checkbox"/> Affidavit (specify)_____</p> <p><input type="checkbox"/> Other (specify)_____</p>

<p>I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.</p>
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: Gohmann Asphalt & Construction Inc. (Portable)
Initial Source Address: HWY 68, Dale, Indiana 47523
FESOP Permit No.: F147-29141-05167

This form consists of 2 pages

Page 1 of 2

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

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

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

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

Page 2 of 2

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

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

FESOP Quarterly Report

Source Name: Gohmann Asphalt & Construction Inc. (Portable)
 Initial Source Address: HWY 68, Dale, Indiana 47523
 FESOP Permit No.: F147-29141-05167
 Facility: Dryer/Burner (EU-01)
 Parameter: Hot Mix Asphalt Production
 Limit: The amount of hot mix asphalt produced in the dryer/burner shall not exceed 600,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1	Hot Mix Asphalt Produced This Month (tons)	Hot Mix Asphalt Produced Previous 11 Months (tons)	12 Month Total Hot Mix Asphalt Produced (tons)
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: Gohmann Asphalt & Construction Inc. (Portable)
Initial Source Address: HWY 68, Dale, Indiana 47523
FESOP Permit No.: F147-29141-05167
Facility: EU-01
Parameters: Nitrogen Oxides (NO_x) and Sulfur Dioxide (SO₂) Emissions
Limit: Nitrogen oxides (NO_x) emissions from dryer/mixer shall be less than 97.75 tons per twelve (12) consecutive month period based on the following equation:

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

where:

N = tons of nitrogen oxide emissions for a 12-month consecutive period
G = million cubic feet of natural gas used in the last 12 months
O = gallons of No. 2 fuel oil used in last 12 months
F = gallons of No. 4 fuel oil used in last 12 months
P = gallons of Propane used in last 12 months
W = gallons of Waste oil used for last 12 months
E_G = 190 lb/million cubic feet of natural gas
E_O = 24 lb/1000 gallons of No. 2 fuel oil
E_F = 47 lb/1000 gallons of No. 4 fuel oil
E_W = 19 lb/1000 gallons of Waste oil
E_P = 13 lb/1000 gallons of Propane

Limit: SO₂ emissions from the dryer/mixer shall be less than 94.56 tons per twelve (12) consecutive month period based on the following equation:

$$S = G(E_G) + O(E_O) + F(E_F) + W(E_W) + P(E_P) + T(E_T)$$

where:

S = tons of sulfur dioxide emissions for a 12-month consecutive period
G = million cubic feet of natural gas used in the last 12 months
O = gallons of No. 2 fuel oil used in last 12 months
F = gallons of No. 4 fuel oil used in last 12 months
W = gallons of Waste oil used in last 12 months
P = gallons of Propane used in last 12 months
T = tons of Steel slag used in last 12 months
E_G = 0.60 lb/million cubic feet of natural gas
E_O = 71.00 lb/1000 gallons of No. 2 fuel oil
E_F = 75.00 lb/1000 gallons of No. 4 fuel oil
E_W = 73.5 lb/1000 gallons of Waste oil
E_P = 0.02 lb/1000 gallons of Propane
E_T = 0.0014 lb/ton of Steel slag used

Limit: HCl emissions in the dryer/mixer burner shall be less than 9.08 tons per twelve (12) consecutive month period based on the following equation:

$$\text{HCl} = \frac{W(E_W)}{2,000 \text{ lbs/ton}}$$

where:

HCl = tons of Hydrogen Chloride emissions for twelve (12) month consecutive period
W = gallons of waste oil used in the last 12 months
E_W = 13.2 lb/1000 gallons of waste oil

Multiple Fuel / Slag Usage Quarterly Report

QUARTER: _____ YEAR: _____ Page 2 of 2

Month		Column 1	Column 2	Column 1 +Column 2	Equation Results
	Fuel Types / Slag (units)	Usage This Month	Usage Previous 11 Months	Usage 12 Month Total	Emissions (tons per 12 months)
Month 1	Natural Gas (million cubic feet)				Nitrogen Oxides = Sulfur Dioxide = Hydrogen Chloride =
	No. 2 Fuel Oil (gallons)				
	No. 4 Fuel Oil (gallons)				
	Waste Fuel Oil (gallons)				
	Propane(gallons)				
	Steel Slag Usage (tons)				
Month 2	Natural Gas (million cubic feet)				Nitrogen Oxides = Sulfur Dioxide = Hydrogen Chloride =
	No. 2 Fuel Oil (gallons)				
	No. 4 Fuel Oil (gallons)				
	Waste Fuel Oil (gallons)				
	Propane(gallons)				
	Steel Slag Usage (tons)				
Month 3	Natural Gas (million cubic feet)				Nitrogen Oxides = Sulfur Dioxide = Hydrogen Chloride =
	No. 2 Fuel Oil (gallons)				
	No. 4 Fuel Oil (gallons)				
	Waste Fuel Oil (gallons)				
	Propane(gallons)				
	Steel Slag Usage (tons)				

No deviation occurred in this reporting period. Submitted by: _____ Date: _____

Deviation/s occurred in this reporting period. Title / Position: _____ Phone: _____

Deviation has been reported on: _____ Signature: _____

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

FESOP Quarterly Report

Source Name: Gohmann Asphalt & Construction Inc. (Portable)
 Initial Source Address: HWY 68, Dale, Indiana 47523
 FESOP Permit No.: F147-29141-05167
 Facility: EU-01
 Parameters: Single Fuel Usage in Dryer/Mixer Burner
 Limits: When combusting only one type of fuel per twelve (12) consecutive month period in the dryer/mixer burner, in conjunction with the use of slag in the aggregate mix, fuel and slag usage shall not exceed the following:

Fuel Type (Units)	Fuel Usage Limit
Natural Gas (million cubic feet)	180.0
No. 2 Distillate Fuel Oil (gallons)	2,663,353
No. 4 Distillate Fuel Oil (gallons)	2,521,307
Waste Oil (gallons)	1,375,484
Propane (gallons)	15,038,242
Steel Slag (tons)	12,000

QUARTER _____ YEAR: _____

Month		Column 1	Column 2	Column 1 +Column 2
	Fuel Types / Slag (units)	Usage This Month	Usage Previous 11 Months	Usage 12 Month Total
Month 1	Natural Gas (million cubic feet)			
	No. 2 Fuel Oil (gallons)			
	No. 4 Fuel Oil (gallons)			
	Waste Fuel Oil (gallons)			
	Propane(gallons)			
	Steel Slag Usage (tons)			
Month 2	Natural Gas (million cubic feet)			
	No. 2 Fuel Oil (gallons)			
	No. 4 Fuel Oil (gallons)			
	Waste Fuel Oil (gallons)			
	Propane(gallons)			
	Steel Slag Usage (tons)			
Month 3	Natural Gas (million cubic feet)			
	No. 2 Fuel Oil (gallons)			
	No. 4 Fuel Oil (gallons)			
	Waste Fuel Oil (gallons)			
	Propane(gallons)			
	Steel Slag Usage (tons)			

No deviation occurred in this reporting period. Submitted by: _____ Date: _____

Deviation/s occurred in this reporting period. Title / Position: _____ Phone: _____

Deviation has been reported on: _____ Signature: _____

**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: Gohmann Asphalt & Construction Inc. (Portable)
 Initial Source Address: HWY 68, Dale, Indiana 47523
 FESOP Permit No.: F147-29141-05167

Months: _____ **to** _____ **Year:** _____

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

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

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

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

Source Description and Location

Source Name:	Gohmann Asphalt & Construction, Inc. (Portable)
Initial Source Location:	I-64 and SR 231, Dale, Indiana 47523
Current Source Location:	12380 E County Road 50 N, Oakland City, Indiana 47660
Current County:	Gibson (Columbia Township)
SIC Code:	2951 (Asphalt Paving Mixtures and Blocks)
Operation Permit No.:	F 147-29141-05167
Operation Permit Issuance Date:	November 16, 2010
Significant Permit Revision No.:	051-31690-05167
Permit Reviewer:	Renee Traivaranon

On April 4, 2012, the Office of Air Quality (OAQ) received an application from Gohmann Asphalt & Construction, Inc. related to a modification to an existing portable asphalt plant.

Existing Approvals

The source was issued a FESOP Renewal No. F 147-29141-05167 on November 16, 2010. The source has since received a relocation approval No. 051-30850-05167, issued on September 8, 2012.

County Attainment Status

The source is located in Gibson County.

Pollutant	Designation
SO ₂	Cannot be classified.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective October 27, 2011, for the Montgomery Twp for PM _{2.5} . The remainder of Gibson County is unclassifiable or attainment effective April 5, 2005, for PM _{2.5} .	

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

- (b) **PM_{2.5}**
Gibson County has been classified as attainment for PM_{2.5}. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM_{2.5} 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_{2.5} significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct PM_{2.5} and SO₂ 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**
Gibson County has been classified as attainment or unclassifiable in Indiana for all other pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

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

Status of the Existing Source

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

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Process Description	Potential to Emit of the Entire Source After Issuance of the FESOP (tons/year) Limited/Controlled Potential Emissions								
	Criteria Pollutants							Hazardous Air Pollutants	
	PM	PM10*	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Ducted Emissions									
Fuel Combustion (worst case)	24.70	19.68	19.68	94.55	97.75	7.52	56.39	17.03	8.49 HCl
Dryer/Mixer	192.5	82.54	93.11	17.40	16.50	9.60	39.0	3.20	0.93 HCOH
Dryer/Mixer Slag Processing	-	-	-	0.0084	-	-	-	-	-
Hot Oil Heater	0.13	0.21	0.21	4.44	1.25	0.05	0.74	0.02	0.016 Hexane
Worst Case Emissions	192.6	82.75	93.32	99.00	99.00	9.65	57.13	17.05	8.49 HCl
Fugitive Emissions									
Asphalt Load-Out, Silo Filling, On-Site Yard	0.33	0.33	0.33	-	-	5.14	0.86	0.09	0.03 HCOH
Material Storage Piles	1.85	0.65	0.65	-	-	-	-	-	-
Material Processing and Handling	1.94	0.92	0.14	-	-	-	-	-	-
Material Crushing, Screening, and Conveying	9.52	3.48	3.48	-	-	-	-	-	-
Paved and Unpaved Roads (worst case)	42.68	10.88	1.09	-	-	-	-	-	-
Cold Mix Asphalt Production	-	-	-	-	-	-	-	-	-
Gasoline Dispensing	-	-	-	-	-	-	-	-	-
**Volatile Organic Liquid Storage Vessels	-	-	-	-	-	negl.	-	negl.	negl.
Total Fugitive Emissions	56.32	16.25	5.68	-	-	5.14	0.86	0.09	0.03 HCOH
Totals Limited/Controlled Emissions	249	99.00	99.00	99.00	99.00	14.79	57.99	17.14	8.49 HCl
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	NA	250	250	250	250	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA 0	100	NA	NA	NA	N/A	N/A	N/A
(1) PTE after Production Limitation. negl. = negligible * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. ** 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.									

Note: The above table of the emissions are based upon TSD of the FESOP No. F147-29141-05167, issued on November 16, 2010.

- (a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(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) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) greenhouse gases (GHGs) is less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year.

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by Gohmann Asphalt & Construction, Inc. on April 2, 2012, requesting to add asbestos-free shingles to the aggregate mix and to add cold feed bins, blending bins, liquid storage tank and to increase the size of the stockpiles to the source.

The following is an existing list of emission units, control devices and Insignificant Activities as they are currently listed in the permit:

- (a) One (1) hot mix asphalt drum mixer/dryer, identified as EU-01, constructed in 1998, capable of processing a maximum of 450 tons per hour of raw material, equipped with one (1) 120 million British thermal units (MMBtu) per hour natural gas fired burner, using waste oil and #2 fuel oil as primary oil and #4 distillate fuel oil, propane, and natural gas as backup fuels, processing steel slag, in the aggregate mix; equipped with one (1) baghouse for particulate control and exhausting through one (1) stack, identified as stack SV-1. This source does not produce or uses cold mix asphalt and no shingles are used at this source. No crushers are used.

Under 40 CFR 60, Subpart I, this hot mix asphalt plant is considered an affected facility.

- (b) Feeding, conveying and loading operations consisting of the following:
- (1) Two (2) asphalt storage silos, rated at 200 tons;
 - (2) One (1) asphalt storage silos, rated at 100 tons;
 - (3) Fifteen (15) storage piles, including:
 - (i) Five (5) reclaimed asphalt pavement (RAP) piles, total capacity 5,500 tons;
 - (ii) Five (5) lime stone pile, total capacity 15,000 tons;
 - (iii) One (1) sandstone pile, total capacity 2,000 tons;
 - (iv) Three (3) sand pile, total capacity 6,600 tons;
 - (v) One (1) steel slag pile, total capacity 6,000 tons;
 - (4) Five (5) cold feed bins for coarse to fine aggregate;
 - (5) Four (4) conveyors, including:
 - (i) Three (3) transporting coarse to fine aggregate to the drum mixer;
 - (ii) One (1) transporting recycled asphalt pavement to the drum mixer;
- (c) One (1) 2.0 million British Thermal Units (MMBtu) per hour hot oil heater firing natural gas as the primary fuel and # 2 distillate fuel oil as the backup fuel, and exhausting to stack SV-2;
- (d) Three (3) storage tanks exhausting at stacks SV-3, SV-4, and SV-5, including:
- (1) One (1) liquid asphalt storage tank, identified as Tank-01, with a capacity of 35,000 gallons; and

- (3) One (1) #4 waste oil fuel storage tank, identified as Tank-02, with a capacity of 15,000 gallons.
- (3) One (1) #2 diesel fuel storage tank, identified as Tank-03, with a capacity of 1,000 gallons.

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) Process vessel degassing and cleaning to prepare for internal repairs.
- (b) Combustion related activities, space heaters, process heaters, or boilers including the following;
 - (1) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu/hr and firing fuel containing less than five-tenths (0.5) percent;
 - (2) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu/hr;
 - (3) Equipment powered by diesel fuel fired or natural gas fired internal combustion engines of capacity equal to or less than five hundred thousand (500,000) Btu/hour, except where total capacity of equipment operated by one stationary source exceeds two million (2,000,000) Btu/hour;
- (c) Combustion source flame safety purging on startup;
- (d) Air compressors and pneumatically operated equipment, including hand tools;
- (e) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per day or less.
- (f) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;
- (g) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings;
- (h) Cleaners and solvents characterized as follows:
 - (1) having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38°C (100°F) or;
 - (2) having a vapor pressure equal to or less than 0.7 kPa; 5 mm Hg; or 0.1psi measured at 20°C(68°F); the use of which for all cleaners and solvents combined does not exceed one hundred forty-five (145) gallons per twelve (12) months;
- (i) Activities related to ventilation, venting equipment and refrigeration;
- (j) Storage tanks, vessels, and containers holding or storing liquid substances that do not contain any VOC or HAP;
- (k) Pressurized storage tanks and associated piping for the Acetylenes and the Liquid petroleum gas (LPG);
- (l) Storage of drums containing maintenance raw materials;

- (m) The equipment related to manufacturing activities not resulting in the emission of HAPs, cutting torches, soldering equipments, welding equipment.
- (n) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;
- (o) portable dust collectors
- (p) Manual loading and unloading operations
- (q) A laboratory as defined in 326 IAC 2-7-1(21)(D);
- (r) Vehicle travel on paved roads, unpaved roads, and parking lots; and
- (s) Painting, including interior and exterior painting of buildings, and solvent use, excluding degreasing operations utilizing halogenated organic solvents.
- (t) Lubrication, including hand held spray can lubrication, dipping metal parts into lubricating oil, and manual or automated addition of cutting oil in machining operations.
- (u) Safety and emergency equipment, except engine driven fire pumps, including fire suppression systems and emergency road flares.
- (v) Closed loop heating and cooling systems;

The following is a list of the modified emission units:

- (a) One (1) hot mix asphalt drum mixer/dryer, identified as EU-01, constructed in 1998, **approved for modification in 2012**, capable of processing a maximum of 450 tons per hour of raw material, equipped with one (1) 120 million British thermal units (MMBtu) per hour natural gas fired burner, using waste oil and #2 fuel oil as primary oil and #4 distillate fuel oil, propane, and natural gas as backup fuels, processing steel slag, **and asbestos-free shingles** in the aggregate mix; equipped with one (1) baghouse for particulate control and exhausting through one (1) stack, identified as stack SV-1. This source does not produce or uses cold mix asphalt ~~and no shingles are used at this source.~~ No crushers are used.

(Shingles are added to the aggregate mix of the hot mix asphalt drum mixer/dryer in this revision.)

- (b) ~~Fifteen (15)~~ **Twelve (12)** storage piles, including:
 - (i) ~~Five (5)~~ **Two (2)** reclaimed asphalt pavement (RAP) piles, total capacity ~~5,500~~ **20,000** tons;
 - (ii) Five (5) lime stone **aggregate** pile, total capacity ~~45,000~~ **156,000** tons;
 - (iii) One (1) sandstone pile, total capacity 2,000 tons;
 - (iv) ~~Three (3)~~ **Two (2)** sand piles, total capacity ~~6,600~~ **20,000** tons;
 - (v) One (1) steel slag pile, total capacity 6,000 tons;
 - (vi) **One (1) recycle shingles (RAS) stockpile, total capacity 2,500 tons.**

The following is a list of the new emission units:

- (a) One (1) 30,000 gallon liquid asphalt storage tank, identified as Tank-04.
- (b) Two (2) Recycled Asphalt Cold Feed Bins.
- (c) Two (2) Blending Bins.
(Note: These bins are for blending raw materials without agitation)

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted emission units during this review.

Enforcement Issues

There are no pending enforcement actions related to this revision.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – FESOP Revision

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

Process/ Emission Unit	PTE of Proposed Revision (tons/year)									
	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e	Total HAPs	Worst Single HAP
Shingle And Aggregate Storage Piles	0.46	0.16	0.16	0	0	0	0	0	0	0
Shingle Processing and Handling	1.99	0.7	0.6	0	0	0	0	0	0	0
Shingle Screening and Conveying	0.4	0.2	0.03	0	0	0	0	0	0	0
Unpaved and Paved Roads (worst case)	82.5	21.0	2.1	0	0	0	0	0	0	0
Tank -04	-	-	-	-	-	neg	-	-	neg	neg
Total PTE of Revision	85.4	22.1	2.9	0	0	0	0	0	0	0
See detail calculation in Appendix A.1, pages 1, 14, 16, 17, and 18 of 20										

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

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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 ~~strike through~~ values.

Process Description	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)									
	PM	PM10*	PM2.5	SO2	NOx	VOC	CO	GHGs as CO ₂ e***	Total HAPs	Worst Single HAP
Ducted Emissions										
Fuel Combustion (worst case)	24.70 13.20	49.68 10.52	49.68 10.52	94.55 94.55	97.75 97.75	7.52 7.52	56.39	96,181.88	17.03 13.41	8.49 9.08 HCl
Dryer/Mixer	492.5 192.31	82.54 82.57	93.14 93.12	17.40	16.50	9.60	39.0	9,976	3.20	0.93 HCOH
Dryer/Mixer Slag Processing	-	-	-	0.001	-	-	-	-	-	-
Hot Oil Heater	0.13	0.21	0.21	4.44	1.25	0.05	0.74	1,141.19	0.02	0.016 Hexane
Worst Case Emissions	492.6 192.44	82.75 82.77	93.32 93.33	99.00	99.00	9.65	57.13	97,569.07	17.05 13.43	8.49 9.08 HCl
Fugitive Emissions										
Asphalt Load-Out, Silo Filling, On-Site Yard	0.33 0.16	0.33 0.16	0.33 0.16	-	-	5.14 1.48	0.86 0.51	-	0.09 0.03	0.03 0.01 HCOH
Material Storage Piles	4.85 2.31	0.65 0.81	0.65 0.81	-	-	-	-	-	-	-
Material Processing and Handling	1.94	0.92	0.14	-	-	-	-	-	-	-
Material Crushing, Screening, and Conveying	9.52	3.48	3.48	-	-	-	-	-	-	-
Paved and Unpaved Roads (worst case)	42.68 42.63	40.88 10.87	1.09	-	-	-	-	-	-	-
Cold Mix Asphalt Production	-	-	-	-	-	-	-	-	-	-
Gasoline Dispensing	-	-	-	-	-	-	-	-	-	-
**Volatile Organic Liquid Storage Vessels	-	-	-	-	-	negl.	-	-	negl.	negl.
Total Fugitive Emissions	56.32 56.56	46.25 16.23	5.68 5.67	-	-	5.14 1.48	0.86 0.51	-	0.09 0.03	0.03 0.01 HCOH
Totals Limited/Controlled Emissions	249	99.00	99.00	99.00	99.00	14.79 11.13	57.99 57.64	97,569.07	17.14 13.47	8.49 9.08 HCl
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	NA	NA
Emission Offset/Nonattainment NSR Major Source Thresholds	NA	NA-0	NA 100	NA	NA	NA	NA	NA	NA	NA

(1) PTE after Production Limitation.

negl. = negligible

* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

** 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.

***** 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.**

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 Description	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)									
	PM	PM10*	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e***	Total HAPs	Worst Single HAP
Ducted Emissions										
Fuel Combustion (worst case)	13.20	10.52	10.52	94.55	97.75	7.52	56.39	96,181.88	13.41	9.08 HCl
Dryer/Mixer	192.31	82.57	93.57	17.40	16.50	9.60	39.0	9,976	3.20	0.93 HCOH
Dryer/Mixer Slag Processing	-	-	-	0.001	-	-	-	-	-	-
Hot Oil Heater	0.13	0.21	0.21	4.44	1.25	0.05	0.74	1,141.19	0.02	0.016 Hexane
Worst Case Emissions	192.44	82.77	93.33	99.00	99.00	9.65	57.13	97.569.07	13.43	9.08 HCl
Fugitive Emissions										
Asphalt Load-Out, Silo Filling, On-Site Yard	0.16	0.16	0.16	-	-	1.48	0.51	-	0.03	0.01 HCOH
Material Storage Piles	2.31	0.81	0.81	-	-	-	-	-	-	-
Material Processing and Handling	1.94	0.92	0.14	-	-	-	-	-	-	-
Material Crushing, Screening, and Conveying	9.52	3.48	3.48	-	-	-	-	-	-	-
Paved and Unpaved Roads (worst case)	42.63	10.87	1.09	-	-	-	-	-	-	-
Cold Mix Asphalt Production	-	-	-	-	-	-	-	-	-	-
Gasoline Dispensing	-	-	-	-	-	-	-	-	-	-
**Volatile Organic Liquid Storage Vessels	-	-	-	-	-	negl.	-	-	negl.	negl.
Total Fugitive Emissions	56.56	16.23	5.67	-	-	1.48	0.51	-	0.03	0.01 HCOH
Totals Limited/Controlled Emissions	249	99.00	99.00	99.00	99.00	11.13	57.64	97.569.07	13.47	9.08 HCl
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	NA	NA

negl. = negligible

* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

** 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.

*** 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.

(a) FESOP Status

This revision to an existing Title V minor stationary source will not change the minor status,

because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP).

- (A) In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the source shall comply with the following:
- (1) The amount of hot-mix asphalt processed from the aggregate mixing and drying operation shall not exceed 600,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is an existing requirement for the source.*
 - (2) PM10 emissions from dryer/mixer shall not exceed 0.275 pounds per ton of asphalt processed. *This is an existing requirement for the source.*
 - (3) PM2.5 emissions from dryer/mixer shall not exceed 0.310 pounds per ton of asphalt processed. *This is an existing requirement for the source.*
 - (4) The VOC emissions from the dryer/mixer shall not exceed 0.032 pounds per ton of asphalt processed. *This is an existing requirement for the source.*
 - (5) The CO emissions from the dryer/mixer shall not exceed 0.130 pounds per ton of asphalt processed. *This is an existing requirement for the source.*

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

Compliance with the limit in (1) and (4) is also limited the PTE VOC from the dryer/mixer burner to less than twenty-five (25) tons per 12 consecutive month period and render 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities) not applicable.

- (B) In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the fuels and slag specifications and usages shall be limited as follows:
- (1) Fuel and Slag Specifications
 - (a) The sulfur content of the No. 2 distillate fuel oil combusted in the dryer burner shall not exceed 0.50% by weight. *This is an existing requirement for the source.*
 - (b) The sulfur content of the No. 4 distillate fuel oil combusted in the dryer burner shall not exceed 0.50% by weight. *This is an existing requirement for the source.*
 - (c) The sulfur content of the waste oil shall not exceed 0.50% by weight. *This is an existing requirement for the source.*
 - (d) The waste oil combusted in the dryer burner shall not contain more than 0.30% ash, 0.10% chlorine, and 0.10% lead. *This is an existing requirement for the source.*

- (e) The HCl emissions shall not exceed 13.2 pounds of HCl per 1,000 gallons of waste oil burned. *This is a change from 6.6 pounds of HCl per 1,000 gallons of waste oil. This is a Title I change.*
- (f) The sulfur content of the Steel slag shall not exceed 0.66% by weight. *This is an existing requirement for the source.*
- (g) The SO₂ emissions from the dryer/mixer shall not exceed 0.0014 pounds per ton of Steel slag processed in the aggregate mix. *This is an existing requirement for the source.*

(2) Single Fuel and Slag Usage Limitations:

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

- (a) Natural gas usage in the dryer/mixer burner shall not exceed 180 million cubic feet (MMCF) per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is an existing requirement for the source.*
- (b) No. 2 fuel oil usage in the dryer/mixer burner shall not exceed 2,663,353 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is an existing requirement for the source.*
- (c) No. 4 fuel oil usage in the dryer/mixer burner shall not exceed 2,521,307 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is an existing requirement for the source.*
- (d) Propane usage in the dryer/mixer burner shall not exceed 15,038,242 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is an existing requirement for the source.*
- (e) Waste oil usage in the dryer/mixer burner shall not exceed 1,375,484 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a change from 2,572,763 gallons. This is a Title I change.*
- (f) The Steel slag usage shall not exceed 12,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is an existing requirement for the source.*

Note: The source is only permitted to burn the above-mentioned fuels in the dryer/mixer burner.

(3) Multiple Fuel and Slag Usage Limitation:

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

- (a) SO₂ emissions from the dryer/mixer burner, in conjunction with the use of slag in the aggregate mix, shall not exceed 94.56 tons per twelve (12) consecutive month period, with compliance determined at the end of

each month. *This is a change from 94.55 tons per twelve (12) consecutive month period. This is a Title I change.*

$$\text{SO}_2 = 94.55 + 0.01 = 94.56 \text{ tons/year}$$

The following equation shall be used to calculate SO₂ emissions:

$$S = \frac{G(E_G) + O(E_O) + F(E_F) + W(E_W) + P(E_P) + T(E_T)}{2000 \text{ lbs/ton}}$$

where:

S= tons of sulfur dioxide emissions for a 12-month consecutive period

G= million cubic feet of natural gas used in the last 12 months

O= gallons of No. 2 fuel oil used in last 12 months

F= gallons of No. 4 fuel oil used in last 12 months

W= gallons of Waste oil used in last 12 months

P= gallons of Propane used in last 12 months

T= tons of Steel slag used in last 12 months

E_G= 0.60 lb/million cubic feet of natural gas

E_O= 71.00 lb/1000 gallons of No. 2 fuel oil

E_F= 75.00 lb/1000 gallons of No. 4 fuel oil

E_W= 73.5 lb/1000 gallons of Waste oil

E_P= 0.02 lb/1000 gallons of Propane

E_T= 0.0014 lb/ton of Steel slag used

- (b) NO_x emissions from the dryer/mixer burner, shall not exceed 97.75 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

This is an existing requirement for the source.

The following equation shall be used to calculate NO_x emissions:

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

where:

N = tons of nitrogen oxide emissions for a 12-month consecutive period

G = million cubic feet of natural gas used in the last 12 months

O = gallons of No. 2 fuel oil used in last 12 months

F = gallons of No. 4 fuel oil used in last 12 months

P = gallons of Propane used in last 12 months

W = gallons of Waste oil used for last 12 months

E_G= 190 lb/million cubic feet of natural gas

E_O= 24 lb/1000 gallons of No. 2 fuel oil

E_F= 47 lb/1000 gallons of No. 4 fuel oil

E_P= 13 lb/1000 gallons of Propane

E_W= 19 lb/1000 gallons of Waste oil

- (c) HCl emissions from the dryer/mixer burner shall not exceed 9.08 tons 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.*

The following equation shall be used to calculate HCl emissions:

$$\text{HCI} = \frac{W(E_w)}{2,000 \text{ lbs/ton}}$$

where:

HCI = tons of Hydrogen Chloride emissions for twelve (12) month consecutive period

W = gallons of waste oil used in the last 12 months

E_w = 13.2 lb/1000 gallons of waste oil

Compliance with these limits, combined with the potential to emit SO₂, NO_x, and HAPs from all other emission units at this source, shall limit the source-wide total potential to emit of SO₂ and NO_x 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 of 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable.

(C) Asphalt Shingle Usage Limitation

To render the 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable, the Permittee shall only use certified asbestos-free recycled shingles, post consumer waste and/or factory seconds, as an additive in its aggregate mix.

(b) PSD Minor Source

This revision 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.

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 amount of asphalt processed shall not exceed 600,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is an existing requirement for the source.*
- (b) The PM emissions from the dryer/mixer shall not exceed 0.641 pounds per ton of asphalt processed. *This is a change from 0.642 pound PM10 per ton of asphalt processed. This is a Title I change.*

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

- (c) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) greenhouse gases (GHGs) is less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) This drum hot-mix asphalt plant, is subject to the New Source Performance Standard for Hot-mix

Asphalt Facilities (40 CFR 60.90, Subpart I), which is incorporated by reference as 326 IAC 12, because it meets the definition of a hot-mix asphalt facility pursuant to the rule and it was constructed after June 11, 1973.

The dryer/mixer is subject to the following portions of 40 CFR 60, Subpart I:

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

Nonapplicable portions of the NSPS will not be included in the permit.

The provisions of 40 CFR 60 Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the dryer/mixer except when otherwise specified in 40 CFR 60 Subpart I.

This is an existing requirement.

(b) 40 CFR 60, Subpart Dc - Standards for Small Industrial/Commercial/Institutional Steam Generating Units

The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc (326 IAC 12), are not included in this renewal, because this source does not have boilers.

(c) 40 CFR 60, Subpart Kb - Standards for Volatile Organic Liquid Storage Vessels

(1) 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 this permit because although the storage Tank-01 and Tank-04, each has a maximum capacity greater than 75 m³ (19,813 gallons) and less than 151 m³ (39,890 gallons), but the liquid stored in each tank has a true maximum vapor pressure of less than fifteen kiloPascals (15.0 kPa).

(2) 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 this permit for storage tanks Tank-02, and Tank-03, because each tank has a maximum capacity of less than 75 m³ (19,813 gallons), and the liquid stored in each tank has a maximum true vapor pressure of less than fifteen kiloPascals (15.0 kPa).

(d) 40 CFR 60, Subpart UU - Standards for Asphalt Processing and Asphalt Roofing Manufacture

The requirements of the New Source Performance Standard for Asphalt Processing and Asphalt Roofing Manufacture, 40 CFR 60, Subpart UU (326 IAC 12), are not included in the permit, since this portable drum hot-mix asphalt does not blow asphalt, or an asphalt roofing and it does not produce asphalt roofing products.

(e) 40 CFR 60, Subpart XX - Standards for Bulk Gasoline Terminals

The requirements of the New Source Performance Standard for Bulk Gasoline Terminals (40 CFR 60, Subpart XX)(326 IAC 12), are not included in the permit, since the source is not considered a bulk gasoline terminal under 40 CFR 60.500 and the source does not have gasoline fuel transfer and dispensing operation.

(f) 40 CFR 60, Subpart OOO - Standards for Nonmetallic Mineral Processing Plants

The requirements of the New Source Performance Standard for Nonmetallic Mineral Processing Plants (40 CFR 60, Subpart OOO) (326 IAC 12), are not included in the permit, since the Recycled Asphalt Pavement (RAP) system does not contain a crusher or grinding mill. The source will be receiving pre-crushed/pre-sized RAP materials, therefore, pursuant to 40 CFR 60.670(a)(2) stand-alone screening operations at plants without crushers or grinding mills are exempt.

- (g) 40 CFR 60, Subpart UUU - Standards for Calciners and Dryers in Mineral Industries
The requirements of the New Source Performance Standard for Calciners and Dryers in Mineral Industries, 40 CFR 60, Subpart UUU (326 IAC 12), are not included in the permit, since a portable drum hot-mix asphalt plant is not a mineral processing plant, meaning that it does not process or produce any of the following minerals, their concentrates or any mixture of which the majority (>50 percent) is any of the following minerals or a combination of these minerals: alumina, ball clay, bentonite, diatomite, feldspar, fire clay, fuller's earth, gypsum, industrial sand, kaolin, lightweight aggregate, magnesium compounds, perlite, roofing granules, talc, titanium dioxide, and vermiculite.
- (h) There are no other New Source Performance Standards (NSPS)(40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (a) 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 (326 IAC 20-71), are not included in the permit, since the source is not a major source of HAPs, and does not engage in the preparation of asphalt flux or asphalt roofing materials.
- (b) 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 (NESHAPs) for Source Category Gasoline Dispensing Facilities (40 CFR 63, Subpart CCCCC) are not included in the permit, since the portable drum hot-mix asphalt plant does not operate gasoline dispensing facility (GDF).
- (c) 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 this 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.
- (d) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

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

State Rule Applicability Determination

The following state rules are applicable to the revision:

- (a) 326 IAC 2-8-4 (FESOP)
This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP). See PTE of the Entire Source After Issuance of the FESOP

Revision Section above.

- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
This revision will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the FESOP Revision Section above.
- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The revision will not change the Title V minor stationary source since the source will continue to limit the potential to emit of HAPs 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. See PTE of the Entire Source After Issuance of the FESOP Revision Section above.
- (d) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not an operating permit under 326 IAC 2-7 (Part 70), it is not allowed to re-locate to Lake County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (e) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
- (1) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

The above Opacity Limitations apply, when this source is relocated to the following Counties/Townships/Areas:

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)
7. Vigo County (Indiana State University campus, 0.5km radius around UTM Easting 464,519.00, Northing 4,369,208.00, Zone 16)

When this source is relocated *all other counties*:

- (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

This source will not be relocated to Lake County, therefore, the Opacity Limitation for Lake County is not included in this permit.

- (f) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
- (g) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is subject to the requirements of 326 IAC 6-5, because the source has potential fugitive particulate emissions; material processing, handling, crushing, screening, conveying, paved and unpaved road, greater than 25 tons per year. Pursuant to 326 IAC 6-5, fugitive particulate matter emissions shall be controlled according to the Fugitive Dust Control Plan, which is included as Attachment A to the permit.

State Rule Applicability – Aggregate Dryer/Mixer Burner

- (i) 326 IAC 6.5-1-2(a) (PM Limitations)
The PM emissions for the dryer/mixer at this portable asphalt plant are subject to the requirements of 326 IAC 6.5-1-2 and shall comply with the PM emission limit of three-hundredths (0.03) grain per dry standard cubic foot when operating in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.
- In order to comply with the requirements of 326 IAC 6.5-1-2, particulate from the dryer/mixer shall be controlled by the baghouse at all times that the dryer/mixer is in operation.
- (j) 326 IAC 6.8 (Particulate Matter Limitations)
This portable source is not permitted to locate in Lake County; therefore, the requirements of 326 IAC 6.8 do not apply.
- (k) 326 IAC 7-1.1-2 (Sulfur Dioxide (SO₂) Emission Limitations)
The asphalt drum mixer/dryer burner, is subject to the requirements of 326 IAC 7-1.1-2, because it has potential sulfur dioxide emissions greater than twenty-five (25) tons per year. Pursuant to 326 IAC 7-1.1-2:
- (a) The sulfur dioxide (SO₂) emissions from the dryer/mixer burner shall not exceed five-tenths (0.5) pounds per MMBtu when using distillate oil.
- (b) The sulfur dioxide (SO₂) emissions from the dryer/mixer burner shall not exceed one and six tenths (1.6) pounds per MMBtu heat input when using residual oil.
- (l) 326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
The VOC emissions from the dryer/mixer burner has been limited to less than 25 tons per year, therefore, this rule does not apply. See PTE of the Entire Source After Issuance of the FESOP Revision Section above.

Storage Tanks:

- (m) 326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
The VOC emissions from each storage tank is less than 25 tons per year, therefore, this rule does not apply.
- (n) 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)
The storage tanks are not subject to the requirements of 326 IAC 8-4-3 because each liquid storage vessel at this source, has a capacity less than thirty-nine thousand (39,000) gallons.
- (o) 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
This portable source can relocate to Clark, Floyd, or Porter Counties and has storage tanks; Tank-01, Tank-02, Tank-03, and Tank-04 that each have a capacity less than thirty-nine thousand

(39,000) gallons. 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 and are exempt from all other provisions of this rule when the source is located in Clark, Floyd, or Porter Counties.

Compliance Determination, Monitoring and Testing Requirements

(a) This compliance determination and monitoring requirements for the source are as follows:

Control	Parameter	Frequency	Range	Excursions and Exceedances
dryer/mixer stack (SV-1) exhaust	Visible Emissions	Daily	Normal-Abnormal	Response Steps
Baghouse for the dryer/mixer	Pressure Drop	Daily	2.0 to 6.0 inches	Response Steps

These are existing monitoring requirements.

(b) The testing requirements for this source are as follows:

Emission Unit	Control Device	Timeframe for Testing	Pollutant	Frequency of Testing
EU-01	Baghouse	No later than five (5) years from the last valid compliance demonstration	PM	Once every five (5) years*
			PM10	
			PM2.5	

Note:

*The source previously performed PM and PM10 testing on the EU-01 on October 3, 2007. The source shall perform PM2.5 testing of the aggregate dryer/mixer at least once every five (5) years from the date of the last valid compliance demonstration, to be run concurrently with the PM and PM10 testing.

Proposed Changes

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

- (1) The description of hot mix asphalt drum mixer/dryer has been revised to indicate that this source will process asbestos free shingles in the aggregate mix in A.2 Emission Units and Pollution Control Equipment Summary, and D.1 Emissions Unit Description, and E.1 Emissions Unit Description.
- (2) Two Recycled Asphalt Cold Feed Bins, two Blending Bins, one 30,000 gallon liquid storage tank and one shingles stockpile have been added, including the size of stockpiles have been increased, in A.2 Emission Units and Pollution Control Equipment Summary, D.1 Emissions Unit Description, and E.1 Emissions Unit Description.
- (3) The PTE of each pollutant of new and modified units has been added to source, and PM emission limit has been revised accordingly in Conditions D.1.1.
- (4) The requirements for source to use only certified asbestos-free shingles in the aggregate mix and keep this record have been added to Condition D.1.3(c) and D.1.17(b).

- (5) When this portable source is relocated to Clark, Floyd, Porter Counties, the source is required to keep record and report for the liquid asphalt storage tank; therefore, these requirements have been added as Condition D.1.7
- (b) Upon further review, IDEM, OAQ has decided to make the following changes to the permit. Deleted language appears as ~~strike through~~ text and new language appears as **bold** text:
- (1) IDEM, OAQ, has revised B.11 Preventive Maintenance Plan for clarification.
 - (2) The Indiana Air Pollution Control Board issued revisions to 326 IAC 2, on October 27 2010. These revisions resulted in changes to the rule cites listed in the permit. These changes are not changes to the underlying provisions. The change is only to the cites of these rules in Section B.18 - Operational Flexibility.
 - (3) The threshold of PM has been corrected from 100 tons to 250 tons per twelve (12) consecutive month period for this source, in Condition C.2 Over Source Limit.
 - (4) This source will not be relocated to Lake County, therefore any conditions related to the requirements of Lake County have been removed from Section C. The following conditions have been renumbered.
 - (5) IDEM, OAQ has clarified the Permittee's responsibility with regards to record keeping.
 - (6) IDEM, OAQ has clarified the interaction of the Quarterly Deviation and Compliance Monitoring Report and the Emergency Provisions.
 - (7) Emission Statement is not required for this source, therefore, Condition C.20 requirements have been removed.
 - (8) For clarification, the citation of 326 IAC 2-2 has been removed from Condition D.1.3, Hazardous Air Pollutants (HAPs).
 - (9) The hydrogen chloride emission rate has been revised, including waste oil usage limit, in order to keep the single HAP to less than 10 tons per year. In addition, compliance determination, and reporting has been added to this source.
 - (10) All counties have been designated as unclassifiable or attainment for ozone standard, therefore, 326 IAC 2-3 requirements have been removed from Condition D.1.2 and renamed FESOP limits for PM10, PM2.5, CO and VOC.
 - (11) For clarification, the additional information to indicate that No. 2 and No.4 fuel oil are considered distillate oil, and waste oil is considered residual oil has been added to Condition D.1.5.
 - (12) This source is not allowed to relocate to Lake County, therefore, the requirements of 326 IAC 6.8-1-2 have been removed from Condition D.1.6. In addition, items (a) and (b) have been consolidated.
 - (13) VOC Limited requirements in Condition D.1.7, in previous permit, have been consolidated to Condition D.1.2 FESOP limits. Compliance determination, record keeping and reporting related to this condition have also been consolidated accordingly.
 - (14) This source is required to limit and verify sulfur contents, the NOx and SO2 emissions, when uses more than one type of fuel, therefore the conditions D.1.11 and D.1.12 have been moved from Compliance Monitoring to Compliance Determination. The SO2 emissions have been revised to indicate that the limit is for dryer/mixer burner only.

- (15) The words "Emission factors for Nitrogen Oxide" and "Emission factors for Sulfur Dioxide" are not needed; therefore they have been removed from D.1.11.
- (16) For clarification, citations of 326 IAC 7-2-1 and 326 IAC 3-7-4 have been replaced by 326 IAC 2-8-4 in Condition D.1.12, however, these changes are to the citations only, it did not change the underlying requirements.
- (17) The Compliance determine and record keeping of ash, chlorine, lead content of waste oil, are required and added to Condition D.1.13 and D.1.17(d)(3).
- (18) The phrase "in accordance with" in Condition D.1.15 Parametric Monitoring (previous Condition D.1.14), has been corrected for typographical errors.
- (19) There was not D.1.4(b)(7) in Condition D.1.16(b), therefore, this condition has been removed.
- (20) For clarification, specific conditions D.1.4(a)(4) and D.1.4(b)(6) have been added to D.1.17(c) [previous Condition D.1.16(c)].
- (21) For clarification, specific conditions D.1.3(a)(2), D.1.4(a)(1) and D.1.4(a)(2) have been added to D.1.17(d) [previous Condition D.1.16(d)].
- (22) IDEM, OAQ, has decided to clarify Condition D.1.15 Parametric Monitoring regarding the pressure.
- (23) The last paragraph of Condition D.1.17(d) has been removed since it is a repeat condition of item (h).
- (24) The requirements in Condition D.2.1 for Lake County have been removed since this source will not be relocated to Lake County.
- (25) Condition D.2.2: Volatile Organic Liquid Storage Vessels [326 IAC 8-9], for record keeping and reporting of the storage tanks, when the plant is relocated to Clark, Floyd and Porter Counties, have been consolidated to Condition D.1.7. In addition, the tanks identifications have been added for clarification.
- (26) Condition D.2.3 Fugitive Emission for unpaved road has been removed, since Fugitive Emissions Control from all facilities has already been addressed in Condition C.7.
- (27) Since all conditions in Section D.2 has been either removed or consolidated to Section D.1, therefore, the unit description has also been removed.
- (28) For clarification, the address where the report should be submitted and frequency of testing have been added to Section E.1. In addition, entire 40 CFR 60, Subpart I, has been included.
- (29) FESOP Quarterly Report for single fuel usages limits, when the source uses only one single fuel, have been added in the quarterly Report.
- (30) A statement indicated that a signed certification to complete this report has been removed according to IDEM permit model, because it has been addressed in each condition that it's required.

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

...

- (a) One (1) hot mix asphalt drum mixer/dryer, identified as EU-01, constructed in 1998, **approved for modification in 2012**, capable of processing a maximum of 450 tons per hour of raw material, equipped with one (1) 120 million British thermal units (MMBtu) per hour natural gas fired burner, using waste oil and #2 fuel oil as primary oil and #4 distillate fuel oil, propane, and natural gas as backup fuels, processing steel slag, **and asbestos-free shingles** in the aggregate mix; equipped with one (1) baghouse for particulate control and exhausting through one (1) stack, identified as stack SV-1. This source does not produce or uses cold mix asphalt ~~and no shingles are used at this source~~. No crushers are used.

~~Under 40 CFR 60, Subpart I, this hot mix asphalt plant is considered an affected facility.~~

- (b) Feeding, conveying and loading operations consisting of the following:

.....

- (3) ~~Fifteen (15)~~ **Twelve (12)** storage piles, including:
- (i) ~~Five (5)~~ **Two (2)** reclaimed asphalt pavement (RAP) piles, total capacity ~~5,500~~ **20,000** tons;
 - (ii) Five (5) lime stone **aggregate** pile, total capacity ~~15,000~~ **156,000** tons;
 - (iii) One (1) sandstone pile, total capacity 2,000 tons;
 - (iv) ~~Three (3)~~ **Two (2)** sand piles, total capacity ~~6,600~~ **20,000** tons;
 - (v) One (1) steel slag pile, total capacity 6,000 tons;
 - (vi) **One (1) recycle shingles (RAS) stockpile, total capacity 2,500 tons.**
- (4) Five (5) cold feed bins for coarse to fine aggregate;
- (5) **Two (2) Recycled Asphalt Cold Feed Bins;**
- (6) **Two (2) Blending Bins;**
- (~~5~~7) Four (4) conveyors,

- (e) **One (1) 30,000 gallon liquid asphalt storage tank, identified as Tank-04;**

Under 40 CFR 60, Subpart I, the above units are considered an affected source.

SECTION B GENERAL CONDITIONS

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

.....

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:
- (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) through (d). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)(2), (e)(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)]

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.

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

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(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than ~~one hundred (100)~~ **two hundred fifty (250)** tons per twelve (12) consecutive month period.

C.3 Opacity [326 IAC 5-1]

....

- (c) ~~Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4, when the source is located in Lake County.~~
- (d) ~~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.~~

C.12 ~~Continuous Compliance Plan [326 IAC 6.8-8-1][326 IAC 6.8-8-8]~~

- (a) ~~Pursuant to 326 IAC 326 IAC 6.8-8-1, the Permittee shall submit to IDEM and maintain at source a copy of the Continuous Compliance Plan (CCP). The Permittee shall perform the inspections, monitoring and record keeping in accordance with the information in 326 IAC 6.8-8-5 through 326 IAC 6.8-8-7 or applicable procedures in the CCP.~~
- (b) ~~Pursuant to 326 IAC 6.8-8-8, the Permittee shall update the CCP, as needed, retain a copy of any changes and updates to the CCP at the source and make the updated CCP available for inspection by the department. The Permittee shall submit the updated CCP, if required to IDEM, OAQ within thirty (30) days of the update.~~
- (c) ~~Pursuant to 326 IAC 6.8-8, failure to submit a CCP, maintain all information required by the CCP at the source, or submit update to a CCP is a violation of 326 IAC 6.8-8.~~

C.132 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.143 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]

....

C.154 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

....

C.165 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

...

C.176 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

.....

C.187 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. **Support information includes the following:**
 - (AA) All calibration and maintenance records.
 - (BB) All original strip chart recordings for continuous monitoring instrumentation.
 - (CC) Copies of all reports required by the FESOP.

Records of required monitoring information include the following:

- (AA) The date, place, as defined in this permit, and time of sampling or measurements.
- (BB) The dates analyses were performed.
- (CC) The company or entity that performed the analyses.
- (DD) The analytical techniques or methods used.
- (EE) The results of such analyses.
- (FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

C.198 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.**

~~C.20 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(e)] [326 IAC 2-6]~~

- ~~(a) In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), the Permittee shall submit by July 1 an emission statement covering the previous calendar year as follows:
 - ~~(1) starting in 2004 and every three (3) years thereafter, and~~
 - ~~(2) any year not already required under (1) if the source emits volatile organic compounds or oxides of nitrogen into the ambient air at levels equal to or greater than twenty-five (25) tons during the previous calendar year.~~~~
- ~~(b) The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:
 - ~~(1) Indicate estimated actual emissions of all pollutants listed in 326 IAC 2-6-4(a);~~
 - ~~(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("Regulated pollutant, which is used only for purposes of Section 19 of this rule") from the source, for purpose of fee assessment.~~~~

~~The statement must be submitted to:~~

~~Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251~~

~~The emission statement does require a certification that meets the requirements of 326 IAC 2-6 by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).~~

C.2119 Relocation of Portable Sources [326 IAC 2-14-4] [326 IAC 2-1.1-5]

- (a) This permit is approved for operation in all areas of Indiana except **Lake County because of additional requirements for this county**, in severe nonattainment areas for ozone. This determination is based on the requirements of Prevention of Significant Deterioration in 326 IAC 2-2, 326 IAC 2-1.1-5, and Emission Offset requirements in 326 IAC 2-3. Prior

~~to locating in any severe nonattainment area,~~ **Prior to relocated to Lake County,** the Permittee must submit a request and obtain a permit modification.

C.220 Compliance with 40 CFR 82 and 326 IAC 22-1

...

SECTION D.1

Emissions Unit Description:

- (a) One (1) hot mix asphalt drum mixer/dryer, identified as EU-01, constructed in 1998, **approved for modification in 2012**, capable of processing a maximum of 450 tons per hour of raw material, equipped with one (1) 120 million British thermal units (MMBtu) per hour natural gas fired burner, using waste oil and #2 fuel oil as primary oil and #4 distillate fuel oil, propane, and natural gas as backup fuels, processing steel slag, **and asbestos-free shingles** in the aggregate mix; equipped with one (1) baghouse for particulate control and exhausting through one (1) stack, identified as stack SV-1. This source does not produce or uses cold mix asphalt ~~and no shingles are used at this source.~~ No crushers are used.

~~Under 40 CFR 60, Subpart I, this hot mix asphalt plant is considered an affected facility.~~

- (b) Feeding, conveying and loading operations consisting of the following:

.....

- (3) ~~Fifteen (15)~~ **Twelve (12)** storage piles, including:

- (i) ~~Five (5)~~ **Two (2)** reclaimed asphalt pavement (RAP) piles, total capacity ~~5,500~~ **20,000** tons;
- (ii) Five (5) lime stone **aggregate** pile, total capacity ~~15,000~~ **156,000** tons;
- (iii) One (1) sandstone pile, total capacity 2,000 tons;
- (iv) ~~Three (3)~~ **Two (2)** sand piles, total capacity ~~6,600~~ **20,000** tons;
- (v) One (1) steel slag pile, total capacity 6,000 tons;
- (vi) **One (1) recycle shingles (RAS) stockpile, total capacity 2,500 tons.**

- (4) Five (5) cold feed bins for coarse to fine aggregate;

- (5) **Two (2) Recycled Asphalt Cold Feed Bins;**

- (6) **Two (2) Blending Bins;**

- (~~5~~7) Four (4) conveyors,

.....

- (e) **One (1) 30,000 gallon liquid asphalt storage tank, identified as Tank-04;**

Under 40 CFR 60, Subpart I, the above units are considered an affected source.

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

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

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

.....

- (b) PM emissions from the dryer/mixer shall not exceed ~~0.642~~ **0.641** pounds per ton of asphalt processed.

...

D.1.2 ~~Dryer and Mixer~~ **FESOP Limits: PM10, PM2.5, CO and VOC and Emission Offset Limits** [326 IAC 2-8-4] [326 IAC 2-2][~~326 IAC 2-3~~] [326 IAC 8-1-6]

.....

- (b) The PM10 emissions from the dryer/mixer shall not exceed 0.275 pounds per ton of asphalt processed.

- (c) The PM2.5 emissions from the dryer/mixer shall not exceed 0.310 pounds per ton of asphalt processed.

...

Compliance with these limitations, combined with the limited PTE from other emission units at this source, shall limit the source-wide total potential to emit PM10, PM2.5, CO, and VOC, to less than 100 tons per twelve (12) consecutive month period, and shall render 326 IAC 2-7 (Part 70) , ~~326 IAC 2-3~~, and 326 IAC 2-2 (PSD) not applicable.

Compliance with the limit in (a) and (e) shall limit the PTE VOC from the dryer/mixer to less than twenty-five (25) tons per 12 consecutive month period and shall render 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities) not applicable.

D.1.3 Hazardous Air Pollutants (HAPs) [326 IAC 2-8-4][~~326 IAC 2-2~~][326 IAC 2-4.1]

.....

- (a) The HCl emissions shall not exceed ~~6.6~~ **13.2** pounds of HCl per 1,000 gallons of waste oil burned.

- (b) The waste oil combusted shall not contain more than 0.30% ash, 0.10% chlorine, and 0.1% Lead.

- (c) **Only certified asbestos-free factory seconds, post consumer waste and/or factory seconds, shall be used as an additive in its aggregate mix.**

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

D.1.4 ~~Fuel and Slag Usage~~, **FESOP Limits: NOx, SO₂ and HCl Emission** Limitations [326 IAC 2-8-4][326 IAC 2-2] [**326 IAC 2-4.1**]

.....

- (b) Single Fuel Usage and Slag Usage Limitations:

.....

- (5) Waste oil usage shall not exceed ~~2,572,763~~ **1,375,484** gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (c) Multiple Fuel Usage and Slag Usage Limitation:
.....
 - (2) SO₂ emissions from the dryer/mixer ~~and all other combustion equipment~~ shall be less than ~~94.55~~ **94.56** tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
 - (3) **HCl emissions from the dryer/mixer burner shall not exceed 9.08 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.**

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

D.1.5 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-2]

Pursuant to 326 IAC 7-1.1-2, the Permittee shall comply with the following:

- (a) The sulfur dioxide (SO₂) emissions from the dryer/mixer burner shall not exceed five-tenths (0.5) pounds per MMBtu when using distillate oil.
- (b) The sulfur dioxide (SO₂) emissions from the dryer/mixer burner shall not exceed one and six tenths (1.6) pounds per MMBtu heat input when using residual oil.
- (c) Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

Note: No. 2 and No.4 fuel oil are considered distillate oil, and waste oil is considered residual oil.

D.1.6 Particulate Matter (PM) [326 IAC 6.5-1-2] [~~326 IAC 6.8-1-2~~]

- (a) Pursuant to 326 IAC 6.5-1-2(a) ~~and 326 IAC 6.8-1-2(a)~~, particulate emissions from the aggregate dryer/mixer **and material conveying and handling operation, exhausting to Stack SV-1**, shall not exceed 0.03 grain per dry standard cubic foot when operating in the counties listed in 326 IAC 6.5-1-1(a) ~~or in Lake County.~~
- (b) Pursuant to 326 IAC 6.5-1-2(a) ~~and 326 IAC 6.8-1-2(a)~~, particulate emissions from the ~~material conveying and handling operation~~ shall not exceed 0.03 grain per dry standard cubic foot when operating in the counties listed in ~~326 IAC 6.5-1-1(a) or in Lake County.~~

D.1.7 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

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

~~In order to render the requirements of 326 IAC 8-1-6 not applicable, the dryer/mixer shall be limited as follows:~~

- (a) ~~The amount of asphalt processed shall not exceed 600,000 tons per twelve (12) consecutive month period~~
- (b) ~~The VOC emissions from the dryer/mixer shall not exceed 0.032 pounds per ton of asphalt processed.~~

~~Compliance with this limit shall limit the VOC PTE from the dryer/mixer to less than twenty-five (25) tons per 12 consecutive month period and shall render 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities) not applicable.~~

Pursuant to 326 IAC 8-9-1(b), the storage tanks; Tank-01, Tank-02, Tank-03, and Tank-04 are subject to reporting and recordkeeping of the following information, when operating in Clark, Floyd, Porter Counties.

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

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

D.1.11 Multiple Fuel Usage and Slag Limitation

.....
Emission factors for Nitrogen Oxide

-
- (2) SO₂ emissions from the dryer/mixer shall be less than ~~94.55~~ **94.56** tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
.....

Emission factors for Sulfur Dioxide

- (3) In order to comply with Condition D.1.4(c)(3) when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, the HCl emissions in the dryer/mixer burner shall be limited according to the following formulas:**

$$\text{HCl} = \frac{W(E_w)}{2,000 \text{ lbs/ton}}$$

where:

HCl = tons of Hydrogen Chloride emissions for twelve (12) month consecutive period

W = gallons of waste oil used in the last 12 months

E_w = 13.2 lb/1000 gallons of waste oil

D.1.12 Sulfur Dioxide (SO₂) Emissions and Sulfur Content

Steel Slag

- (a) **Pursuant to 326 IAC 2-8-4 c**Compliance with the Steel slag limitations established in Condition D.1.4(a)(3) shall be determined utilizing one of the following options. ~~Pursuant to 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements), compliance shall be demonstrated on a thirty (30) day calendar-month average.~~

.....

- (3) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the one hundred twenty (120) million British thermal units 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 in (1) or (2) above shall not be refuted by evidence of compliance pursuant to the other method.

Fuel Oil and Waste Oil

- (b) Pursuant to 326 IAC 2-8-4 c Compliance with the fuel limitations established in Conditions D.1.4(a)(1), D.1.4(a)(2), and D.1.5 shall be determined utilizing one of the following options. Pursuant to 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements), compliance shall be demonstrated on a thirty (30) day calendar month average.

- (1) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million British thermal units heat input when combusting No. 2 fuel oil, or one (1.00) pound per million British thermal units heat input when combusting waste fuel oil, by:

.....

- (2)(C) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the one hundred twenty (120) million British thermal units 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 in (1) or (2) above shall not be refuted by evidence of compliance pursuant to the other method.

D.1.13 Ash, Chlorine, and Lead Content

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

D.1.134 Visible Emissions Notations

.....

D.1.145 Parametric Monitoring

..... ~~When for any one reading, the pressure drop across the baghouse is outside the normal range of 2.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with.~~ **When, for any one reading, the pressure drop across the baghouse is outside of the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between 2.0 and 6.0 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test.....**

D.1.156 Broken or Failed Bag Detection

.....

D.1.167 Record Keeping Requirements

- (a) To document the compliance status with Conditions D.1.1(a), **and** D.1.2(a) ~~and D.1.7(a)~~, the Permittee shall

- (b) ~~To document the compliance status with Condition D.1.4(b)(7), the Permittee shall keep records of the amount of Steel slag processed through the dryer/mixer. Records necessary to demonstrate compliance shall be available within thirty (30) days of the end of each compliance period.~~
To document the compliance status with condition D.1.3(c) when shingles are used in the dryer/mixer, the Permittee shall maintain records:
- (A) **Shingle supplier certifications;**
 - (B) **The name of the shingle supplier(s);**
 - (C) **A statement from the shingle supplier(s) that certifies the asbestos content of the shingles from their company; and**
 - (D) **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**
- (c) To document the compliance status with Conditions D.1.4(a)(3), **D.1.4(a)(4), and D.1.4(b)(6)**, the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) ~~shall be taken daily and shall be complete and sufficient to establish compliance with the SO2 emission limits established in Conditions D.1.4(a)(3) and D.1.4(a)(4) and D.1.4(b)(6). For the sulfur content limit, the compliance determination period is each calendar month.~~
- (d) To document the compliance status with Conditions D.1.3 (a), **D.1.3(b), D.1.4(a)(1), D.1.4(a)(2), D.1.4(b)(1)-D.1.4(b)(5)**, and D.1.5, the Permittee shall maintain records in accordance with (1) through (7) below.
- (1) Calendar dates covered in the compliance determination period;
 - (2) Actual fuel usage, sulfur content, heat content, and equivalent sulfur dioxide emission rates for each fuel used at the source **per month since the last compliance determination period;**
 - (3) **Actual waste oil ash, chlorine, and lead content, for waste oil used at the source since the last compliance determination period;**
 - (34) ...
 - (45) ...
 - (56) ...
 - (67) ...

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

- (e) To document the compliance status with Conditions D.1.4(c) and D.1.11 when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, the Permittee shall maintain records of actual fuel usage, and equivalent nitrogen oxides and sulfur dioxide emission ~~rates for each fuel used~~ at the source ~~per month~~ **since the last compliance determination period.**
- (f) To document the compliance status with Condition D.1.134, the Permittee shall maintain daily records of the visible emission notations from ~~each of the conveyors, screens, material transfer points, and dryer/mixer-stack (SV-1) exhaust.~~ The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the plant did not operate that day).
- (g) To document the compliance status with Condition D.1.145, the Permittee

D.1.178 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1(a), D.1.2(a), D.1.4(b), **and** D.1.4(c), ~~D.1.7(a), and D.1.14~~ shall be submitted no later than thirty (30) days after the end of the quarter being reported

SECTION D.2 ~~EMISSIONS UNIT OPERATION CONDITIONS~~

Emissions Unit Description:

- ~~(a) Process vessel degassing and cleaning to prepare for internal repairs.~~
- ~~(b) Combustion related activities, space heaters, process heaters, or boilers including the following:
 - ~~(1) Fuel oil-fired combustion sources with heat input equal to or less than two million (2,000,000) Btu/hr and firing fuel containing less than five tenths (0.5) percent;~~
 - ~~(2) Propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) Btu/hr;~~
 - ~~(3) Equipment powered by diesel fuel fired or natural gas fired internal combustion engines of capacity equal to or less than five hundred thousand (500,000) Btu/hour, except where total capacity of equipment operated by one stationary source exceeds two million (2,000,000) Btu/hour;~~~~
- ~~(c) Combustion source flame safety purging on startup;~~
- ~~(d) Air compressors and pneumatically operated equipment, including hand tools;~~
- ~~(e) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per day or less.~~
- ~~(f) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;~~
- ~~(g) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings;~~
- ~~(h) Cleaners and solvents characterized as follows:~~

- ~~(1) — having a vapor pressure equal to or less than 2 kPa; 15 mm Hg; or 0.3 psi measured at 38°C (100°F) or;~~
 - ~~(2) — having a vapor pressure equal to or less than 0.7 kPa; 5 mm Hg; or 0.1psi measured at 20°C(68°F); the use of which for all cleaners and solvents combined does not exceed one hundred forty five (145) gallons per twelve (12) months;~~
 - ~~(i) — Activities related to ventilation, venting equipment and refrigeration;~~
 - ~~(j) — Storage tanks, vessels, and containers holding or storing liquid substances that do not contain any VOC or HAP;~~
 - ~~(k) — Pressurized storage tanks and associated piping for the Acetylenes and the Liquid petroleum gas (LPG);~~
 - ~~(l) — Storage of drums containing maintenance raw materials;~~
 - ~~(m) — The equipment related to manufacturing activities not resulting in the emission of HAPs, cutting torches, soldering equipments, welding equipment.~~
 - ~~(n) — Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;~~
 - ~~(o) — portable dust collectors~~
 - ~~(p) — Manual loading and unloading operations~~
 - ~~(q) — A laboratory as defined in 326 IAC 2-7-1(21)(D);~~
 - ~~(r) — Vehicle travel on paved roads, unpaved roads, and parking lots; and~~
 - ~~(s) — Painting, including interior and exterior painting of buildings, and solvent use, excluding degreasing operations utilizing halogenated organic solvents.~~
 - ~~(t) — Lubrication, including hand held spray can lubrication, dipping metal parts into lubricating oil, and manual or automated addition of cutting oil in machining operations.~~
 - ~~(u) — Safety and emergency equipment, except engine driven fire pumps, including fire suppression systems and emergency road flares.~~
 - ~~(v) — Closed loop heating and cooling systems;~~
- ~~(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)~~

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

~~D.2.1 — Fugitive Particulate Matter [326 IAC 6.8-10]~~

~~Pursuant to 326 IAC 6.8-10-3, the particulate matter emissions from source wide activities shall meet the following requirements whenever the plant is located in Lake County:~~

- ~~(a) — The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).~~

- ~~(b) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).~~
- ~~(c) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).~~
- ~~(d) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.~~
- ~~(e) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.~~
- ~~(f) There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.~~
- ~~(g) The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).~~
- ~~(h) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.~~
- ~~(i) The PM_{4.0} emissions from building vents shall not exceed twenty two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.~~
- ~~(j) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).~~
- ~~(k) Any facility or operation not specified in 326 IAC 6.8-10-3 shall meet a twenty percent (20%), three (3) minute average opacity standard.~~

~~The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the Fugitive Dust Control Plan, submitted on June 3, 1996. The fugitive dust control plan is as follows: Roadways and stockpiles shall be watered on an as needed basis to prevent fugitive particulate emissions.~~

~~D.2.2 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, Floyd, Lake, or Porter Counties.~~

~~D.2.3 Particulate Emissions [326 IAC 2-8]~~

~~Pursuant to 326 IAC 2-8, the emissions of PM10 from the unpaved roads shall be controlled according to the Fugitive Dust Control Plan submitted by the Permittee in attachment A.~~

SECTION E.1

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) hot mix asphalt drum mixer/dryer, identified as EU-01, constructed in 1998, capable of processing a maximum of 450 tons per hour of raw material, equipped with one (1) 120 million British thermal units (MMBtu) per hour natural gas fired burner, using waste oil and #2 fuel oil as primary oil and #4 distillate fuel oil, propane, and natural gas as backup fuels, processing steel slag, **and asbestos-free shingles** in the aggregate mix; equipped with one (1) baghouse

for particulate control and exhausting through one (1) stack, identified as stack SV-1. This source does not produce or uses cold mix asphalt and no shingles are used at this source. No crushers are used.

~~Under 40 CFR 60, Subpart I, this hot mix asphalt plant is considered an affected facility.~~

(b) Feeding, conveying and loading operations consisting of the following:

.....

(3) ~~Fifteen (15)~~ **Twelve (12)** storage piles, including:

- (i) ~~Five (5)~~ **Two (2)** reclaimed asphalt pavement (RAP) piles, total capacity ~~5,500~~ **20,000** tons;
- (ii) Five (5) lime stone **aggregate** pile, total capacity ~~45,000~~ **156,000** tons;
- (iii) One (1) sandstone pile, total capacity 2,000 tons;
- (iv) ~~Three (3)~~ **Two (2)** sand piles, total capacity ~~6,600~~ **20,000** tons;
- (v) One (1) steel slag pile, total capacity 6,000 tons;
- (vi) **One (1) recycle shingles (RAS) stockpile, total capacity 2,500 tons.**

(4) Five (5) cold feed bins for coarse to fine aggregate;

(5) Two (2) Recycled Asphalt Cold Feed Bins;

(6) Two (2) Blending Bins;

~~(5)~~ Four (4) conveyors,

(c) **One (1) 2.0 million British Thermal Units (MMBtu) per hour hot oil heater firing natural gas as the primary fuel and # 2 distillate fuel oil as the backup fuel, and exhausting to stack SV-2;**

(d) **Three (3) storage tanks exhausting at stacks SV-3, SV-4, and SV-5, including:**

(1) **One (1) liquid asphalt storage tank, identified as Tank-01, with a capacity of 35,000 gallons; and**

(2) **One (1) #4 waste oil fuel storage tank, identified as Tank-02, with a capacity of 15,000 gallons.**

(3) **One (1) #2 diesel fuel storage tank, identified as Tank-03, with a capacity of 1,000 gallons.**

(e) **One (1) 30,000 gallon liquid asphalt storage tank, identified as Tank-04;**

Under 40 CFR 60, Subpart I, the above units are considered an affected source.

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

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

E.1.1 NSPS Subpart I Requirements – Standards of Performance for Hot Mix Asphalt Facilities [40 CFR Part 60, Subpart I] [326 IAC 12-1]

Pursuant to CFR Part 60, Subpart I, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart I, which are incorporated by reference as 326 IAC 12-1 for the asphalt plant as specified as follows. Pursuant to 40 CFR 60.90(a), the affected facility to which the provisions of this subpart apply is each hot mix asphalt facility. For the purpose of this subpart, a hot mix asphalt facility is comprised only of any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler, systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems.

§ 60.90 Applicability and designation of affected facility.

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

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

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

§ 60.91 Definitions.

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

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

[51 FR 12325, Apr. 10, 1986]

§ 60.92 Standard for particulate matter.

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

(1) Contain particulate matter in excess of 90 mg/dscm (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]~~

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]

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

E.1.3 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

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

.....

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

FESOP Quarterly Report

Source Name: Gohmann Asphalt & Construction Inc. (Portable)

Initial Source Address: HWY 68, Dale, Indiana 47523
FESOP Permit No.: F147-29141-05167
Facility: EU-01
Parameters: Nitrogen Oxides (NOx) and Sulfur Dioxide (SO₂) Emissions
Limit: Nitrogen oxides (NOx) emissions from dryer/mixer shall be less than 97.75 tons per twelve (12) consecutive month period based on the following equation:

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

where:

N = tons of nitrogen oxide emissions for a 12-month consecutive period
G = million cubic feet of natural gas used in the last 12 months
O = gallons of No. 2 fuel oil used in last 12 months
F = gallons of No. 4 fuel oil used in last 12 months
P = gallons of Propane used in last 12 months
W = gallons of Waste oil used for last 12 months

Emission factors for Nitrogen Oxide

E_G = 190 lb/million cubic feet of natural gas
E_O = 24 lb/1000 gallons of No. 2 fuel oil
E_F = 47 lb/1000 gallons of No. 4 fuel oil
E_W = 19 lb/1000 gallons of Waste oil
E_P = 13 lb/1000 gallons of Propane

Limit: SO₂ emissions from the dryer/mixer shall be less than ~~94.55~~ **94.56** tons per twelve (12) consecutive month period based on the following equation:

$$S = G(E_G) + O(E_O) + F(E_F) + W(E_W) + P(E_P) + T(E_T)$$

where:

S = tons of sulfur dioxide emissions for a 12-month consecutive period
G = million cubic feet of natural gas used in the last 12 months
O = gallons of No. 2 fuel oil used in last 12 months
F = gallons of No. 4 fuel oil used in last 12 months
W = gallons of Waste oil used in last 12 months
P = gallons of Propane used in last 12 months
T = tons of Steel slag used in last 12 months

Emission factors for Sulfur Dioxide

E_G = 0.60 lb/million cubic feet of natural gas
E_O = 71.00 lb/1000 gallons of No. 2 fuel oil
E_F = 75.00 lb/1000 gallons of No. 4 fuel oil
E_W = 73.5 lb/1000 gallons of Waste oil
E_P = 0.02 lb/1000 gallons of Propane
E_T = 0.0014 lb/ton of Steel slag used

Limit: HCl emissions in the dryer/mixer burner shall be less than 9.08 tons per twelve (12) consecutive month period based on the following equation:

$$HCl = \frac{W(E_W)}{2,000 \text{ lbs/ton}}$$

where:

HCl = tons of Hydrogen Chloride emissions for twelve (12) month consecutive period

W = gallons of waste oil used in the last 12 months
E_W = 13.2 lb/1000 gallons of waste oil

Multiple Fuel / Slag Usage Quarterly Report

QUARTER: _____ YEAR: _____ Page 2 of 2

Month		Column 1	Column 2	Column 1 + Column 2	Equation Results
	Fuel Types / Slag (units)	Usage This Month	Usage Previous 11 Months	Usage 12 Month Total	Emissions (tons per 12 months)
Month 1	Natural Gas (million cubic feet)				Nitrogen Oxides = Sulfur Dioxide = Hydrogen Chloride =
	No. 2 Fuel Oil (gallons)				
	No. 4 Fuel Oil (gallons)				
	Waste Fuel Oil (gallons)				
	Propane(gallons)				
	Steel Slag Usage (tons)				
Month 2	Natural Gas (million cubic feet)				Nitrogen Oxides = Sulfur Dioxide = Hydrogen Chloride =
	No. 2 Fuel Oil (gallons)				
	No. 4 Fuel Oil (gallons)				
	Waste Fuel Oil (gallons)				
	Propane(gallons)				
	Steel Slag Usage (tons)				
Month 3	Natural Gas (million cubic feet)				Nitrogen Oxides = Sulfur Dioxide = Hydrogen Chloride =
	No. 2 Fuel Oil (gallons)				
	No. 4 Fuel Oil (gallons)				
	Waste Fuel Oil (gallons)				
	Propane(gallons)				
	Steel Slag Usage (tons)				

No deviation occurred in this reporting period. Submitted by: _____ Date: _____

Deviation/s occurred in this reporting period. Title / Position: _____ Phone: _____

Deviation has been reported on: _____ Signature: _____

~~Attach a signed certification to complete this report.~~

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

FESOP Quarterly Report

Source Name: Gohmann Asphalt & Construction Inc. (Portable)
Initial Source Address: HWY 68, Dale, Indiana 47523
FESOP Permit No.: F147-29141-05167
Facility: EU-01
Parameters: Single Fuel Usage in Dryer/Mixer Burner
Limits: When combusting only one type of fuel per twelve (12) consecutive month

period in the dryer/mixer burner, in conjunction with the use of slag in the aggregate mix, fuel and slag usage shall not exceed the following:

Fuel Type (Units)	Fuel Usage Limit
Natural Gas (million cubic feet)	180.0
No. 2 Distillate Fuel Oil (gallons)	2,663,353
No. 4 Distillate Fuel Oil (gallons)	2,521,307
Waste Oil (gallons)	1,375,484
Propane (gallons)	15,038,242
Blast Furnace (tons)	12,000

QUARTER _____ YEAR: _____

Month		Column 1	Column 2	Column 1 +Column 2
	Fuel Types / Slag (units)	Usage This Month	Usage Previous 11 Months	Usage 12 Month Total
Month 1	Natural Gas (million cubic feet)			
	No. 2 Fuel Oil (gallons)			
	No. 4 Fuel Oil (gallons)			
	Waste Fuel Oil (gallons)			
	Propane(gallons)			
	Steel Slag Usage (tons)			
Month 2	Natural Gas (million cubic feet)			
	No. 2 Fuel Oil (gallons)			
	No. 4 Fuel Oil (gallons)			
	Waste Fuel Oil (gallons)			
	Propane(gallons)			
	Steel Slag Usage (tons)			
Month 3	Natural Gas (million cubic feet)			
	No. 2 Fuel Oil (gallons)			
	No. 4 Fuel Oil (gallons)			
	Waste Fuel Oil (gallons)			
	Propane(gallons)			
	Steel Slag Usage (tons)			

- No deviation occurred in this reporting period. Submitted by: _____ Date: _____
 Deviation/s occurred in this reporting period. Title / Position: _____ Phone: _____

Deviation has been reported on: _____ Signature: _____

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".

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 2, 2012.

The construction and operation of this proposed revision shall be subject to the conditions of the attached FESOP Significant Revision No. 051-31690-05167. The staff recommends to the Commissioner that this FESOP Significant Revision be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Ms. Renee Traivaranon at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5615 or toll free at 1-800-451-6027 extension 4-5615.
- (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

Attachment A

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

**Gohmann Asphalt & Construction, Inc.
Portable**

**Drum hot mix asphalt plant
FUGITIVE PARTICULATE MATTER EMISSIONS
CONTROL PLAN**

1. Fugitive particulate matter (dust) emissions from paved roads, unpaved roads, and parking lots shall be controlled by one or more of the following measures:
 - a. Paved roads and parking lots:
 - i. Cleaning by vacuum sweeping on an as needed basis⁽¹⁾ (monthly at a minimum).
 - ii. Power brooming while wet either from rain or application of water.
 - b. Unpaved roads and parking lots:
 - i. paving with asphalt.
 - ii. Treating with emulsified asphalt on an as needed basis.
 - iii. Treating with water on an as needed basis.
 - iv. Double chip and seal the road surface and maintained on an as needed basis.
2. Fugitive particulate matter (dust) emissions from aggregate stockpiles shall be controlled by one or more of the following measures:
 - a. Maintain minimum size and number of stockpiles of aggregate.
 - b. Treating around the stockpile area with emulsified asphalt on an as needed basis.
 - c. Treating around the stockpile area with water on an as needed basis.
 - d. Treating the stockpiles with water on an as needed basis.
3. Fugitive particulate matter (dust) emissions from outdoor conveying of aggregates shall be controlled by the following measure:
 - a. Apply water at the feed and the intermediate points on an as needed basis.
4. Fugitive particulate matter (dust) emissions resulting from the transferring of aggregates shall be controlled by one or more of the following measures:
 - a. Minimize the vehicular distance between the transfer points.
 - b. Enclose the transfer points.
 - c. Apply water on transfer points on an as needed basis.
5. Fugitive particulate matter (dust) emissions resulting from transportation of aggregate by truck, front-end loader, etc., shall be controlled by one or more of the following measures:
 - a. Tarping the aggregate hauling vehicles.
 - b. Maintain vehicle bodies in a condition to prevent leakage.
 - c. Spray the aggregates with water.
 - d. Maintain a 10 MPH speed limit in the yard.
6. Fugitive particulate matter (dust) emissions resulting from the loading and unloading of aggregates shall be controlled by on or more of the following measures:
 - a. Reduce free fall distance to a minimum.
 - b. Reduce the rate of discharge of the aggregate.
 - c. Spray the aggregate with water on an as needed basis.

⁽¹⁾ "An As Needed Basis" means the frequency or quantity of application necessary to minimize visible particulate matter emissions.

Attachment B

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

**Gohmann Asphalt & Construction, Inc.
Portable**

Title 40: Protection of Environment

[PART 60—NEW SOURCE PERFORMANCE STANDARDS](#)

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

40 CFR 60, 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 and mixing with asphalt cements.

[51 FR 12325, Apr. 10, 1986]

§ 60.92 Standard for particulate matter.

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

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

§ 60.93 Test methods and procedures.

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

[54 FR 6667, Feb. 14, 1989]

Reference

The US EPA Electronic Code of Federal Regulations - 40 CFR 60, Subpart I: Standards of Performance for Hot Mix Asphalt Facilities weblink:

<http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=875648a88dd2168ac2096fe26e3e4c98&rqn=div6&view=text&node=40:6.0.1.1.1.20&idno=40>

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

Addendum to the Technical Support Document (ATSD) for a
Significant Permit Revision

Source Background and Description

Source Name: Gohmann Asphalt & Construction, Inc. (Portable)
Initial Source Location: I-64 and SR 231, Dale, Indiana 47523
Current Source Location: 12380 E County Road 50 N, Oakland City, Indiana 47660
Current County: Gibson (Columbia Township)
SIC Code: 2951 (Asphalt Paving Mixtures and Blocks)
Operation Permit No.: F 147-29141-05167
Operation Permit Issuance Date: November 16, 2010
Significant Permit Revision No.: 051-31690-05167
Permit Reviewer: Renee Traivaranon

On May 25, 2012, the Office of Air Quality (OAQ) had a notice published in the Princeton Daily Clarion in Princeton, Indiana, stating that Gohmann Asphalt & Construction, Inc. had applied for a significant permit revision to add asbestos free shingles to the aggregate mix, and additional amount of aggregate to stock piles, four bins and one liquid asphalt storage tank. The notice also stated that the OAQ proposed to issue a significant permit 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

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

- (a) The source uses the steel slag in the process of aggregate mix and has limit of 12,000 tons per year; therefore, the report from has been corrected for the type of slag as follows:

FESOP Quarterly Report

.....

Fuel Type (Units)	Fuel Usage Limit
Natural Gas (million cubic feet)	180.0
No. 2 Distillate Fuel Oil (gallons)	2,663,353
No. 4 Distillate Fuel Oil (gallons)	2,521,307
Waste Oil (gallons)	1,375,484
Propane (gallons)	15,038,242
Blast Furnace Steel Slag (tons)	12,000

IDEM Contact

- (a) Questions regarding this proposed significant permit revision can be directed to Ms. Renee Traivaranon at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) (234-5615) or toll free at 1-800-451-6027 extension 4-5615.
- (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

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted emission units during this review.

Enforcement Issues

There are no pending enforcement actions related to this revision.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – FESOP Revision

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

Process/ Emission Unit	PTE of Proposed Revision (tons/year)									
	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e	Total HAPs	Worst Single HAP
Shingle And Aggregate Storage Piles	0.46	0.16	0.16	0	0	0	0	0	0	0
Shingle Processing and Handling	1.99	0.7	0.6	0	0	0	0	0	0	0
Shingle Screening and Conveying	0.4	0.2	0.03	0	0	0	0	0	0	0
Unpaved and Paved Roads (worst case)	82.5	21.0	2.1	0	0	0	0	0	0	0
Tank -04	-	-	-	-	-	neg	-	-	neg	neg
Total PTE of Revision	85.4	22.1	2.9	0	0	0	0	0	0	0
See detail calculation in Appendix A.1, pages 1, 14, 16, 17, and 18 of 20										

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

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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 ~~strike through~~ values.

Process Description	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)									
	PM	PM10*	PM2.5	SO2	NOx	VOC	CO	GHGs as CO ₂ e***	Total HAPs	Worst Single HAP
Ducted Emissions										
Fuel Combustion (worst case)	24.70 13.20	49.68 10.52	49.68 10.52	94.55 94.55	97.75 97.75	7.52 7.52	56.39	96,181.88	17.03 13.41	8.49 9.08 HCl
Dryer/Mixer	492.5 192.31	82.54 82.57	93.14 93.12	17.40	16.50	9.60	39.0	9,976	3.20	0.93 HCOH
Dryer/Mixer Slag Processing	-	-	-	0.001	-	-	-	-	-	-
Hot Oil Heater	0.13	0.21	0.21	4.44	1.25	0.05	0.74	1,141.19	0.02	0.016 Hexane
Worst Case Emissions	492.6 192.44	82.75 82.77	93.32 93.33	99.00	99.00	9.65	57.13	97,569.07	17.05 13.43	8.49 9.08 HCl
Fugitive Emissions										
Asphalt Load-Out, Silo Filling, On-Site Yard	0.33 0.16	0.33 0.16	0.33 0.16	-	-	5.14 1.48	0.86 0.51	-	0.09 0.03	0.03 0.01 HCOH
Material Storage Piles	4.85 2.31	0.65 0.81	0.65 0.81	-	-	-	-	-	-	-
Material Processing and Handling	1.94	0.92	0.14	-	-	-	-	-	-	-
Material Crushing, Screening, and Conveying	9.52	3.48	3.48	-	-	-	-	-	-	-
Paved and Unpaved Roads (worst case)	42.68 42.63	40.88 10.87	1.09	-	-	-	-	-	-	-
Cold Mix Asphalt Production	-	-	-	-	-	-	-	-	-	-
Gasoline Dispensing	-	-	-	-	-	-	-	-	-	-
**Volatile Organic Liquid Storage Vessels	-	-	-	-	-	negl.	-	-	negl.	negl.
Total Fugitive Emissions	56.32 56.56	46.25 16.23	5.68 5.67	-	-	5.14 1.48	0.86 0.51	-	0.09 0.03	0.03 0.01 HCOH
Totals Limited/Controlled Emissions	249	99.00	99.00	99.00	99.00	14.79 11.13	57.99 57.64	97,569.07	17.14 13.47	8.49 9.08 HCl
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	NA	NA
Emission Offset/Nonattainment NSR Major Source Thresholds	NA	NA-0	NA 100	NA	NA	NA	NA	NA	NA	NA
(1) PTE after Production Limitation. negl. = negligible * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions. ** 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. *** 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.

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 Description	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)									
	PM	PM10*	PM2.5	SO2	NOx	VOC	CO	GHGs as CO ₂ e***	Total HAPs	Worst Single HAP
Ducted Emissions										
Fuel Combustion (worst case)	13.20	10.52	10.52	94.55	97.75	7.52	56.39	96,181.88	13.41	9.08 HCl
Dryer/Mixer	192.31	82.57	93.57	17.40	16.50	9.60	39.0	9,976	3.20	0.93 HCOH
Dryer/Mixer Slag Processing	-	-	-	0.001	-	-	-	-	-	-
Hot Oil Heater	0.13	0.21	0.21	4.44	1.25	0.05	0.74	1,141.19	0.02	0.016 Hexane
Worst Case Emissions	192.44	82.77	93.33	99.00	99.00	9.65	57.13	97.569.07	13.43	9.08 HCl
Fugitive Emissions										
Asphalt Load-Out, Silo Filling, On-Site Yard	0.16	0.16	0.16	-	-	1.48	0.51	-	0.03	0.01 HCOH
Material Storage Piles	2.31	0.81	0.81	-	-	-	-	-	-	-
Material Processing and Handling	1.94	0.92	0.14	-	-	-	-	-	-	-
Material Crushing, Screening, and Conveying	9.52	3.48	3.48	-	-	-	-	-	-	-
Paved and Unpaved Roads (worst case)	42.63	10.87	1.09	-	-	-	-	-	-	-
Cold Mix Asphalt Production	-	-	-	-	-	-	-	-	-	-
Gasoline Dispensing	-	-	-	-	-	-	-	-	-	-
**Volatile Organic Liquid Storage Vessels	-	-	-	-	-	negl.	-	-	negl.	negl.
Total Fugitive Emissions	56.56	16.23	5.67	-	-	1.48	0.51	-	0.03	0.01 HCOH
Totals Limited/Controlled Emissions	249	99.00	99.00	99.00	99.00	11.13	57.64	97.569.07	13.47	9.08 HCl
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	NA	NA
negl. = negligible										
* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.										
** 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.										
*** The 100,000 CO ₂ 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.										

- (a) **FESOP Status**
 This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less

than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP).

- (A) In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the source shall comply with the following:
- (1) The amount of hot-mix asphalt processed from the aggregate mixing and drying operation shall not exceed 600,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is an existing requirement for the source.*
 - (2) PM10 emissions from dryer/mixer shall not exceed 0.275 pounds per ton of asphalt processed. *This is an existing requirement for the source.*
 - (3) PM2.5 emissions from dryer/mixer shall not exceed 0.310 pounds per ton of asphalt processed. *This is an existing requirement for the source.*
 - (4) The VOC emissions from the dryer/mixer shall not exceed 0.032 pounds per ton of asphalt processed. *This is an existing requirement for the source.*
 - (5) The CO emissions from the dryer/mixer shall not exceed 0.130 pounds per ton of asphalt processed. *This is an existing requirement for the source.*

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

Compliance with the limit in (1) and (4) is also limited the PTE VOC from the dryer/mixer burner to less than twenty-five (25) tons per 12 consecutive month period and render 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities) not applicable.

- (B) In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the fuels and slag specifications and usages shall be limited as follows:
- (1) Fuel and Slag Specifications
 - (a) The sulfur content of the No. 2 distillate fuel oil combusted in the dryer burner shall not exceed 0.50% by weight. *This is an existing requirement for the source.*
 - (b) The sulfur content of the No. 4 distillate fuel oil combusted in the dryer burner shall not exceed 0.50% by weight. *This is an existing requirement for the source.*
 - (c) The sulfur content of the waste oil shall not exceed 0.50% by weight. *This is an existing requirement for the source.*
 - (d) The waste oil combusted in the dryer burner shall not contain more than 0.30% ash, 0.10% chlorine, and 0.10% lead. *This is an existing requirement for the source.*

- (e) The HCl emissions shall not exceed 13.2 pounds of HCl per 1,000 gallons of waste oil burned. *This is a change from 6.6 pounds of HCl per 1,000 gallons of waste oil. This is a Title I change.*
- (f) The sulfur content of the Steel slag shall not exceed 0.66% by weight. *This is an existing requirement for the source.*
- (g) The SO₂ emissions from the dryer/mixer shall not exceed 0.0014 pounds per ton of Steel slag processed in the aggregate mix. *This is an existing requirement for the source.*

(2) Single Fuel and Slag Usage Limitations:

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

- (a) Natural gas usage in the dryer/mixer burner shall not exceed 180 million cubic feet (MMCF) per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is an existing requirement for the source.*
- (b) No. 2 fuel oil usage in the dryer/mixer burner shall not exceed 2,663,353 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is an existing requirement for the source.*
- (c) No. 4 fuel oil usage in the dryer/mixer burner shall not exceed 2,521,307 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is an existing requirement for the source.*
- (d) Propane usage in the dryer/mixer burner shall not exceed 15,038,242 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is an existing requirement for the source.*
- (e) Waste oil usage in the dryer/mixer burner shall not exceed 1,375,484 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a change from 2,572,763 gallons. This is a Title I change.*
- (f) The Steel slag usage shall not exceed 12,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is an existing requirement for the source.*

Note: The source is only permitted to burn the above-mentioned fuels in the dryer/mixer burner.

(3) Multiple Fuel and Slag Usage Limitation:

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

- (a) SO₂ emissions from the dryer/mixer burner, in conjunction with the use of slag in the aggregate mix, shall not exceed 94.56 tons per twelve (12) consecutive month period, with compliance determined at the end of

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

**Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon**

Asphalt Plant Maximum Capacity - Drum Mix

Maximum Hourly Asphalt Production =	450	ton/hr								
Maximum Annual Asphalt Production =	3,942,000	ton/yr								
Maximum Annual Blast Furnace Slag Usage =	0	ton/yr	1.5	% sulfur						
Maximum Annual Steel Slag Usage =	1,655,640	ton/yr	0.66	% sulfur						
Maximum Dryer Fuel Input Rate =	120.0	MMBtu/hr								
Natural Gas Usage =	1,051	MCMCF/yr								
No. 2 Fuel Oil Usage =	7,508,571	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Usage =	7,508,571	gal/yr, and	0.50	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and	0.50	% sulfur						
Propane Usage =	11,615,470	gal/yr, and	0.20	gr/100 ft3 sulfur						
Butane Usage =	0	gal/yr, and	0.22	gr/100 ft3 sulfur						
Used/Waste Oil Usage =	7,508,571	gal/yr, and	0.50	% sulfur	0.30	% ash	0.100	% chlorine,	0.100	% lead
Diesel Fuel Usage - Generator < 600 HP =	0	gal/yr, and								
Diesel Fuel Usage - Generator > 600 HP =	0	gal/yr	0.50	% 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 =	0.74	lb/ton of slag processed								
Unlimited Steel Slag SO2 Dryer/Mixer Emission Factor =	0.0014	lb/ton of slag processed								

Unlimited/Uncontrolled Emissions

Process Description	Unlimited/Uncontrolled Potential to Emit (tons/year)									
	Criteria Pollutants							Greenhouse Gas Pollutants	Hazardous Air Pollutants	
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	CO2e	Total HAPs	Worst Case HAP
Ducted Emissions										
Dryer Fuel Combustion (worst case)	72.08	57.44	57.44	281.57	176.45	5.81	44.15	90,979.90	72.73	49.56 (hydrogen chloride)
Dryer/Mixer (Process)	55,188.00	12,811.50	2,956.50	114.32	108.41	63.07	256.23	65,539.69	21.01	6.11 (formaldehyde)
Dryer/Mixer Slag Processing (worst case)	0	0	0	1.16	0	0	0	0.00	0	0
Hot Oil Heater Fuel Combustion (worst case)	0.13	0.21	0.21	4.44	1.25	0.05	0.74	1,414.19	0.020	0.016 (hexane)
Diesel-Fired Generator < 600 HP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000 (formaldehyde)
Diesel-Fired Generator > 600 HP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000 (benzene)
Worst Case Emissions*	55,188.13	12,811.71	2,956.71	287.17	177.70	63.12	256.97	92,394.09	72.75	49.56 (hydrogen chloride)
Fugitive Emissions										
Asphalt Load-Out, Silo Filling, On-Site Yard	2.18	2.18	2.18	0	0	33.76	5.68	0	0.56	0.17 (formaldehyde)
Material Storage Piles	2.31	0.81	0.81	0	0	0	0	0	0	0
Material Processing and Handling	13.12	6.21	0.91	0	0	0	0	0	0	0
Material Crushing, Screening, and Conveying	64.14	23.40	23.40	0	0	0	0	0	0	0
Unpaved and Paved Roads (worst case)	384.00	97.87	9.78	0	0	0	0	0	0	0
Cold Mix Asphalt Production	0	0	0	0	0	0.00	0	0	0.00	0.00 (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
Total Fugitive Emissions	465.76	130.47	37.09	0.00	0.00	33.76	5.68	0.00	0.56	0.00 (xylenes)
Totals Unlimited/Uncontrolled PTE	55,653.89	12,942.18	2,993.80	287.17	177.70	96.88	262.64	92,394.09	73.32	49.56 (hydrogen chloride)

negl = negligible

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

*Worst Case Emissions (tons/yr) = Worst Case Emissions from Dryer Fuel Combustion and Dryer/Mixer + Worst Case Emissions From Dryer/Mixer Slag Processing + Worst Case Emissions from Hot Oil Heater Fuel Combustion + Diesel-Fired Generator < 600 HP + Diesel-Fired Generator > 600 HP
Fuel component percentages provided by the source.

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

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

The following calculations determine the unlimited/uncontrolled emissions created from the combustion of natural gas, fuel oil, propane, butane, or used/waste oil in the dryer/mixer at the source.

Maximum Capacity

Maximum Hourly Asphalt Production =	450	ton/hr
Maximum Annual Asphalt Production =	3,942,000	ton/yr
Maximum Fuel Input Rate =	120	MMBtu/hr
Natural Gas Usage =	1,051	MMCF/yr
No. 2 Fuel Oil Usage =	7,508,571	gal/yr, and
No. 4 Fuel Oil Usage =	7,508,571	gal/yr, and
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and
Propane Usage =	11,615,470	gal/yr, and
Butane Usage =	0	gal/yr, and
Used/Waste Oil Usage =	7,508,571	gal/yr, and

	0.50	% sulfur
	0.50	% sulfur
	0.50	% sulfur
	0.20	gr/100 ft3 sulfur
	0.22	gr/100 ft3 sulfur
	0.50	% sulfur
	0.30	% ash
	0.100	% chlorine
	0.100	% 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	7.815	0.5	0.6	19.2	1.00	7.51	26.28	0.00	2.904	0.000	72.08	72.08	
PM10/PM2.5	7.6	3.3	8.3	9.315	0.5	0.6	15.3	3.99	12.39	31.16	0.00	2.904	0.000	57.44	57.44	
SO2	0.6	71.0	75.0	78.5	0.020	0.020	73.5	0.32	266.55	281.57	0.00	0.116	0.000	275.94	281.57	
NOx	190	24.0	47.0	47.0	13.0	15.0	19.0	99.86	90.10	176.45	0.00	75.50	0.00	71.33	176.45	
VOC	5.5	0.20	0.20	0.28	1.00	1.10	1.0	2.89	0.75	0.75	0.00	5.81	0.00	3.75	5.81	
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	44.1504	18.77	18.77	0.00	43.56	0.00	18.77	44.15	
Hazardous Air Pollutant																
HCl							13.2							49.56	49.56	
Antimony			5.25E-03	5.25E-03			negl			1.97E-02	0.00E+00			negl	2.0E-02	
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03			1.1E-01	1.1E-04	2.10E-03	4.96E-03	0.00E+00			4.13E-01	4.1E-01	
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05			negl	6.3E-06	1.58E-03	1.04E-04	0.00E+00			negl	1.6E-03	
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04			9.3E-03	5.8E-04	1.58E-03	1.49E-03	0.00E+00			3.49E-02	3.5E-02	
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02	7.4E-04	1.58E-03	3.17E-03	0.00E+00			7.51E-02	7.5E-02	
Cobalt	8.4E-05		6.02E-03	6.02E-03			2.1E-04	4.4E-05	2.26E-02	0.00E+00				7.88E-04	2.3E-02	
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03			5.5	2.6E-04	4.73E-03	5.67E-03	0.00E+00			2.1E+01	20.65	
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03			6.8E-02	2.0E-04	3.15E-03	1.13E-02	0.00E+00			2.55E-01	0.26	
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04				1.4E-04	1.58E-03	4.24E-04	0.00E+00				1.6E-03	
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02	1.1E-03	1.58E-03	3.17E-01	0.00E+00			4.13E-02	0.317	
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl	1.3E-05	7.88E-03	2.56E-03	0.00E+00			negl	7.9E-03	
1,1,1-Trichloroethane			2.36E-04	2.36E-04						8.86E-04	0.00E+00				8.9E-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				1.1E-03		8.03E-04	0.00E+00			8.26E-03	1.1E-03	
Bis(2-ethylhexyl)phthalate							2.2E-03							8.26E-03	8.3E-03	
Dichlorobenzene	1.2E-03						8.0E-07	6.3E-04						3.00E-06	6.3E-04	
Ethylbenzene			6.36E-05	6.36E-05						2.39E-04	0.00E+00				2.4E-04	
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				3.9E-02	2.29E-01	1.24E-01	0.00E+00				0.229	
Hexane	1.8E+00							0.95							0.946	
Phenol							2.4E-03							9.01E-03	9.0E-03	
Toluene	3.4E-03		6.20E-03	6.20E-03				1.8E-03		2.33E-02	0.00E+00				2.3E-02	
Total PAH Haps	negl		1.13E-03	1.13E-03			3.9E-02	negl		4.24E-03	0.00E+00			1.47E-01	1.5E-01	
Polycyclic Organic Matter		3.30E-03							1.24E-02						1.2E-02	
Xylene			1.09E-04	1.09E-04						4.09E-04	0.00E+00				4.1E-04	
Total HAPs								0.99	0.27	0.54	0.00	0	0	71.19	72.73	

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 Calculation:
Greenhouse Gas (CO₂e) Emissions from the
Dryer/Mixer Fuel Combustion with Maximum Capacity≥ 100 MMBtu/hr**

**Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon**

The following calculations determine the unlimited/uncontrolled emissions created from the combustion of natural gas, fuel oil, propane, butane, or used/waste oil in the dryer/mixer at the source.

Maximum Capacity

Maximum Hourly Asphalt Production	450	ton/hr								
Maximum Annual Asphalt Production	3,942,000	ton/yr								
Maximum Fuel Input Rate	120	MMBtu/hr								
Natural Gas Usage	1,051	MMCF/yr								
No. 2 Fuel Oil Usage	7,508.571	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Usage	7,508.571	gal/yr, and	0.50	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage	0	gal/yr, and	0.50	% sulfur						
Propane Usage	11,615,470	gal/yr, and	0.20	gr/100 ft3 sulfur						
Butane Usage	0	gal/yr, and	0.22	gr/100 ft3 sulfur						
Used/Waste Oil Usage	7,508.571	gal/yr, and	0.50	% sulfur	0.30	% ash	0.100	% chlorine,	0.100	% lead

Unlimited/Uncontrolled Emissions

CO ₂ 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 ₂	120,161.84	22,501.41	24,153.46	24,835.04	12,500.00	14,506.73	22,024.15	Carbon dioxide	CO ₂	1
CH ₄	2.49	0.91	0.97	1.00	0.60	0.67	0.89	Methane	CH ₄	21
N ₂ O	2.2	0.26	0.19	0.53	0.9	0.9	0.18	Nitrous oxide	N ₂ O	310

CO ₂ e 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)
CO ₂	63,157.06	84,476.72	90,679.00	0.00	72,596.69	0.00	82,684.97
CH ₄	1.31	3.43	3.63	0.00	3.50	0.00	3.35
N ₂ O	1.16	0.98	0.73	0.00	5.23	0.00	0.68
Total	63,159.53	84,481.13	90,683.36	0.00	72,605.41	0.00	82,688.99

CO₂e for Worst Case Fuel* (tons/yr)
90,979.90

CO₂e Equivalent Emissions (tons/yr)	63,543.05	84,851.29	90,979.90	0.00	74,290.45	0.00	82,964.85
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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) 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 Fuel Oil: 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**

**Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon**

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

Maximum Hourly Asphalt Production = ton/hr
Maximum Annual Asphalt Production = ton/yr

Criteria Pollutant	Uncontrolled Emission Factors (lb/ton)			Unlimited/Uncontrolled Potential to Emit (tons/yr)			Worse Case PTE
	Drum-Mix Plant (dryer/mixer)			Drum-Mix Plant (dryer/mixer)			
	Natural Gas	No. 2 Fuel Oil	Waste Oil	Natural Gas	No. 2 Fuel Oil	Waste Oil	
PM*	28	28	28	55188	55188	55188	55188
PM10*	6.5	6.5	6.5	12811.5	12811.5	12811.5	12811.5
PM2.5*	1.5	1.5	1.5	2956.5	2956.5	2956.5	2957
SO2**	0.0034	0.011	0.058	6.7	21.7	114.3	114.3
NOx**	0.026	0.055	0.055	51.2	108.4	108.4	108.4
VOC**	0.032	0.032	0.032	63.1	63.1	63.1	63.1
CO***	0.13	0.13	0.13	256.2	256.2	256.2	256.2
Hazardous Air Pollutant							
HCl			2.10E-04			4.14E-01	0.41
Antimony	1.80E-07	1.80E-07	1.80E-07	3.55E-04	3.55E-04	3.55E-04	3.55E-04
Arsenic	5.60E-07	5.60E-07	5.60E-07	1.10E-03	1.10E-03	1.10E-03	1.10E-03
Beryllium	negl	negl	negl	negl	negl	negl	0.00E+00
Cadmium	4.10E-07	4.10E-07	4.10E-07	8.08E-04	8.08E-04	8.08E-04	8.08E-04
Chromium	5.50E-06	5.50E-06	5.50E-06	1.08E-02	1.08E-02	1.08E-02	1.08E-02
Cobalt	2.60E-08	2.60E-08	2.60E-08	5.12E-05	5.12E-05	5.12E-05	5.12E-05
Lead	6.20E-07	1.50E-05	1.50E-05	1.22E-03	2.96E-02	2.96E-02	2.96E-02
Manganese	7.70E-06	7.70E-06	7.70E-06	1.52E-02	1.52E-02	1.52E-02	1.52E-02
Mercury	2.40E-07	2.60E-06	2.60E-06	4.73E-04	5.12E-03	5.12E-03	5.12E-03
Nickel	6.30E-05	6.30E-05	6.30E-05	0.12	0.12	0.12	0.12
Selenium	3.50E-07	3.50E-07	3.50E-07	6.90E-04	6.90E-04	6.90E-04	6.90E-04
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	0.08	0.08	0.08	0.08
Acetaldehyde			1.30E-03			2.56	2.56
Acrolein			2.60E-05			5.12E-02	5.12E-02
Benzene	3.90E-04	3.90E-04	3.90E-04	0.77	0.77	0.77	0.77
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0.47	0.47	0.47	0.47
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	6.11	6.11	6.11	6.11
Hexane	9.20E-04	9.20E-04	9.20E-04	1.81	1.81	1.81	1.81
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0.09	0.09	0.09	0.09
MEK			2.00E-05			0.04	0.04
Propionaldehyde			1.30E-04			0.26	0.26
Quinone			1.60E-04			0.32	0.32
Toluene	1.50E-04	2.90E-03	2.90E-03	0.30	5.72	5.72	5.72
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0.37	1.73	1.73	1.73
Xylene	2.00E-04	2.00E-04	2.00E-04	0.39	0.39	0.39	0.39
Total HAPs							21.01
Worst Single HAP							6.11 (formaldehyde)

Methodology

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

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

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

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

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

Abbreviations

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

HAP = Hazardous Air Pollutant
PAH = Polyaromatic Hydrocarbon

**Appendix A.1: Unlimited Emissions Calculations
Greenhouse Gas (CO₂e) Emissions from the
Drum-Mix Plant (Dryer/Mixer) Process Emissions**

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

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

Maximum Hourly Asphalt Production = ton/hr
 Maximum Annual Asphalt Production = 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 ₂ e for Worst Case Fuel (tons/yr)
	Natural Gas	No. 2 Fuel Oil	Waste Oil		Natural Gas	No. 2 Fuel Oil	Waste Oil	
CO ₂	33	33	33	1	65,043.00	65,043.00	65,043.00	65,539.69
CH ₄	0.0120	0.0120	0.0120	21	23.65	23.65	23.65	
N ₂ O				310	0	0	0	
Total					65,066.65	65,066.65	65,066.65	
CO₂e Equivalent Emissions (tons/yr)					65,539.69	65,539.69	65,539.69	

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 N₂O available in either the 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no N₂O 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 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).

Abbreviations

CO₂ = Carbon Dioxide CH₄ = Methane N₂O = Nitrogen Dioxide PTE = Potential to Emit

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

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

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

1.5

 % sulfur
Maximum Annual Steel Slag Usage* =

1,655,640

 ton/yr

0.66

 % sulfur

Type of Slag	SO2 Emission Factor (lb/ton)**	Unlimited Potential to Emit SO2 (tons/yr)
Blast Furnace Slag	0.74	0.0
Steel Slag	0.0014	1.16

Methodology

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

** 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: Gohman Asphalt & Construction
Source Location: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon**

Maximum Hot Oil Heater Fuel Input Rate = **2.00** MMBtu/hr
 Natural Gas Usage = **18** MMCF/yr
 No. 2 Fuel Oil Usage = **125,143** gal/yr, and **0.50** % sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		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	0.017	0.125	0.13
PM10/PM2.5	7.6	3.3	0.067	0.206	0.21
SO2	0.6	71.0	0.005	4.443	4.44
NOx	100	20.0	0.876	1.251	1.25
VOC	5.5	0.20	0.048	0.013	0.05
CO	84	5.0	0.736	0.313	0.74
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	1.8E-06	3.50E-05	3.5E-05
Beryllium	1.2E-05	4.2E-04	1.1E-07	2.63E-05	2.6E-05
Cadmium	1.1E-03	4.2E-04	9.6E-06	2.63E-05	2.6E-05
Chromium	1.4E-03	4.2E-04	1.2E-05	2.63E-05	2.6E-05
Cobalt	8.4E-05		7.4E-07		7.4E-07
Lead	5.0E-04	1.3E-03	4.4E-06	7.88E-05	7.9E-05
Manganese	3.8E-04	8.4E-04	3.3E-06	5.26E-05	5.3E-05
Mercury	2.6E-04	4.2E-04	2.3E-06	2.63E-05	2.6E-05
Nickel	2.1E-03	4.2E-04	1.8E-05	2.63E-05	2.6E-05
Selenium	2.4E-05	2.1E-03	2.1E-07	1.31E-04	1.3E-04
Benzene	2.1E-03		1.8E-05		1.8E-05
Dichlorobenzene	1.2E-03		1.1E-05		1.1E-05
Ethylbenzene					0.0E+00
Formaldehyde	7.5E-02	6.10E-02	6.6E-04	3.82E-03	3.8E-03
Hexane	1.8E+00		0.02		1.6E-02
Phenol					0.0E+00
Toluene	3.4E-03		3.0E-05		3.0E-05
Total PAH Haps	negl		negl		0.0E+00
Polycyclic Organic Matter		3.30E-03		2.06E-04	2.1E-04
Total HAPs =			1.7E-02	4.5E-03	0.020

Methodology

Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
 Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
 Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
 All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
 Sources of AP-42 Emission Factors for fuel combustion:

Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
 No. 2 Fuel Oil: AP-42 Chapter 1.3 (dated 5/10), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11

Abbreviations

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

**Appendix A.1: Unlimited Emissions Calculations
Greenhouse Gas (CO2e) Emissions from
Hot Oil Heater Fuel Combustion with Maximum Capacity < 100 MMBtu/hr**

**Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon**

Maximum Hot Oil Heater Fuel Input Rate = MMBtu/hr
 Natural Gas Usage = MMCF/yr
 No. 2 Fuel Oil Usage = gal/yr, % 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)
CO2	120,161.84	22,501.41	1	1,052.62	1,407.95
CH4	2.49	0.91	21	0.02	0.06
N2O	2.2	0.26	310	0.02	0.02
				1,052.66	1,408.02

Worse Case CO2e Emissions (tons/yr)
1,414.19

CO2e Equivalent Emissions (tons/yr)	1,059.05	1,414.19
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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 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 Fuel Oil: 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

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).

Abbreviations

CO2 = Carbon Dioxide
CH4 = Methane

N2O = Nitrogen Dioxide
PTE = Potential to Emit

Appendix A.1: Unlimited Emissions Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

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

	Pollutant						
	PM ^{2.5}	PM10 ²	direct PM2.5 ²	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 ¹	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

¹ 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.

² 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)

³ 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 ³
	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 ⁴	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

³ PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

⁴ 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.

⁵ Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10⁶ (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Potential Emission of Total HAPs (tons/yr)	0.00E+00
Potential Emission of Worst Case HAPs (tons/yr)	0.00E+00

Green House Gas Emissions (GHG)

	Pollutant		
	CO ₂ ⁵	CH ₄ ⁶	N ₂ O ⁶
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

⁵ 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.

⁶ 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)

⁷ 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.

⁸ Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) * 2.20462 (lb/kg) * 1/10⁶ (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Summed Potential Emissions in tons/yr	0.00
CO ₂ e Total in tons/yr	0.00

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

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.

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
Large Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (>600 HP)

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivananon

Output Horsepower Rating (hp)	0.0	Sulfur Content (S) of Fuel (% by weight)	0.50
Maximum Hours Operated per Year	8760		
Potential Throughput (hp-hr/yr)	0		
Maximum Diesel Fuel Usage (gal/yr)	0		

	Pollutant						
	PM	PM10 ²	direct PM2.5 ²	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	7.00E-04			4.05E-03 (.00809S)	2.40E-02	7.05E-04	5.50E-03
Emission Factor in lb/MMBtu		0.0573	0.0573				
Emission Factor in lb/kgal	13.70	7.85	7.85	79.18	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

¹ 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 3.1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

² 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)

³ 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.

⁴ Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10⁶ (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Hazardous Air Pollutants (HAPs)

	Pollutant						Total PAH ³
	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	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

³ PAH = Polycyclic Aromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

⁴ 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.

⁵ Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10⁶ (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Potential Emission of Total HAPs (tons/yr)	0.00E+00
Potential Emission of Worst Case HAPs (tons/yr)	0.00E+00

Green House Gas Emissions (GHG)

	Pollutant		
	CO2 ²	CH4 ^{4,5,6}	N2O ⁷
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

² 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 3.1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

³ 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)

⁴ 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.

⁵ 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.

⁶ Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) * 2.20462 (lb/kg) * 1/10⁶ (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Summed Potential Emissions in tons/yr	0.00
CO2e Total in tons/yr	0.00

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: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

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

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.5	
Maximum Annual Asphalt Production =	3,942,000	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	1.03	1.15	NA	2.18
Organic PM	3.4E-04	2.5E-04	NA	0.67	0.500	NA	1.17
TOC	0.004	0.012	0.001	8.20	24.02	2.168	34.4
CO	0.001	0.001	3.5E-04	2.66	2.326	0.694	5.68

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

PM/HAPs	0.048	0.056	0	0.104
VOC/HAPs	0.121	0.305	0.032	0.459
non-VOC/HAPs	6.3E-04	6.5E-05	1.7E-04	8.6E-04
non-VOC/non-HAPs	0.59	0.34	0.16	1.09
Total VOCs	7.71	24.02	2.0	33.8
Total HAPs	0.17	0.36	0.032	0.56
		Worst Single HAP		0.175
				(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: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

Organic Particulate-Based Compounds (Table 11.1-15)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Unlimited/Uncontrolled Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of Total Organic PM)	Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)	Load-out	Silo Filling	Onsite Yard	Total
PAH HAPs										
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	0.47%	1.7E-03	2.4E-03	NA	4.1E-03
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	1.9E-04	7.0E-05	NA	2.6E-04
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	4.7E-04	6.5E-04	NA	1.1E-03
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	1.3E-04	2.8E-04	NA	4.1E-04
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	5.1E-05	0	NA	5.1E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	1.5E-05	0	NA	1.5E-05
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	1.3E-05	0	NA	1.3E-05
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	1.5E-05	0	NA	1.5E-05
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	5.2E-05	4.8E-05	NA	1.0E-04
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	6.9E-04	1.1E-03	NA	1.7E-03
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	2.5E-06	0	NA	2.5E-06
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	3.4E-04		NA	3.4E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	5.2E-03	5.1E-03	NA	1.0E-02
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	3.2E-06	0	NA	3.2E-06
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	1.6E-02	2.6E-02	NA	0.042
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	8.4E-03	9.1E-03	NA	1.8E-02
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	1.5E-04	1.5E-04	NA	3.0E-04
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	5.4E-03	9.0E-03	NA	1.4E-02
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	1.0E-03	2.2E-03	NA	3.2E-03
Total PAH HAPs							0.040	0.056	NA	0.096
Other semi-volatile HAPs										
Phenol		PM/HAP	---	Organic PM	1.18%	0	7.9E-03	0	0	7.9E-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)**

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

Organic Volatile-Based Compounds (Table 11.1-16)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Unlimited/Uncontrolled Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of TOC)	Silo Filling and Asphalt Storage Tank (% by weight of TOC)	Load-out	Silo Filling	Onsite Yard	Total
VOC		VOC	---	TOC	94%	100%	7.71	24.02	2.04	33.76
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	5.3E-01	6.2E-02	1.4E-01	0.736
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	3.8E-03	1.3E-02	1.0E-03	0.018
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	5.8E-02	2.6E-01	1.5E-02	0.338
Total non-VOC/non-HAPS					7.30%	1.40%	0.598	0.336	0.158	1.09
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	4.3E-03	7.7E-03	1.1E-03	1.3E-02
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	7.9E-04	1.2E-03	2.1E-04	2.2E-03
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	4.0E-03	9.4E-03	1.1E-03	1.4E-02
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	1.1E-03	3.8E-03	2.8E-04	5.2E-03
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	1.7E-05	9.6E-04	4.6E-06	9.8E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	1.2E-03	5.5E-03	3.3E-04	7.1E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	9.0E-03	0	2.4E-03	1.1E-02
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	2.3E-02	9.1E-03	6.1E-03	0.038
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	7.2E-03	1.7E-01	1.9E-03	0.175
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	1.2E-02	2.4E-02	3.3E-03	0.040
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	1.5E-04	7.4E-05	3.9E-05	2.6E-04
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	6.5E-05	0	6.5E-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%	6.0E-04	1.3E-03	1.6E-04	2.1E-03
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	6.3E-04	0	1.7E-04	8.0E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	1.7E-02	1.5E-02	4.6E-03	0.037
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	1.1E-04	0	2.8E-05	1.3E-04
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	3.4E-02	4.8E-02	8.9E-03	0.091
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	6.6E-03	1.4E-02	1.7E-03	2.2E-02
Total volatile organic HAPs					1.50%	1.30%	0.123	0.312	0.033	0.468

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: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

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	1.00	0.549	0.192
Limestone	1.6	1.85	4.00	1.352	0.473
RAP	0.5	0.58	1.00	0.106	0.037
Gravel	1.6	1.85	0.00	0.000	0.000
Slag	3.8	4.40	0.25	0.201	0.070
Shingles	0.5	0.58	1.00	0.106	0.037
Totals				2.31	0.81

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.

RAP - recycled asphalt pavement

Abbreviations

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

PM2.5 = PM10

PTE = Potential to Emit

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

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

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

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

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

where: E_f = Emission factor (lb/ton)

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

Maximum Annual Asphalt Production = 3,942,000 tons/yr
 Percent Asphalt Cement/Binder (weight %) = 5.0%
 Maximum Material Handling Throughput = 3,744,900 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	4.24	2.01	0.30
Front-end loader dumping of materials into feeder bins	4.24	2.01	0.30
Conveyor dropping material into dryer/mixer or batch tower	4.24	2.01	0.30
Total (tons/yr)	12.73	6.02	0.91

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	10.11	4.49
Screening	0.025	0.0087	46.81	16.29
Conveying	0.003	0.0011	5.62	2.06
Unlimited Potential to Emit (tons/yr) =			62.54	22.84

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
Material Processing, Handling, Crushing, Screening, and Conveying**

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

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

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

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

where: E_f = Emission factor (lb/ton)

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

Maximum Annual Asphalt Production =	3,942,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	3.3%	
Maximum Material Handling Throughput =	3,811,914	
Percent RAS (%Weight) =	3.0%	
Maximum RAS Handling Throughput =	114,357	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	0.13	0.06	0.01
Front-end loader dumping of materials into feeder bins	0.13	0.06	0.01
Conveyor dropping material into dryer/mixer or batch tower	0.13	0.06	0.01
Total (tons/yr)	0.39	0.18	0.03

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)**
Screening	0.025	0.0087	1.43	0.50
Conveying	0.003	0.0011	0.17	0.06
Unlimited Potential to Emit (tons/yr) =			1.60	0.56

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: **Gohman Asphalt & Construction**
 Source Address: **I-64 & SR 231, Dale, Indiana 47523**
 Permit Number: **F051-31690-05167**
 Reviewer: **Renee Traivaranon**

Unpaved Roads at Industrial Site

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

Maximum Annual Asphalt Production =	3,942,000 tons/yr	Maximum Annual Asphalt Production =	3,942,000 tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	Percent Asphalt Cement/Binder (weight %) =	3.3%
Maximum Material Handling Throughput =	3,743,000 tons/yr	Maximum Material Handling Throughput =	3,811,914 tons/yr
Maximum Asphalt Cement/Binder Throughput =	197,100 tons/yr	Percent RAS (%Weight) =	3.0%
Maximum No. 2 Fuel Oil Usage =	7,508,571 gallons/yr	Maximum RAS Handling Throughput =	114,357 tons/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)	14.6	20.5	35.1	1.8E+05	6.4E+06	1500	0.284	51897.2
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	14.6	0	14.6	1.8E+05	2.7E+06	1500	0.284	51897.2
Aggregate/RAS Truck Enter Full	Dump truck (16 CY)	14.6	20.5	35.1	1.9E+05	6.5E+06	500	0.095	17608.6
Aggregate/RAS Truck Leave Empty	Dump truck (16 CY)	14.6	0	14.6	1.9E+05	2.7E+06	500	0.095	17608.6
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	14.1	22.0	36.1	9.0E+03	3.2E+05	1800	0.341	3054.2
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	14.1	0	14.1	9.0E+03	1.3E+05	1800	0.341	3054.2
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	7.9E+02	3.5E+04	1800	0.341	270.4
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	7.9E+02	9.5E+03	1800	0.341	270.4
Aggregate/RAP Loader Full	Front-end loader (3 CY)	27.5	7.0	34.5	5.3E+05	1.8E+07	620	0.117	62820.3
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	27.5	0	27.5	5.3E+05	6.5E+07	620	0.117	62820.3
Aggregate/RAS Loader Full	Front-end loader (3 CY)	27.5	13.0	40.5	2.9E+05	1.2E+07	300	0.057	16660.5
Aggregate/RAS Loader Empty	Front-end loader (3 CY)	27.5	0	27.5	2.9E+05	8.1E+06	300	0.057	16660.5
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	14.0	24.0	38.0	1.6E+05	6.2E+06	300	0.057	9332.4
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	14.0	0	14.0	1.6E+05	2.9E+06	300	0.057	9332.4
Total					2.7E+06	8.0E+07			3.2E+05

Average Vehicle Weight Per Trip = 29.3 tons/trip
 Average Miles Per Trip = 0.118 miles/trip

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

	PM	PM10	PM2.5	
k =	4.9	1.5	0.15	b/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
a =	4.9	4.9	4.9	% = # of % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)
b =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
W =	29.3	29.3	29.3	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, $E_{mf} = E_f \cdot [(365 - P)/365]$

Mitigated Emission Factor, $E_{mf} = E_f \cdot [(365 - P)/365]$
 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, $E_f =$	7.20	1.84	0.18	b/mile
Mitigated Emission Factor, $E_{mf} =$	4.73	1.21	0.12	b/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)	186.84	47.62	4.76	122.85	31.31	3.13	61.43	15.66	1.57
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	186.84	47.62	4.76	122.85	31.31	3.13	61.43	15.66	1.57
Aggregate/RAS Truck Enter Full	Dump truck (16 CY)	64.45	16.43	1.64	42.38	10.80	1.08	21.19	5.40	0.54
Aggregate/RAS Truck Leave Empty	Dump truck (16 CY)	64.45	16.43	1.64	42.38	10.80	1.08	21.19	5.40	0.54
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	10.996	2.802	0.28	7.230	1.843	0.18	3.615	0.921	0.09
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	10.996	2.802	0.28	7.230	1.843	0.18	3.615	0.921	0.09
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.973	0.248	0.02	0.640	0.163	0.02	0.320	0.082	0.01
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.973	0.248	0.02	0.640	0.163	0.02	0.320	0.082	0.01
Aggregate/RAP Loader Full	Front-end loader (3 CY)	226.16	57.64	5.76	148.71	37.90	3.79	74.35	18.95	1.90
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	226.16	57.64	5.76	148.71	37.90	3.79	74.35	18.95	1.90
Aggregate/RAS Loader Full	Front-end loader (3 CY)	60.98	15.54	1.55	40.10	10.22	1.02	20.05	5.11	0.51
Aggregate/RAS Loader Empty	Front-end loader (3 CY)	60.98	15.54	1.55	40.10	10.22	1.02	20.05	5.11	0.51
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	33.60	8.56	0.86	22.09	5.63	0.56	11.05	2.82	0.28
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	33.60	8.56	0.86	22.09	5.63	0.56	11.05	2.82	0.28
Totals		1167.99	297.68	29.75	768.00	195.73	19.57	384.00	97.87	9.78

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 Vehicle and 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 (b/mile)) * (ton/2000 lbs)
 Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (b/mile)) * (ton/2000 lbs)
 Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations

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

**Appendix A: Unlimited Emissions Calculations
Paved Roads**

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

Paved Roads at Industrial Site

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

Maximum Annual Asphalt Production =	3,942,000	tons/yr	Maximum Annual Asphalt Production =	3,942,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%		Percent Asphalt Cement/Binder (weight %) =	3.3%	
Maximum Material Handling Throughput =	3,744,900	tons/yr	Maximum Material Handling Throughput =	3,811,914	tons/yr
Maximum Asphalt Cement/Binder Throughput =	197,100	tons/yr	Percent RAS (%Weight) =	3%	
Maximum No. 2 Fuel Oil Usage =	7,508.571	gallons/yr	Maximum RAS Handling Throughput =	114,357	tons/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 distance (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	14.6	20.5	35.10	1.8E+05	6.4E+06	300	0.057	10379.4
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	14.6	0	14.60	1.8E+05	2.7E+06	300	0.057	10379.4
Aggregate/RAS Truck Enter Full	Dump truck (16 CY)	14.6	20.5	35.10	1.9E+05	6.5E+06	500	0.095	17608.6
Aggregate/RAS Truck Leave Empty	Dump truck (16 CY)	14.6	0	14.60	1.9E+05	2.7E+06	500	0.095	17608.6
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	14.1	22.0	36.10	9.0E+03	3.2E+05	300	0.057	509.0
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	14.1	0	14.10	9.0E+03	1.3E+05	300	0.057	529.0
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.00	7.9E+02	3.5E+04	300	0.057	45.1
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	7.9E+02	9.5E+03	300	0.057	45.1
Aggregate/RAP Loader Full	Front-end loader (3 CY)	27.5	7.0	34.50	5.3E+05	1.8E+07	300	0.057	30396.9
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	27.5	0	27.50	5.3E+05	1.5E+07	300	0.057	30396.9
Aggregate/RAS Loader Full	Front-end loader (3 CY)	27.5	13.0	40.50	2.9E+05	1.2E+07	300	0.057	16660.5
Aggregate/RAS Loader Empty	Front-end loader (3 CY)	27.5	0	27.50	2.9E+05	8.1E+06	300	0.057	16660.5
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	14.0	24.0	38.00	1.6E+05	6.2E+06	300	0.057	9332.4
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	14.0	0	14.00	1.6E+05	2.3E+06	300	0.057	9332.4
Total					2.7E+06	8.0E+07			1.7E+05

Average Vehicle Weight Per Trip = 29.3 tons/trip
Average Miles Per Trip = 0.082 miles/trip

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

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	b/trip = particle size multiplier (AP-42 Table 13.2.1-1)
W =	29.3	29.3	29.3	average vehicle weight (provided by source)
sl =	0.6	0.6	0.6	g/m ² = Ubiquitous Baseline Silt Loading values of paved roads (Table 13.2.1-3 for summer months)

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

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

Unmitigated Emission Factor, E_f =	PM	PM10	PM2.5	lb/mile
Mitigated Emission Factor, E_{ext} =	0.22	0.04	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)	1.13	0.23	0.06	1.03	0.21	0.05	0.51	0.10	0.03
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	1.13	0.23	0.06	1.03	0.21	0.05	0.51	0.10	0.03
Aggregate/RAS Truck Enter Full	Dump truck (16 CY)	10.67	2.08	0.31	9.76	1.90	0.28	4.88	0.95	0.14
Aggregate/RAS Truck Leave Empty	Dump truck (16 CY)	10.67	2.08	0.31	9.76	1.90	0.28	4.88	0.95	0.14
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.055	0.011	2.7E-03	0.051	0.010	2.5E-03	0.025	5.1E-03	1.2E-03
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.055	0.011	2.7E-03	0.051	0.010	2.5E-03	0.025	5.1E-03	1.2E-03
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	4.9E-03	9.8E-04	2.4E-04	4.5E-03	8.9E-04	2.2E-04	2.2E-03	4.5E-04	1.1E-04
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	4.9E-03	9.8E-04	2.4E-04	4.5E-03	8.9E-04	2.2E-04	2.2E-03	4.5E-04	1.1E-04
Aggregate/RAP Loader Full	Front-end loader (3 CY)	3.30	0.68	0.16	3.02	0.60	0.15	1.51	0.30	0.07
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	3.30	0.68	0.16	3.02	0.60	0.15	1.51	0.30	0.07
Aggregate/RAS Loader Full	Front-end loader (3 CY)	10.10	1.97	0.29	9.23	1.80	0.27	4.62	0.90	0.13
Aggregate/RAS Loader Empty	Front-end loader (3 CY)	10.10	1.97	0.29	9.23	1.80	0.27	4.62	0.90	0.13
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	1.01	0.20	0.05	0.93	0.19	0.05	0.46	0.09	0.02
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	1.01	0.20	0.05	0.93	0.19	0.05	0.46	0.09	0.02
Totals		52.53	10.30	1.74	48.03	9.41	1.59	24.03	4.71	0.79

Methodology

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

Abbreviations

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

**Appendix A.1: Unlimited Emissions Calculations
Cold Mix Asphalt Production and Stockpiles**

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

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	=	0	tons/yr
Percent Asphalt Cement/Binder (weight %)	=	5.0%	
Maximum Asphalt Cement/Binder Throughput	=	0	tons/yr

Volatile Organic Compounds

	Maximum weight % of VOC solvent in binder*	Weight % VOC solvent in binder that evaporates	Maximum VOC Solvent Usage (tons/yr)	PTE of VOC (tons/yr)
Cut back asphalt rapid cure (assuming gasoline or naphtha solvent)	25.3%	95.0%	0.0	0.0
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	0.0	0.0
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	0.0	0.0
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	0.0	0.0
Other asphalt with solvent binder	25.9%	2.5%	0.0	0.0
Worst Case PTE of VOC =				0.0

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)*	=	26.08%
Worst Case Single HAP Content of VOC solvent (weight %)*	=	9.0% Xylenes
PTE of Total HAPs (tons/yr) =		0.00
PTE of Single HAP (tons/yr) =		0.00 Xylenes

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

	CAS#	Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents				
		Gasoline	Kerosene	Diesel (#2) Fuel Oil	No. 2 Fuel Oil	No. 6 Fuel Oil
Volatile Organic HAP						
1,3-Butadiene	106-99-0	3.70E-5%				
2,2,4-Trimethylpentane	540-84-1	2.40%				
Acenaphthene	83-32-9		4.70E-5%		1.80E-4%	
Acenaphthylene	208-96-8		4.50E-5%		6.00E-5%	
Anthracene	120-12-7		1.20E-6%	5.80E-5%	2.80E-5%	5.00E-5%
Benzene	71-43-2	1.90%		2.90E-4%		
Benzof(a)anthracene	56-55-3			9.80E-7%	4.50E-7%	5.50E-4%
Benzo(a)pyrene	50-32-8			2.20E-6%	2.10E-7%	4.40E-5%
Benzo(g,h,i)perylene	191-24-2			1.20E-7%	5.70E-8%	
Biphenyl	92-52-4			6.30E-4%	7.20E-5%	
Chrysene	218-01-9			4.50E-7%	1.40E-6%	6.90E-4%
Ethylbenzene	100-41-4	1.70%		0.07%	3.40E-4%	
Fluoranthene	206-44-0		7.10E-6%	5.90E-5%	1.40E-5%	2.40E-4%
Fluorene	86-73-7		4.20E-5%	8.60E-4%	1.90E-4%	
Indeno(1,2,3-cd)pyrene	193-39-5			1.60E-7%		1.00E-4%
Methyl-tert-butylether	1634-04-4	0.33%				
Naphthalene	91-20-3	0.25%	0.31%	0.26%	0.22%	4.20E-5%
n-Hexane	110-54-3	2.40%				
Phenanthrene	85-01-8		8.60E-6%	8.80E-4%	7.90E-4%	2.10E-4%
Pyrene	129-00-0		2.40E-6%	4.60E-5%	2.90E-5%	2.30E-5%
Toluene	108-88-3	8.10%		0.18%	6.20E-4%	
Total Xylenes	1330-20-7	9.00%		0.50%	0.23%	
Total Organic HAPs		26.08%	0.33%	1.29%	0.68%	0.19%
Worst Single HAP		9.00%	0.31%	0.50%	0.23%	0.07%
		Xylenes	Naphthalene	Xylenes	Xylenes	Chrysene

Methodology

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

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

Abbreviations

VOC = Volatile Organic Compounds
 PTE = Potential to Emit

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

**Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon**

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
Total		0.00

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0% Xylenes
Limited PTE of Total HAPs (tons/yr) =	0.00
Limited PTE of Single HAP (tons/yr) =	0.00 Xylenes

Methodology

The gasoline throughput was provided by the source.

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

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

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

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

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

Abbreviations

VOC = Volatile Organic Compounds

PTE = Potential to Emit

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

Company Name: Gohman Asphalt & Construction
 Source Address: I-64 & SR 231, Dale, Indiana 47523
 Permit Number: F051-31690-05167
 Reviewer: Renee Traivaranon

Asphalt Plant Limitations - Drum Mix

Maximum Hourly Asphalt Production =	450	ton/hr									
Annual Asphalt Production Limitation =	600,000	ton/yr									
Blast Furnace Slag Usage Limitation =	0	ton/yr	1.50	% sulfur							
Steel Slag Usage Limitation =	12,000		0.66	% sulfur							
Natural Gas Limitation =	180.00	MMCF/yr									
No. 2 Fuel Oil Limitation =	2,663,353	gal/yr, and	0.50	% sulfur							
No. 4 Fuel Oil Limitation =	2,521,307	gal/yr, and	0.50	% sulfur							
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and	0.50	% sulfur							
Propane Limitation =	15,038,242	gal/yr, and	0.20	gr/100 ft3 sulfur							
Butane Limitation =	0	gal/yr, and	0.22	gr/100 ft3 sulfur							
Used/Waste Oil Limitation =	1,375,484	gal/yr, and	0.50	% sulfur	0.30	% ash	0.100	% chlorine,	0.100	% lead	
Diesel Fuel Limitation - Generator < 600 HP =	0	gal/yr, and									
Diesel Fuel Limitation - Generator > 600 HP =	0	gal/yr	0.50	% sulfur							
PM Dryer/Mixer Limitation =	0.641	lb/ton of asphalt production									
PM10 Dryer/Mixer Limitation =	0.275	lb/ton of asphalt production									
PM2.5 Dryer/Mixer Limitation =	0.310	lb/ton of asphalt production									
CO Dryer/Mixer Limitation =	0.130	lb/ton of asphalt production									
VOC Dryer/Mixer Limitation =	0.032	lb/ton of asphalt production									
SO2 Dryer/Mixer Limitation =	0.058	lb/ton of asphalt production									
NOx Dryer/Mixer Limitation =	0.055	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 Usage Limitation =	0.0	tons/yr									
HCl Limitation =	13.2	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 ₂ e	Total HAPs	Worst Case HAP
Ducted Emissions										
Dryer Fuel Combustion (worst case)	13.20	10.52	10.52	94.55	97.75	7.52	56.39	96,181.88	13.41	9.08 (hydrogen chloride)
Dryer/Mixer (Process)	192.31	82.57	93.12	17.40	16.50	9.60	39.00	9,976	3.20	0.93 (formaldehyde)
Dryer/Mixer Slag Processing	0	0	0	0.01	0	0	0	0	0	0
Hot Oil Heater Fuel Combustion (worst case)	0.13	0.21	0.21	4.44	1.25	0.05	0.74	1,414.19	0.02	0.016 (hexane)
Diesel-Fired Generator < 600 HP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000 (formaldehyde)
Diesel-Fired Generator > 600 HP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000 (benzene)
Worst Case Emissions*	192.44	82.77	93.33	99.00	99.00	9.65	57.13	97,596.07	13.43	9.08 (hydrogen chloride)
Fugitive Emissions										
Asphalt Load-Out and On-Site Yard	0.16	0.16	0.16	0	0	1.48	0.51	0	0.03	0.01 (formaldehyde)
Material Storage Piles	2.31	0.81	0.81	0	0	0	0	0	0	0
Material Processing and Handling	1.94	0.92	0.14	0	0	0	0	0	0	0
Material Crushing, Screening, and Conveying	9.52	3.48	3.48	0	0	0	0	0	0	0
Unpaved and Paved Roads (worst case)	42.63	10.87	1.09	0	0	0	0	0	0	0
Cold Mix Asphalt Production	0	0	0	0	0	0.00	0	0	0.00	0.00 (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	negl
Total Fugitive Emissions	56.56	16.23	5.67	0	0	1.48	0.51	0.00	0.03	0.00 (xylenes)
Totals Limited/Controlled Emissions	249.00	99.00	99.00	99.00	99.00	11.13	57.64	97,596.07	13.47	9.08 (Hydrogen chloride)

negl = negligible

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

*Worst Case Emissions (tons/yr) = Worst Case Emissions from Dryer Fuel Combustion and Dryer/Mixer + Dryer/Mixer Slag Processing + Worst Case Emissions from Hot Oil Heater Fuel Combustion + Diesel-Fired Generator < 600 HP + Diesel-Fired Generator > 600 HP

Fuel component percentages provided by the source.

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

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

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

Production and Fuel Limitations

Maximum Hourly Asphalt Production	=	450	ton/hr																
Annual Asphalt Production Limitation	=	600,000	ton/yr																
Natural Gas Limitation	=	180	MMCF/yr																
No. 2 Fuel Oil Limitation	=	2,663,353	gal/yr, and				0.50	% sulfur											
No. 4 Fuel Oil Limitation	=	2,521,307	gal/yr, and				0.50	% sulfur											
Residual (No. 5 or No. 6) Fuel Oil Limitation	=	0	gal/yr, and				0.50	% sulfur											
Propane Limitation	=	15,038,242	gal/yr, and				0.20	gr/100 ft3 sulfur											
Butane Limitation	=	0	gal/yr, and				0.22	gr/100 ft3 sulfur											
Used/Waste Oil Limitation	=	1,375,484	gal/yr, and				0.50	% sulfur	0.30	% ash	0.100	% chlorine,	0.100	% lead					

Limited Emissions

Criteria Pollutant	Emission Factor (units)								Limited Potential to Emit (tons/yr)							
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/Waste Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/Waste Oil (tons/yr)	Worse Case Fuel (tons/yr)	
PM	1.9	2	7	7.815	0.5	0.6	19.2	0.17	2.66	8.82	0.00	3.760	0.000	13.20	13.20	
PM10	7.6	3.3	8.3	9.315	0.5	0.6	15.3	0.68	4.39	10.46	0.00	3.760	0.000	10.52	10.52	
SO2	0.6	71.0	75.0	78.5	0.020	0.020	73.5	0.05	94.55	94.55	0.00	0.150	0.000	50.55	94.55	
NOx	190	24.0	47.0	47.0	13.0	15.0	19.0	17.10	31.96	59.25	0.00	97.75	0.00	13.07	97.75	
VOC	5.5	0.20	0.20	0.28	1.00	1.10	1.0	0.49	0.27	0.25	0.00	7.52	0.00	0.69	7.52	
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	7.56	6.66	6.30	0.00	56.39	0.00	3.44	56.39	
Hazardous Air Pollutant																
HCl			5.25E-03	5.25E-03			13.2							9.08	9.08	
Arsimony							negl			6.62E-03	0.00E+00			negl	6.6E-03	
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03			1.1E-01	1.8E-05	7.46E-04	1.66E-03	0.00E+00			7.57E-02	7.6E-02	
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05			negl	1.1E-06	5.59E-04	3.50E-05	0.00E+00			negl	5.6E-04	
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04			9.3E-03	9.9E-05	5.59E-04	5.02E-04	0.00E+00			6.40E-03	6.4E-03	
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02	1.3E-04	5.59E-04	1.07E-03	0.00E+00			1.38E-02	1.4E-02	
Cobalt	8.4E-05		6.02E-03	6.02E-03			2.1E-04	7.6E-06		7.59E-03	0.00E+00			1.44E-04	7.6E-03	
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03			5.5	4.5E-05	1.68E-03	1.90E-03	0.00E+00			3.8E+00	3.78	
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03			6.8E-02	3.4E-05	1.12E-03	3.78E-03	0.00E+00			4.68E-02	0.05	
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04				2.3E-05	5.59E-04	1.42E-04	0.00E+00				5.6E-04	
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02	1.9E-04	5.59E-04	1.07E-01	0.00E+00			7.57E-03	0.107	
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl	2.2E-06	2.80E-03	8.61E-04	0.00E+00			negl	2.8E-03	
1,1,1-Trichloroethane			2.36E-04	2.36E-04						2.98E-04	0.00E+00				3.0E-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				1.9E-04		2.70E-04	0.00E+00				2.7E-04	
Bis(2-ethylhexyl)phthalate							2.2E-03							1.51E-03	1.5E-03	
Dichlorobenzene	1.2E-03						8.0E-07	1.1E-04						5.50E-07	1.1E-04	
Ethylbenzene			6.36E-05	6.36E-05						8.02E-05	0.00E+00				8.0E-05	
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				6.7E-03	8.12E-02	4.16E-02	0.00E+00				0.081	
Hexane	1.8E+00							0.16							0.162	
Phenol							2.4E-03							1.65E-03	1.7E-03	
Toluene	3.4E-03		6.20E-03	6.20E-03				3.1E-04		7.82E-03	0.00E+00				7.8E-03	
Total PAH Haps	negl		1.13E-03	1.13E-03			3.9E-02	negl		1.42E-03	0.00E+00			2.69E-02	2.7E-02	
Polycyclic Organic Matter		3.30E-03							4.39E-03						4.4E-03	
Xylene			1.09E-04	1.09E-04						1.37E-04	0.00E+00				1.4E-04	
Total HAPs							0.17	0.09	0.18	0.00	0	0	13.04	13.41		

Methodology

Natural Gas: Limited Potential to Emit (tons/yr) = (Natural Gas Limitation (MMCF/yr)) * (Emission Factor (lb/MMCF)) * (ton/2000 lbs)
 All Other Fuels: Limited Potential to Emit (tons/yr) = (Fuel Limitation (gals/yr)) * (Emission Factor (lb/kgal)) * (kgal/1000 gal) * (ton/2000 lbs)
 Sources of AP-42 Emission Factors for fuel combustion:

- Natural Gas: AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
- No. 2, No. 4, and No. 6 Fuel Oil: AP-42 Chapter 1.3 (dated 5/10), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11
- Propane and Butane: AP-42 Chapter 1.5 (dated 7/08), Tables 1.5-1 (assuming PM = PM10)
- Waste Oil: AP-42 Chapter 1.11 (dated 10/96), Tables 1.11-1, 1.11-2, 1.11-3, 1.11-4, and 1.11-5

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

Abbreviations

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

**Appendix A.2: Limited Emissions Summary
Greenhouse Gas (CO₂e) Emissions from the
Dryer/Mixer Fuel Combustion with Maximum Capacity ≥ 100 MMBtu/hr**

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

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

Production and Fuel Limitations

Maximum Hourly Asphalt Production =	450	ton/hr								
Annual Asphalt Production Limitation =	600,000	ton/yr								
Natural Gas Limitation =	180	MMCF/yr								
No. 2 Fuel Oil Limitation =	2,663,353	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Limitation =	2,521,307	gal/yr, and	0.50	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and	0.50	% sulfur						
Propane Limitation =	15,038,242	gal/yr, and	0.20	gr/100 ft3 sulfur						
Butane Limitation =	0	gal/yr, and	0.22	gr/100 ft3 sulfur						
Used/Waste Oil Limitation =	1,375,484	gal/yr, and	0.50	% sulfur	0.30	% ash	0.100	% chlorine,	0.100	% lead

Limited Emissions

CO ₂ 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 ₂	120,161.84	22,501.41	24,153.46	24,835.04	12,500.00	14,506.73	22,024.15	Carbon dioxide	CO ₂	1
CH ₄	2.49	0.91	0.97	1.00	0.60	0.67	0.89	Methane	CH ₄	21
N ₂ O	2.20	0.26	0.19	0.53	0.90	0.90	0.18	Nitrous oxide	N ₂ O	310

CO ₂ 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 ₂	10,814.29	29,964.60	30,449.15	0.00	93,989.01	0.00	15,146.93
CH ₄	0.22	1.22	1.22	0.00	4.53	0.00	0.61
N ₂ O	0.20	0.35	0.24	0.00	6.77	0.00	0.12
Total	10,814.72	29,966.16	30,450.61	0.00	94,000.30	0.00	15,147.67
CO₂e Equivalent Emissions (tons/yr)	10,880.39	30,097.46	30,550.19	0.00	96,181.88	0.00	15,198.20

CO₂e for Worst Case Fuel* (tons/yr)
96,181.88

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 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

Oil: 1.3 (dated 5/10), Table 1.3-8

Propane and 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: 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 CO₂e Emissions (tons/yr) = CO₂ Potential Emission of "worst case" fuel (ton/yr) x CO₂ GWP (1) + CH₄ Potential Emission of "worst case" fuel (ton/yr) x CH₄ GWP (21) + N₂O Potential Emission of "worst case" fuel (ton/yr) x N₂O GWP (310).

Abbreviations

CH₄ = Methane

CO₂ = Carbon Dioxide

N₂O = Nitrogen Dioxide

PTE = Potential to Emit

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

**Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon**

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

Maximum Hourly Asphalt Production =	450	ton/hr
Annual Asphalt Production Limitation =	600,000	ton/yr
PM Dryer/Mixer Limitation =	0.641	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation =	0.275	lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation =	0.310	lb/ton of asphalt production
CO Dryer/Mixer Limitation =	0.130	lb/ton of asphalt production
VOC Dryer/Mixer Limitation =	0.032	lb/ton of asphalt production

Criteria Pollutant	Emission Factor or Limitation (lb/ton)			Limited/Controlled Potential to Emit (tons/yr)			Worse Case PTE
	Drum-Mix Plant (dryer/mixer, controlled by fabric filter)			Drum-Mix Plant (dryer/mixer, controlled by fabric filter)			
	Natural Gas	No. 2 Fuel Oil	Waste Oil	Natural Gas	No. 2 Fuel Oil	Waste Oil	
PM*	0.641	0.641	0.641	192.3	192.3	192.3	192.3
PM10*	0.275	0.275	0.275	82.6	82.6	82.6	82.6
PM2.5*	0.310	0.310	0.310	93.1	93.1	93.1	93.1
SO2**	0.003	0.011	0.058	1.0	3.3	17.4	17.4
NOx**	0.026	0.055	0.055	7.8	16.5	16.5	16.5
VOC**	0.032	0.032	0.032	9.6	9.6	9.6	9.6
CO***	0.130	0.130	0.130	39.0	39.0	39.0	39.0
Hazardous Air Pollutant							
HCl			2.10E-04			0.06	0.06
Antimony	1.80E-07	1.80E-07	1.80E-07	5.40E-05	5.40E-05	5.40E-05	5.40E-05
Arsenic	5.60E-07	5.60E-07	5.60E-07	1.68E-04	1.68E-04	1.68E-04	1.68E-04
Beryllium	negl	negl	negl	negl	negl	negl	0.00E+00
Cadmium	4.10E-07	4.10E-07	4.10E-07	1.23E-04	1.23E-04	1.23E-04	1.23E-04
Chromium	5.50E-06	5.50E-06	5.50E-06	1.65E-03	1.65E-03	1.65E-03	1.65E-03
Cobalt	2.60E-08	2.60E-08	2.60E-08	7.80E-06	7.80E-06	7.80E-06	7.80E-06
Lead	6.20E-07	1.50E-05	1.50E-05	1.86E-04	4.50E-03	4.50E-03	4.50E-03
Manganese	7.70E-06	7.70E-06	7.70E-06	2.31E-03	2.31E-03	2.31E-03	2.31E-03
Mercury	2.40E-07	2.60E-06	2.60E-06	7.20E-05	7.80E-04	7.80E-04	7.80E-04
Nickel	6.30E-05	6.30E-05	6.30E-05	1.89E-02	1.89E-02	1.89E-02	1.89E-02
Selenium	3.50E-07	3.50E-07	3.50E-07	1.05E-04	1.05E-04	1.05E-04	1.05E-04
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	1.20E-02	1.20E-02	1.20E-02	1.20E-02
Acetaldehyde			1.30E-03			0.39	0.39
Acrolein			2.60E-05			7.80E-03	7.80E-03
Benzene	3.90E-04	3.90E-04	3.90E-04	0.12	0.12	0.12	0.12
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0.07	0.07	0.07	0.07
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	0.93	0.93	0.93	0.93
Hexane	9.20E-04	9.20E-04	9.20E-04	0.28	0.28	0.28	0.28
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0.01	0.01	0.01	0.01
MEK			2.00E-05			0.01	0.01
Propionaldehyde			1.30E-04			0.04	0.04
Quinone			1.60E-04			0.05	0.05
Toluene	1.50E-04	2.90E-03	2.90E-03	0.05	0.87	0.87	0.87
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0.06	0.26	0.26	0.26
Xylene	2.00E-04	2.00E-04	2.00E-04	0.06	0.06	0.06	0.06
Total HAPs							3.20
Worst Single HAP							0.93 (formaldehyde)

Methodology

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

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-3, 11.1-4, 11.1-7, 11.1-8, 11.1-10, and 11.1-12

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

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

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

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

Abbreviations

VOC - Volatile Organic Compounds

HAP = Hazardous Air Pollutant

HCl = Hydrogen Chloride

PAH = Polyaromatic Hydrocarbon

SO2 = Sulfur Dioxide

**Appendix A.2: Limited Emissions Summary
Greenhouse Gas (CO₂e) Emissions from the
Drum-Mix Plant (Dryer/Mixer) Process Emissions**

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

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

Maximum Hourly Asphalt Production = 450 ton/hr
 Annual Asphalt Production Limitation = 600,000 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 ₂ e for Worst Case Fuel (tons/yr)
	Natural Gas	No. 2 Fuel Oil	Waste Oil		Natural Gas	No. 2 Fuel Oil	Waste Oil	
CO ₂	33	33	33	1	9,900.00	9,900.00	9,900.00	9,975.60
CH ₄	0.0120	0.0120	0.0120	21	3.60	3.60	3.60	
N ₂ O				310	0	0	0	
Total					9,903.60	9,903.60	9,903.60	
CO ₂ e Equivalent Emissions (tons/yr)					9,975.60	9,975.60	9,975.60	

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 N₂O available in either the 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no N₂O 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 CO₂e Emissions (tons/yr) = CO₂ Potential Emission of "worst case" fuel (ton/yr) x CO₂ GWP (1) + CH₄ Potential Emission of "worst case" fuel (ton/yr) x CH₄ GWP (21) + N₂O Potential Emission of "worst case" fuel (ton/yr) x N₂O GWP (310).

Abbreviations

CO₂ = Carbon Dioxide

CH₄ = Methane

N₂O = Nitrogen Dioxide

PTE = Potential to Emit

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

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

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

1.50

 % sulfur
 Limited Annual Steel Slag Usage =

12,000

 ton/yr

0.66

 % sulfur

Type of Slag	SO2 Emission Factor (lb/ton)**	Limited Potential to Emit SO2 (tons/yr)
Blast Furnace Slag	0.0000	0.0
Steel Slag	0.0014	0.01

Methodology

** 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: Gohman Asphalt & Construction
Source Location: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

Maximum Hot Oil Heater Fuel Input Rate = 2.00 MMBtu/hr
 Natural Gas Usage = 18 MMCF/yr
 No. 2 Fuel Oil Usage = 125,143 gal/yr, and 0.50 % sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		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	0.017	0.125	0.13
PM10/PM2.5	7.6	3.3	0.067	0.206	0.21
SO2	0.6	71.0	0.005	4.443	4.44
NOx	100	20.0	0.876	1.251	1.25
VOC	5.5	0.20	0.048	0.013	0.05
CO	84	5.0	0.736	0.313	0.74
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	1.8E-06	3.50E-05	3.5E-05
Beryllium	1.2E-05	4.2E-04	1.1E-07	2.63E-05	2.6E-05
Cadmium	1.1E-03	4.2E-04	9.6E-06	2.63E-05	2.6E-05
Chromium	1.4E-03	4.2E-04	1.2E-05	2.63E-05	2.6E-05
Cobalt	8.4E-05		7.4E-07		7.4E-07
Lead	5.0E-04	1.3E-03	4.4E-06	7.88E-05	7.9E-05
Manganese	3.8E-04	8.4E-04	3.3E-06	5.26E-05	5.3E-05
Mercury	2.6E-04	4.2E-04	2.3E-06	2.63E-05	2.6E-05
Nickel	2.1E-03	4.2E-04	1.8E-05	2.63E-05	2.6E-05
Selenium	2.4E-05	2.1E-03	2.1E-07	1.31E-04	1.3E-04
Benzene	2.1E-03		1.8E-05		1.8E-05
Dichlorobenzene	1.2E-03		1.1E-05		1.1E-05
Ethylbenzene					0
Formaldehyde	7.5E-02	6.10E-02	6.6E-04	3.82E-03	0.004
Hexane	1.8E+00		0.02		0.016
Phenol					0
Toluene	3.4E-03		3.0E-05		3.0E-05
Total PAH Haps	negl		negl		0
Polycyclic Organic Matter		3.30E-03		2.06E-04	2.1E-04
Total HAPs =			1.7E-02	4.5E-03	0.020

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)] * [ton/2000 lbs]

Sources of AP-42 Emission Factors for fuel combustion:

Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4

No. 2 Fuel Oil: AP-42 Chapter 1.3 (dated 5/10), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 SO2 = Sulfur Dioxide
 NOx = Nitrous Oxides
 VOC = Volatile Organic Compounds

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

Appendix A.2: Limited Emissions Summary
Greenhouse Gas (CO2e) Emissions from
Hot Oil Heater Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

Maximum Hot Oil Heater Fuel Input Rate = 2.00 MMBtu/hr
 Natural Gas Usage = 17.52 MMCF/yr
 No. 2 Fuel Oil Usage = 125,142.86 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)
CO2	120,161.84	22,501.41	1	1,052.62	1,407.95
CH4	2.49	0.91	21	0.022	5.71E-02
N2O	2.20	0.26	310	0.019	1.63E-02
Total				1,052.66	1,408.02

Worse Case CO2e Emissions (tons/yr)
1,414.19

CO2e Equivalent Emissions (tons/yr)	1,059.05	1,414.19
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Methodology

Greenhouse 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 Fuel Oil: 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

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 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).

Abbreviations

CH4 = Methane
 CO2 = Carbon Dioxide

N2O = Nitrogen Dioxide
 PTE = Potential to Emit

Appendix A.2: Limited Emissions Summary
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

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

	Pollutant						
	PM ²	PM10 ²	direct PM2.5 ²	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	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

¹The 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.

²Emission 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)

³PM 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 ³
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	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

³PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

⁴The 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.

⁵Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10⁶ (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Limited Emission of Total HAPs (tons/yr)	0.00E+00
Limited Emission of Worst Case HAPs (tons/yr)	0.00E+00

Green House Gas Emissions (GHG)

	Pollutant		
	CO2 ⁵	CH4 ⁶	N2O ⁶
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

⁵The 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.

⁶Emission 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)

⁷The 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.

⁸Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) * 2.20462 (lb/kg) * 1/10⁶ (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Summed Limited Emissions in tons/yr	0.00
CO2e Total in tons/yr	0.00

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: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

Output Horsepower Rating (hp)	0.0	Sulfur Content (S) of Fuel (% by weight)	0.50
Limited Hours Operated per Year	0		
Limited Throughput (hp-hr/yr)	0		
Limited Diesel Fuel Usage (gal/yr)	0		

	Pollutant						
	PM	PM10 ²	direct PM2.5 ³	SO2	NOx	VOC	CO
Emission Factor in lb/hp-hr	7.00E-04			4.05E-03 (.00809S)	2.40E-02	7.05E-04	5.50E-03
Emission Factor in lb/MMBtu		0.0573	0.0573				
Emission Factor in lb/kgal	13.70	7.85	7.85	79.18	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

¹The 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.

²Emission 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)

³Emission 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.

⁴Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10⁶ (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Hazardous Air Pollutants (HAPs)

	Pollutant						Total PAH HAPs ⁵
	Benzene	Toluene	Xylene	Formaldehyde	Acetaldehyde	Acrolein	
Emission Factor in lb/MMBtu	7.78E-04	2.81E-04	1.93E-04	7.89E-05	2.52E-05	7.88E-06	2.12E-04
Emission Factor in lb/kgal	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

⁵PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

⁶Emission 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.

⁷Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10⁶ (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Limited Emission of Total HAPs (tons/yr)	0.00E+00
Limited Emission of Worst Case HAPs (tons/yr)	0.00E+00

Green House Gas Emissions (GHG)

	Pollutant		
	CO2 ⁸	CH4 ⁹	N2O ⁷
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

⁸The 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.

⁹Emission 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)

⁶According 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.

⁷The 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.

⁸Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) * 2.20462 (lb/kg) * 1/10⁶ (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Summed Potential Emissions in tons/yr	0.00
CO2e Total in tons/yr	0.00

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 and Yard Emissions**

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

The following calculations determine the limited fugitive emissions from hot asphalt mix load-out 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 =	600,000	tons/yr

Pollutant	Emission Factor (lb/ton asphalt)		Limited Potential to Emit (tons/yr)		
	Load-Out	On-Site Yard	Load-Out	On-Site Yard	Total
Total PM*	5.2E-04	NA	0.16	NA	0.16
Organic PM	3.4E-04	NA	0.10	NA	0.10
TOC	0.004	0.001	1.25	0.330	1.6
CO	0.001	3.5E-04	0.40	0.106	0.51

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

PM/HAPs	0.007	0	0.007
VOC/HAPs	0.018	0.005	0.023
non-VOC/HAPs	9.6E-05	2.5E-05	1.2E-04
non-VOC/non-HAPs	0.09	0.02	0.11

Total VOCs	1.17	0.3	1.5
Total HAPs	0.03	0.005	0.03
Worst Single HAP			0.006
			(formaldehyde)

Methodology

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

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

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

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

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

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

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

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

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 and Yard Emissions (continued)**

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

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)	Load-out	Onsite Yard	Total
PAH HAPs								
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	2.7E-04	NA	2.7E-04
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	2.9E-05	NA	2.9E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	7.2E-05	NA	7.2E-05
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	1.9E-05	NA	1.9E-05
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	7.8E-06	NA	7.8E-06
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	2.3E-06	NA	2.3E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	1.9E-06	NA	1.9E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	2.4E-06	NA	2.4E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	8.0E-06	NA	8.0E-06
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	1.1E-04	NA	1.1E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	3.8E-07	NA	3.8E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	5.1E-05	NA	5.1E-05
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	7.9E-04	NA	7.9E-04
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	4.8E-07	NA	4.8E-07
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	2.4E-03	NA	0.002
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.3E-03	NA	1.3E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	2.3E-05	NA	2.3E-05
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	8.3E-04	NA	8.3E-04
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	1.5E-04	NA	1.5E-04
Total PAH HAPs						0.006	NA	0.006
Other semi-volatile HAPs								
Phenol		PM/HAP	---	Organic PM	1.18%	1.2E-03	0	1.2E-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 and Yard Emissions (continued)**

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

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)	Load-out	Onsite Yard	Total
VOC		VOC	---	TOC	94%	1.17	0.31	1.48
non-VOC/non-HAPS								
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	8.1E-02	2.1E-02	0.103
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	5.7E-04	1.5E-04	0.001
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	8.9E-03	2.3E-03	0.011
Total non-VOC/non-HAPS					7.30%	0.091	0.024	0.12
Volatile organic HAPs								
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	6.5E-04	1.7E-04	8.2E-04
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	1.2E-04	3.2E-05	1.5E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	6.1E-04	1.6E-04	7.7E-04
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	1.6E-04	4.3E-05	2.1E-04
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.0021%	2.6E-06	6.9E-07	3.3E-06
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	1.9E-04	5.0E-05	2.4E-04
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	1.4E-03	3.6E-04	1.7E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	3.5E-03	9.2E-04	0.004
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	1.1E-03	2.9E-04	0.001
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	1.9E-03	5.0E-04	0.002
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	2.2E-05	5.9E-06	2.8E-05
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0	0	0.0E+00
MTBE	1634-04-4	VOC/HAP	---	TOC	0	0	0	0
Styrene	100-42-5	VOC/HAP	---	TOC	0.0073%	9.1E-05	2.4E-05	1.2E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	9.6E-05	2.5E-05	1.2E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	2.6E-03	6.9E-04	0.003
1,1,1-Trichloroethane	71-55-6	VOC/HAP	---	TOC	0	0	0	0
Trichloroethene	79-01-6	VOC/HAP	---	TOC	0	0	0	0
Trichlorofluoromethane	75-69-4	VOC/HAP	---	TOC	0.0013%	1.6E-05	4.3E-06	2.1E-05
m/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	5.1E-03	1.4E-03	0.006
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	1.0E-03	2.6E-04	1.3E-03
Total volatile organic HAPs					1.50%	0.019	0.005	0.024

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: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

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

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

$E_f = 1.7 \cdot (s/1.5) \cdot (365-p)/235 \cdot (f/15)$ <p>where E_f = emission factor (lb/acre/day) s = silt content (wt %) p = <input type="text" value="125"/> days of rain greater than or equal to 0.01 inches f = <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)
Sand	2.6	3.01	1.00	0.549	0.192
Limestone	1.6	1.85	4.00	1.352	0.473
RAP	0.5	0.58	1.00	0.106	0.037
Shingles	0.5	0.58	1.00	0.106	0.037
Steel Slag	3.8	4.40	0.25	0.201	0.070
Totals				2.31	0.81

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.

RAP - recycled asphalt pavement

Abbreviations

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

PM2.5 = PM10

PTE = Potential to Emit

Appendix A.2: Limited Emissions Summary
Material Processing, Handling, Crushing, Screening, and Conveying

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

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.

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

where: Ef = 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)
 Ef (PM) = 2.27E-03 lb PM/ton of material handled
 Ef (PM10) = 1.07E-03 lb PM10/ton of material handled
 Ef (PM2.5) = 1.62E-04 lb PM2.5/ton of material handled

Annual Asphalt Production Limitation = 600,000 tons/yr
 Percent Asphalt Cement/Binder (weight %) = 5.0%
 Maximum Material Handling Throughput = 570,000 tons/yr

Type of Activity	Limited PTE of PM (tons/yr)	Limited PTE of PM10 (tons/yr)	Limited PTE of PM2.5 (tons/yr)
Truck unloading of materials into storage piles	0.65	0.31	0.05
Front-end loader dumping of materials into feeder bins	0.65	0.31	0.05
Conveyor dropping material into dryer/mixer or batch tower	0.65	0.31	0.05
Total (tons/yr)	1.94	0.92	0.14

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	1.54	0.68
Screening	0.025	0.0087	7.13	2.48
Conveying	0.003	0.0011	0.86	0.31
Limited Potential to Emit (tons/yr) =			9.52	3.48

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: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

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	600,000	tons/yr
Percent Asphalt Cement/Binder (weight %)	5.0%	
Maximum Material Handling Throughput	570,000	tons/yr
Maximum Asphalt Cement/Binder Throughput	30,000	tons/yr
No. 2 Fuel Oil Limitation	2,663,353	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-RAS Truck Enter Full	Dump truck (16 CY)	14.6	20.5	35.1	2.8E+04	9.8E+05	1500	0.284	7899.1
Aggregate/RAP-RAS Truck Leave Empty	Dump truck (16 CY)	14.6	0	14.6	2.8E+04	4.1E+05	1500	0.284	7899.1
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	14.1	22.0	36.1	1.4E+03	4.9E+04	1800	0.341	464.9
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	14.1	0	14.1	1.4E+03	1.9E+04	1800	0.341	464.9
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	2.8E+02	1.2E+04	1800	0.341	95.9
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	2.8E+02	3.4E+03	1800	0.341	95.9
Aggregate/RAP-RAS Loader Full	Front-end loader (3 CY)	27.5	7.0	34.5	8.1E+04	2.8E+06	620	0.117	9561.7
Aggregate/RAP-RAS Loader Empty	Front-end loader (3 CY)	27.5	0	27.5	8.1E+04	2.2E+06	620	0.117	9561.7
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.0	2.5E+04	1.0E+06	0	0.000	0.0
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.0	2.5E+04	4.3E+05	0	0.000	0.0
Total					2.7E+05	8.0E+06			3.6E+04

Average Vehicle Weight Per Trip = $\frac{29.3}{0.133}$ tons/trip
Average Miles Per Trip = $\frac{29.3}{0.133}$ miles/trip

Unmitigated Emission Factor, $E_f = k \cdot \left[\frac{s}{12} \right]^a \cdot \left[\frac{W}{3} \right]^b$ (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 =	29.3	29.3	29.3	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, $E_{ext} = E_f \cdot \left[\frac{365 - P}{365} \right]$
Mitigated Emission Factor, $E_{ext} = E_f \cdot \left[\frac{365 - P}{365} \right]$
where P = $\frac{125}{125}$ 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	7.20	1.83	0.18	lb/mile
Mitigated Emission Factor, E_{ext}	4.73	1.21	0.12	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)	28.42	7.24	0.72	18.69	4.76	0.48	9.34	2.38	0.24
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	28.42	7.24	0.72	18.69	4.76	0.48	9.34	2.38	0.24
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	1.673	0.426	0.04	1.100	0.280	2.8E-02	0.550	0.140	1.4E-02
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	1.673	0.426	0.04	1.100	0.280	2.8E-02	0.550	0.140	1.4E-02
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.345	0.088	8.8E-03	0.227	0.058	5.8E-03	0.113	0.029	2.9E-03
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.345	0.088	8.8E-03	0.227	0.058	5.8E-03	0.113	0.029	2.9E-03
Aggregate/RAP Loader Full	Front-end loader (3 CY)	34.40	8.77	0.88	22.62	5.77	0.58	11.31	2.88	0.29
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	34.40	8.77	0.88	22.62	5.77	0.58	11.31	2.88	0.29
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals		129.68	33.05	3.31	85.27	21.73	2.17	42.63	10.87	1.09

Methodology

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

Abbreviations

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

Appendix A.2: Limited Emissions Summary
Paved Roads

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

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	=	600,000	tons/yr
Percent Asphalt Cement/Binder (weight %)	=	5.0%	
Maximum Material Handling Throughput	=	570,000	tons/yr
Maximum Asphalt Cement/Binder Throughput	=	30,000	tons/yr
No. 2 Fuel Oil Limitation	=	2,663,353	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-RAS Truck Enter Full	Dump truck (16 CY)	14.6	20.5	35.10	2.8E+04	9.8E+05	1500	0.284	7899.1
Aggregate/RAP-RAS Truck Leave Empty	Dump truck (16 CY)	14.6	0	14.60	2.8E+04	4.1E+05	1500	0.284	7899.1
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	14.1	22.0	36.10	1.4E+03	4.9E+04	1800	0.341	464.9
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	14.1	0	14.10	1.4E+03	1.9E+04	1800	0.341	464.9
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.00	2.8E+02	1.2E+04	1800	0.341	95.9
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	2.8E+02	3.4E+03	1800	0.341	95.9
Aggregate/RAP-RAS Loader Full	Front-end loader (3 CY)	27.5	0	27.50	8.1E+04	2.8E+06	620	0.117	9561.7
Aggregate/RAP-RAS Loader Empty	Front-end loader (3 CY)	27.5	0	27.50	8.1E+04	2.2E+06	620	0.117	9561.7
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.00	2.5E+04	1.0E+06	0	0.000	0.0
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.00	2.5E+04	4.3E+05	0	0.000	0.0
Total					2.7E+05	8.0E+06			3.6E+04

Average Vehicle Weight Per Trip = 29.3 tons/trip
 Average Miles Per Trip = 0.133 miles/trip

Unmitigated Emission Factor, $E_f = [k \cdot (sL)^{0.91} \cdot (W)^{1.02}]$ (Equation 1 from AP-42 13.2.1.1)

	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 =	29.3	29.3	29.3	tons = average vehicle weight (provided by source)
sL =	0.6	0.6	0.6	g/m ² = Ubiquitous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months)

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

Mitigated Emission Factor, $E_{ext} = E_f \cdot [1 - (p/4N)]$

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	0.22	0.04	0.01	lb/mile
Mitigated Emission Factor, E_{ext}	0.20	0.04	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)	0.86	0.17	0.04	0.78	0.16	0.04	0.39	0.08	0.02
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.86	0.17	0.04	0.78	0.16	0.04	0.39	0.08	0.02
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.050	0.010	2.5E-03	0.046	0.009	2.3E-03	0.023	4.6E-03	1.1E-03
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.050	0.010	2.5E-03	0.046	0.009	2.3E-03	0.023	4.6E-03	1.1E-03
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	1.0E-02	2.1E-03	5.1E-04	9.5E-03	1.9E-03	4.7E-04	4.8E-03	9.5E-04	2.3E-04
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	1.0E-02	2.1E-03	5.1E-04	9.5E-03	1.9E-03	4.7E-04	4.8E-03	9.5E-04	2.3E-04
Aggregate/RAP Loader Full	Front-end loader (3 CY)	1.04	0.21	0.05	0.95	0.19	0.05	0.47	0.09	0.02
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	1.04	0.21	0.05	0.95	0.19	0.05	0.47	0.09	0.02
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals		3.91	0.78	0.19	3.57	0.71	0.18	1.79	0.36	0.09

Methodology

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

Abbreviations

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

**Appendix A.2: Limited Emissions Summary
Cold Mix Asphalt Production and Stockpiles**

Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon

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%	0.0	0.0	0.000
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	0.0	0.0	0.000
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	0.0	0.0	0.000
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	0.0	0.0	0.000
Other asphalt with solvent binder	25.9%	2.5%	0.0	0.0	0.0
Worst Case Limited PTE of VOC =				0.0	

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0% Xylenes
Limited PTE of Total HAPs (tons/yr) =	0.00
Limited PTE of Single HAP (tons/yr) =	0.00 Xylenes

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

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

Methodology

Limited PTE of VOC (tons/yr) = [Weight % VOC solvent in binder that evaporates] * [VOC Solvent Usage Limitation (tons/yr)]
 Limited PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]
 Limited PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]

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

Abbreviations

VOC = Volatile Organic Compounds
 PTE = Potential to Emit

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

**Company Name: Gohman Asphalt & Construction
Source Address: I-64 & SR 231, Dale, Indiana 47523
Permit Number: F051-31690-05167
Reviewer: Renee Traivaranon**

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
Total		0.00

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%	
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0%	Xylenes
Limited PTE of Total HAPs (tons/yr) =	0.00	
Limited PTE of Single HAP (tons/yr) =	0.00	Xylenes

Methodology

The gasoline throughput was provided by the source.

$$\text{Gasoline Throughput (kgal/yr)} = [\text{Gasoline Throughput (lbs/day)}] * [365 \text{ days/yr}] * [\text{kgal}/1000 \text{ gal}]$$

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

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

$$\text{PTE of Single HAP (tons/yr)} = [\text{Worst Case Single HAP Content of VOC solvent (weight \%)}] * [\text{PTE of VOC (tons/yr)}]$$

*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



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

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

TO: Diana M. Green
Gohmann Asphalt & Construction, Inc.
PO Box 2428
Clarksville, IN 47131-2428

DATE: July 2, 2012

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

SUBJECT: Final Decision
Significant Permit Revision to FESOP
051-31690-05167

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:
OAQ Permits Branch Interested Parties List

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

Final Applicant Cover letter.dot 11/30/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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July 2, 2012

TO: Oakland City Public Library

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

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

Applicant Name: Gohmann Asphalt & Construction, Inc.
Permit Number: 051-31690-05167

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

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

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	PWAY 7/2/2012 Gohmann Asphalt & Construction, Inc. 051-31690-05167 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING	
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: CERTIFICATE OF MAILING ONLY	

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		Dianne M Green Gohmann Asphalt & Construction, Inc. PO Box 2428 Clarksville IN 47131-2428 (Source CAATS)										
2		Mr. Wendell Hibdon Plumbers & Steam Fitters Union, Local 136 2300 St. Joe Industrial Park Dr Evansville IN 47720 (Affected Party)										
3		Oakland City Columbia Twp 210 S Main Oakland City IN 47660-1538 (Library)										
4		Gibson County Health Department 203 S Prince Street, Suite A Princeton IN 47670 (Health Department)										
5		Eric Anderson 25 Atlantic Avenue Erlanger KY 41018 (Affected Party)										
6		Gibson County Commissioners 101 N. Main Street Princeton IN 47670 (Local Official)										
7		Oakland City Town Council and Mayors Office 210 E. Washington St. Oakland City IN 47660 (Local Official)										
8		Mr. Mark Wilson Evansville Courier & Press P.O. Box 268 Evansville IN 47702-0268 (Affected Party)										
9		Mr. Bil Musgrove PO Box 520 Chandler IN 47610 (Affected Party)										
10		Mr. John Blair 800 Adams Ave Evansville IN 47713 (Affected Party)										
11		David Boggs 216 Western Hills Dr Mt Vernon IN 47620 (Affected Party)										
12												
13												
14												
15												

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