



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 1, 2011

RE: Brooks Construction / 053-30554-05360

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 13-17-3-4 and 326 IAC 2, this approval is effective immediately, unless a petition for stay of effectiveness is filed and granted, 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 4-21.5-3-7 and IC 13-15-7-3 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 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-MOD.dot 12/3/07



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

Mr. John Brooks
Brooks Construction, Inc.
6525 Ardmore Avenue
PO Box 9560
Fort Wayne, IN 46809

July 1, 2011

Re: 053-30554-05360
First Minor Revision to
F141-25742-05360 (formerly 00549)

Dear Mr. Brooks:

Brooks Construction, Inc. was issued a Federally Enforceable State Operating Permit (FESOP) Renewal No. F141-25742-05360 on August 20, 2008 for a portable drum hot mix asphalt plant previously located at 727 S Beiger Street, Mishawka, Indiana. On May 16, 2011, the Office of Air Quality (OAQ) received an application from the source requesting to store and process certified asbestos-free factory second shingles and post consumer shingles in the aggregate mix. Shingles will not be ground at this plant. The source has also requested to install one additional RAP feed bin to the existing RAP system. Finally, the source requested that a typographical error in the descriptive information for the existing cold feed system be revised to reflect that there are two cold feed systems. 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 Minor Permit Revision (MPR) procedures of 326 IAC 2-8-11.1(e). Pursuant to the provisions of 326 IAC 2-8-11.1, a minor permit revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the minor permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Attached please find the entire revised permit.

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

Sincerely,

Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

Attachments: Technical Support Document and revised permit

IC/BMW

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



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

Federally Enforceable State Operating Permit Renewal OFFICE OF AIR QUALITY

Brooks 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.

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

Operation Permit No.: F141-25742-05360 (Formerly 141- 00549)	
Issued by/Original Signed By: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: August 20, 2008 Expiration Date: August 20, 2018

First Administrative Amended No. 141-29190-05360 (formerly 141-00549), issued on May 25, 2010
Second Administrative Amended No. 141-30003-05360, issued on January 25, 2011
First Portable Source Relocation No. 053-30246-05360, issued on February 28, 2011

First Minor Permit Revision No.: 053-30554-05360	
Issued by:  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: July 1, 2011 Expiration Date: August 20, 2018

TABLE OF CONTENTS

A. SOURCE SUMMARY	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.....	7
B.1 Definitions [326 IAC 2-8-1]	
B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]	
B.3 Term of Conditions [326 IAC 2-1.1-9.5]	
B.4 Enforceability [326 IAC 2-8-6] [IC 13-17-12]	
B.5 Severability [326 IAC 2-8-4(4)]	
B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]	
B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]	
B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]	
B.9 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]	
B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]	
B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]	
B.12 Emergency Provisions [326 IAC 2-8-12]	
B.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]	
B.14 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]	
B.15 Reserved	
B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]	
B.17 Permit Renewal [326 IAC 2-8-3(h)]	
B.18 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]	
B.19 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]	
B.20 Source Modification Requirement [326 IAC 2-8-11.1]	
B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2] [IC 13-30-3-1]	
B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]	
B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16] [326 IAC 2-1.1-7]	
B.24 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.....	16
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 Stack Height [326 IAC 1-7]	
C.9 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]	
Testing Requirements [326 IAC 2-8-4(3)]	
C.10 Performance Testing [326 IAC 3-6]	
Compliance Requirements [326 IAC 2-1.1-11]	
C.11 Compliance Requirements [326 IAC 2-1.1-11]	

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

- C.12 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]
- C.13 Reserved
- C.14 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.15 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
- C.16 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]
- C.17 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]
- C.18 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.19 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]
- C.20 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

Portable Source Requirement

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

Stratospheric Ozone Protection

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

D.1. EMISSIONS UNIT OPERATION CONDITIONS..... 24

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

- D.1.1 Particulate Matter (PM) [326 IAC 2-2]
- D.1.2 Particulate Matter (PM) [326 IAC 6.5-1-2]
- D.1.3 FESOP Limits [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-4.1]
- D.1.4 Fuel Limitations [326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-4.1]
- D.1.5 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-1][326 IAC 7-2-1]
- D.1.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]
- D.1.7 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

Compliance Determination Requirements

- D.1.8 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]
- D.1.9 Particulate Control
- D.1.10 Multiple Fuel Usage Limitation
- D.1.11 Asbestos Content
- D.1.12 Sulfur Dioxide (SO₂) Emissions and Sulfur Content
- D.1.13 Hydrogen Chloride (HCl) Emissions and Chlorine 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 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]
- D.1.16 Broken or Failed Bag Detection
- D.1.17 Broken or Failed Knockout Box Detection

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

- D.1.18 Record Keeping Requirements
- D.1.19 Reporting Requirements

D.2. EMISSIONS UNIT OPERATION CONDITIONS..... 32
Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 PM and PM10 Emissions [326 IAC 2-8-4] [326 IAC 6-5]

E.1 FACILITY OPERATION CONDITIONS 33

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]

E.1.2 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

Certification Form 35
Emergency Occurrence Form 36
Quarterly Report Forms 38
Quarterly Deviation and Compliance Monitoring Report Form 42
Attachment A: Fugitive Dust Plan 44

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.

Source Address:	Portable
General Source Phone Number:	(574) 288 - 4811
SIC Code:	2951 (Asphalt Paving Mixtures and Blocks)
Initial County Location:	St. Joseph
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) drum dryer/mixer, constructed after June 11, 1973, identified as Emissions Unit No. 2, with a maximum capacity of three hundred (300) tons per hour, equipped with one (1) ninety-two and one half (92.5) million British thermal units per hour (mmBtu/hr) natural gas-fired burner, using No. 2 distillate fuel oil, and refinery blend fuel oil, and waste oil as back-up fuels, processing certified asbestos-free factory second and/or post consumer waste shingles in the aggregate mix, controlled by one (1) baghouse with a knockout box, exhausting to Stack SV1. This source does not process slag in the aggregate mix, produce cold mix asphalt, or grind shingles.

Under 40 CFR 60.90, Subpart I - New Source Performance Standards for Hot Mix Asphalt Facilities, this is considered an affected hot-mix asphalt facility.

- (b) Three (3) liquid asphalt storage tanks, identified as 11A, 11B and 11C, heated by a one and one half (1.5) million British thermal units per hour oil heater, capacity: twenty thousand (20,000) gallons, each, uncontrolled and exhausting to the atmosphere.
- (c) Material Handling and conveying operations, constructed in 2003, consisting of the following:
- (1) Material storage piles, consisting of limestone, sand, gravel, reclaimed asphalt pavement (RAP), and reclaimed ground asphalt shingles, with a combined maximum storage capacity of forty thousand (40,000) tons;
 - (2) Two (2) Cold Feed systems each consisting of four (4) compartments, each holding twenty-five (25) tons per compartment, for a total aggregate holding capacity of two hundred (200) tons;
 - (3) Two (2) feeder conveyors;
 - (4) Two (2) screens;

- (5) One (1) Recycled Asphalt Pavement (RAP) system, approved for modification in 2011, consisting of two (2) twenty-five (25) ton RAP feed bins, one (1) shaker, and one (1) conveyor;
- (6) Two (2) drag slat conveyors; and
- (7) Two (2) Hot Mix Asphalt storage silos: two hundred (200) tons capacity, each, uncontrolled and exhausting to stacks SV3 and SV4.

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, as defined in 326 IAC 2-7-1(21):

- (a) Two (2) oil storage tanks, identified as TA33 for waste oil and TA34 for off-road diesel, constructed in 2003, with a capacity of twenty thousand (20,000) gallons each, uncontrolled and exhausting to the atmosphere; and
- (b) Paved and unpaved roads and parking lots with public access [326 IAC 6-5].

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, F 141-25742-05360 (formerly 141-00549), 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:
 - (i) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and

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

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

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

- (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 Northern 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
Northern Regional Office phone: (574) 245-4870; fax: (574) 245-4877.

- (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 F 141-25742-05360 (formerly 141-00549) 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 Reserved

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

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require 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.17 Permit Renewal [326 IAC 2-8-3(h)]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require 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.18 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

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

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

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

Any such application 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.19 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

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

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

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

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)

77 West Jackson Boulevard
Chicago, Illinois 60604-3590

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- (a) The Permittee shall pay annual fees to IDEM, OAQ 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.24 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

(a) Pursuant to 326 IAC 2-8:

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

(b) 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) 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:

For Clark County, Dearborn County, Dubois County, Marion County, St. Joseph County, Vanderburgh County, or Vigo County

- (a) 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.

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

For all other counties, except Lake County:

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

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

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

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

The Permittee shall not operate an incinerator 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 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using ambient air quality modeling pursuant to 326 IAC 1-7-4.

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

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

- (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

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

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

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

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

- (a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

Unless otherwise specified in this permit, for all monitoring requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such monitoring. If due to circumstances beyond the Permittee's control, any monitoring equipment required by this permit cannot be installed and operated no later than ninety (90) days after permit issuance or the date of initial startup, whichever is later, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

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

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

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

C.13 Reserved

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

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

- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

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

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

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

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

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

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

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

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

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall 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.19 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, 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.20 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported 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) Reserved
- (e) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

Portable Source Requirement

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

- (a) This permit is approved for operation in all areas in Indiana, except Lake and Porter Counties (due to additional requirements for these counties). This determination is based on the requirements of Prevention of Significant Deterioration in 326 IAC 2-2, and Emission Offset requirements in 326 IAC 2-3. Prior to locating in a severe nonattainment area, the Permittee must submit a request and obtain a permit revision.
- (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.22 Compliance with 40 CFR 82 and 326 IAC 22-1

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Drum Hot Mix Asphalt Plant

(a) One (1) drum dryer/mixer, constructed after June 11, 1973, identified as Emissions Unit No. 2, with a maximum capacity of three hundred (300) tons per hour, equipped with one (1) ninety-two and one half (92.5) million British thermal units per hour (mmBtu/hr) natural gas-fired burner, using No. 2 distillate fuel oil, and refinery blend fuel oil, and waste oil as back-up fuels, processing certified asbestos-free factory second and/or post consumer waste shingles in the aggregate mix, controlled by one (1) baghouse with a knockout box, exhausting to Stack SV1. This source does not process slag in the aggregate mix, produce cold mix asphalt, or grind shingles.

Under 40 CFR 60.90, Subpart I - New Source Performance Standards for Hot Mix Asphalt Facilities, this is considered an affected hot-mix asphalt facility.

(b) Three (3) liquid asphalt storage tanks, identified as 11A, 11B and 11C, heated by a one and one half (1.5) million British thermal units per hour oil heater, capacity: twenty thousand (20,000) gallons, each, uncontrolled and exhausting to the atmosphere.

(c) Material Handling and conveying operations, constructed in 2003, consisting of the following:

- (1) Material storage piles, consisting of limestone, sand, gravel, reclaimed asphalt pavement (RAP), and reclaimed ground asphalt shingles, with a combined maximum storage capacity of forty thousand (40,000) tons;
- (2) Two (2) Cold Feed systems each consisting of four (4) compartments, each holding twenty-five (25) tons per compartment, for a total aggregate holding capacity of two hundred (200) tons;
- (3) Two (2) feeder conveyors;
- (4) Two (2) screens;
- (5) One (1) Recycled Asphalt Pavement (RAP) system, approved for modification in 2011, consisting of two (2) twenty-five (25) ton RAP feed bins, one (1) shaker, and one (1) conveyor;
- (6) Two (2) drag slat conveyors; and
- (7) Two (2) Hot Mix Asphalt storage silos: two hundred (200) tons capacity, each, uncontrolled and exhausting to stacks SV3 and SV4.

(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]

- (a) Pursuant to 326 IAC 2-8-4, the amount of asphalt processed shall not exceed 1,500,000 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 fifteen hundredths (0.15) pounds per ton of asphalt processed.

Compliance with these limitations, combined with the limits and emissions from other emission

units at this source will render 326 IAC 2-7, Part 70, and 326 IAC 2-2, PSD, not applicable.

D.1.2 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a), particulate matter (PM) emissions from the dryer/mixer shall be limited to three hundredths (0.03) grain per dry standard cubic foot of exhaust air, when the source is located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.

D.1.3 FESOP Limits [326 IAC 2-8-4] [326 IAC 2-2] [326 IAC 2-4.1]

- (a) Pursuant to 326 IAC 2-8-4, the amount of asphalt processed shall not exceed 1,500,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) PM10 emissions from the dryer/mixer shall not exceed five hundredths (0.05) pounds per ton of asphalt processed.
- (c) PM2.5 emissions from the dryer/mixer shall not exceed five hundredths (0.05) pounds per ton of asphalt processed.
- (d) Pursuant to 326 IAC 2-8-4, the Permittee shall not use slag as an aggregate additive in its hot mix asphalt operations.
- (e) CO emissions from the dryer/mixer shall not exceed thirteen hundredths (0.13) pounds per ton of asphalt processed.
- (f) Pursuant to 326 IAC 2-8-4, the Permittee shall use only certified asbestos-free factory second and/or post consumer waste shingles as an additive in its aggregate mix.

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 SO2 to less than 100 tons per twelve (12) consecutive month period, each, any single HAP to less than 10 tons per 12 consecutive month period, and any combination of HAPs to less than 25 tons per 12 consecutive month period, and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (PSD), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable.

D.1.4 Fuel Limitations [326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-4.1]

The fuel combusted in the dryer/mixer burner and all other combustion equipment shall be limited as follows:

- (a) No. 2 fuel oil shall have a sulfur content less than or equal to five tenths percent (0.5%) by weight,
- (b) Refinery Blend and Waste oils each shall have a sulfur content less than or equal to one percent (1.0%) by weight and a chlorine content less than or equal to four tenths percent (0.4%) by weight,
- (c) The HCl emissions from the dryer/mixer shall not exceed twenty-six and four tenths (26.4) pounds of HCl per 1,000 gallons of waste oil burned, and
- (d) Single Fuel Usage Limitations:

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

- (1) No. 2 fuel oil usage shall not exceed 2,530,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month,
- (2) Refinery blend fuel oil usage shall not exceed 1,320,000 gallons per twelve (12)

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

- (3) Waste oil usage shall not exceed 750,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month,

(e) Multiple Fuel Usage Limitation:

When combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner and all other combustion equipment, emissions from the dryer/mixer and all other combustion equipment shall be limited as follows:

- (1) Nitrogen oxides (NO_x) emissions from the dryer/mixer and all other combustion equipment shall be less than one hundred (100) tons per twelve (12) consecutive month period, with compliance determined at the end of each month, and
- (2) Sulfur dioxide (SO₂) emissions from the dryer/mixer and all other combustion equipment shall be less than one hundred (100) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits, combined with the potential emissions from all other emission units at this source, shall limit the source-wide total potential to emit NO_x and SO₂ to less than one hundred (100) tons per twelve (12) consecutive month period, each, HCl to less than ten (10) tons per twelve (12) consecutive month period, and any combination of HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period, and shall render 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 7-1.1-1][326 IAC 7-2-1]

- (a) Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), sulfur dioxide (SO₂) emissions from the dryer/mixer burner shall not exceed five tenths (0.5) pounds per million Btu heat input when using distillate oil (No. 2 fuel oil) and one and six tenths (1.6) pounds per million British thermal units heat input when using residual oil (including refinery blend fuel oil and waste oil).
- (b) Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

D.1.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

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

- (a) The asphalt production rate shall be limited to less than 1,500,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) VOC emissions from the dryer/mixer shall be limited to less than thirty-two thousandths (0.032) pound of VOC per ton of asphalt produced.

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

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

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

Compliance Determination Requirements

D.1.8 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

The Permittee shall perform PM, PM10, and PM2.5 stack testing for the dryer/mixer utilizing methods as approved by the Commissioner to demonstrate compliance with Conditions D.1.1(b), D.1.2, D.1.3(b), and D.1.3(c) at least once every five (5) years from the date of the most recent 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.1.9 Particulate Control

- (a) In order to comply with Conditions D.1.1(b), D.1.2, D.1.3(b), and D.1.3(c), the baghouse with knockout box for the dryer/mixer shall be in operation and control emissions from the dryer/mixer at all times when the dryer/mixer is in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.1.10 Multiple Fuel Usage Limitation

- (a) In order to comply with Condition D.1.4(e) when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner and all other combustion equipment, the Permittee shall limit fuel usage in the dryer/mixer burner and all other combustion equipment according to the following formulas:

- (1) Nitrogen oxide emission calculation

$$N = \frac{N(E_G) + O(E_O) + R(E_R) + U(E_U)}{2,000 \text{ lbs/ton}}$$

where:

N = tons of nitrogen oxide emissions for a twelve (12) month consecutive period

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

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

R = gallons of refinery blend fuel oil used in last twelve (12) months

U = gallons waste oil used in the last twelve (12) months

Emission Factors for Nitrogen Oxide

E_G = one hundred (100) pounds/ one (1) million cubic feet of natural gas

E_O = twenty-four (24) pounds/ one thousand (1000) gallons of No. 2 fuel oil

E_R = forty-seven (47) pounds/ one thousand (1000) gallons of refinery blend fuel oil

E_U = nineteen (19) pounds/ one thousand (1000) gallons of waste oil

- (2) Sulfur dioxide emission calculation

$$S = \frac{N(E_G) + O(E_O) + R(E_R) + U(E_U)}{2,000 \text{ lbs/ton}}$$

where:

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

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

O = gallons of No. 2 fuel oil used in last twelve (12) months with less than or equal to five tenths percent (0.5%) sulfur content

R = gallons of refinery blend fuel oil used in last twelve (12) months with less

than or equal to one percent (1.0%) sulfur content
U = gallons of waste oil used in the last twelve (12) months less than or equal to one percent (1.0%) sulfur content

Emission Factors for Sulfur dioxide

E_G = six tenths (0.60) pounds/ one (1) million cubic feet of natural gas

E_O = seventy-eight and five tenths (78.5) pounds/ one thousand (1000) gallons of No. 2 fuel oil

E_R = seventy-eight and five tenths (78.5) pounds/ one thousand (1000) gallons of refinery blend fuel oil

E_U = one hundred forty-seven (147) pounds/ one thousand (1000) gallons of waste oil

D.1.11 Asbestos Content

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

- (a) Providing shingle supplier certification that the factory second and/or post consumer waste shingles do not contain asbestos; or
- (b) Analyzing a sample of the factory second and/or post consumer waste shingles delivery to determine the asbestos content of the factory second shingles, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A determination of noncompliance pursuant to any of the methods specified above shall not be refuted by evidence of compliance pursuant to the other method.

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

Compliance with the sulfur dioxide emissions and sulfur content limitations in Conditions D.1.4(a), D.1.4(b), and D.1.5 shall be determined utilizing one of the following options.

- (a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate compliance with sulfur dioxide emissions and sulfur content limitations by:
 - (1) Providing vendor analysis of heat content and sulfur content of fuel delivered, if accompanied by a vendor certification; or
 - (2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the dryer/mixer, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

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

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

In order to comply with Conditions D.1.4(b) and D.1.4(c), the Permittee shall demonstrate that the chlorine content of the fuel used for the dryer/mixer burner all other fuel combustion equipment

does not exceed 0.40 percent by weight, when combusting waste oil, by providing a vendor analysis of fuel delivered accompanied by a vendor certification.

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

D.1.14 Visible Emissions Notations

- (a) Visible emission notations of the conveyors, screens, material transfer points, and dryer/mixer stack (SV1) exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.15 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the dryer/mixer at least once per day when the dryer/mixer is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of two (2.0) and ten (10.0) inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.
- (b) The instruments used for determining the pressure and temperature shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated 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 emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature,

flow rate, air infiltration, leaks, or dust traces.

D.1.17 Broken or Failed Knockout Box Detection

In the event that knockout box failure has been observed, the failed unit(s) and the associated process will be shut down immediately until the failed unit(s) has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

D.1.18 Record Keeping Requirements

- (a) To document the compliance status with Conditions D.1.1, D.1.3 and D.1.6, 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(f), the Permittee shall maintain records in accordance with (1) through (3) below.
 - (1) Calendar dates covered in the compliance determination period;
 - (2) A certification, signed by the owner or operator, that the records of the shingle supplier certifications represent all of the shingles used during the period; and
 - (3) If the shingle supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:
 - (i) Shingle supplier certifications;
 - (ii) The name of the shingle supplier(s); and
 - (iii) A statement from the shingle supplier(s) that certifies the asbestos content of the shingles from their company.
- (c) To document the compliance status with Conditions D.1.4 and D.1.5, the Permittee shall maintain records in accordance with (1) through (7) below.
 - (1) Calendar dates covered in the compliance determination period;
 - (2) Actual fuel usage, sulfur content, heat content and equivalent sulfur dioxide emission rates for each fuel used at the source per month;
 - (3) Actual waste oil usage, chlorine content, and equivalent hydrogen chloride (HCl) emission rate per month;
 - (4) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

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

 - (5) Fuel supplier certifications;
 - (6) The name of the fuel supplier; and

- (7) A statement from the fuel supplier that certifies the sulfur content of the distillate (No. 2) and residual (refinery blend) fuel oil and waste oil and the chlorine content of waste oil.

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

- (d) To document the compliance status with Conditions D.1.4(e) and D.1.10 when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner and all other combustion equipment, 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.
- (e) To document the compliance status with Condition D.1.14, the Permittee shall maintain daily records of the visible emission notations from each of the conveyors, screens, material transfer points, and dryer/mixer stack (SV1) 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).
- (f) To document the compliance status with Condition D.1.15, the Permittee shall maintain the following:
- (1) 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).
- (g) Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the records required by this condition.

D.1.19 Reporting Requirements

A quarterly summary of the information to document compliance status with Conditions D.1.1, D.1.3(a), D.1.4(d), D.1.4(e), and D.1.6 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Insignificant Activities

(b) Paved and unpaved roads and parking lots with public access [326 IAC 6-5].

(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 PM and PM10 Emissions [326 IAC 2-8-4] [326 IAC 6-5]

Pursuant to 326 IAC 2-8 and 326 IAC 6-5, the Permittee shall control PM and PM10 emissions from paved and unpaved roads according to the fugitive dust plan submitted on June 16, 2003, which is included in Section C - Fugitive Particulate Matter Emission Limitations, of this permit.

SECTION E.1 FACILITY OPERATION CONDITIONS

Emissions Unit Description: Hot-Mix Asphalt Plant

- (a) One (1) drum dryer/mixer, constructed after June 11, 1973, identified as Emissions Unit No. 2, with a maximum capacity of three hundred (300) tons per hour, equipped with one (1) ninety-two and one half (92.5) million British thermal units per hour (mmBtu/hr) natural gas-fired burner, using No. 2 distillate fuel oil, and refinery blend fuel oil, and waste oil as back-up fuels, processing certified asbestos-free factory second and/or post consumer waste shingles in the aggregate mix, controlled by one (1) baghouse with a knockout box, exhausting to Stack SV1. This source does not process slag in the aggregate mix, produce cold mix asphalt, or grind shingles.

Under 40 CFR 60.90, Subpart I - New Source Performance Standards for Hot Mix Asphalt Facilities, this is considered an affected hot-mix asphalt facility.

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

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

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

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

§ 60.90 *Applicability and designation of affected facility.*

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

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

§ 60.91 *Definitions.*

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

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

[51 FR 12325, Apr. 10, 1986]

§ 60.92 Standard for particulate matter.

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

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

§ 60.93 Test methods and procedures.

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

[54 FR 6667, Feb. 14, 1989]

E.1.2 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.1.1. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Brooks Construction, Inc.
Source Address: Portable
FESOP Permit No.: F141-25742-05360

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
Compliance and Enforcement Branch
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: 317-233-0178
Fax: 317-233-6865**

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

Source Name: Brooks Construction, Inc.
Source Address: Portable
FESOP Permit No.: F141-25742-05360 (formerly 141-00549)

This form consists of 2 pages

Page 1 of 2

- | |
|--|
| <p><input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <ul style="list-style-type: none">• 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 and Enforcement Branch); 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, PM10, 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: Brooks Construction, Inc.
Source Address: Portable
FESOP No.: F141-25742-05360 (formerly 141-00549)
Facility: One (1) dryer/mixer
Parameter: Asphalt processed
Limit: 1,500,000 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			
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
 Single Fuel Quarterly Report**

Source Name: Brooks Construction, Inc.
 Source Address: Portable
 FESOP No.: F141-25742-05360 (formerly 141-00549)
 Facilities: Dryer/mixer burner and all other combustion equipment
 Parameter: Fuel Usage
 Limit: In order to limit the source-wide total potential to emit NO_x and SO₂ to less than one hundred (100) tons per twelve (12) consecutive month period, each, each, HCl to less than ten (10) tons per twelve (12) consecutive month period, and any combination of HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period, the usage of fuel combusted in the dryer/mixer burner and all other combustion equipment shall be limited as follows:

Fuel Type (units)	Fuel Usage Limit (per 12 consecutive month period)
No. 2 Fuel Oil ≤ 0.5 wt% sulfur (gallons)	2,530,000
Refinery Blend Fuel Oil ≤ 1.0 wt% sulfur (gallons)	1,320,000
Waste Oil ≤ 1.0 wt% sulfur (gallons)	750,000

QUARTER: _____ YEAR: _____

The following fuel was the only fuel combusted over the previous twelve (12) month period: _____
 (combustion of more than one fuel requires the use of the "Multiple Fuel Quarterly Report" form)

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

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

Submitted by: _____ Date: _____

Title / Position: _____ Phone: _____

Signature: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
Multiple Fuel Quarterly Report
Page 1 of 2

Source Name: Brooks Construction, Inc.
Source Address: Portable
FESOP No.: F141-25742-05360 (formerly 141-00549)
Facilities: Dryer/mixer burner and all other combustion equipment
Parameters: Nitrogen Oxides (NO_x) and Sulfur Dioxide (SO₂) Emissions

Limit: Nitrogen oxides (NO_x) emissions shall be less than one hundred (100) tons per twelve (12) consecutive month period based on the following equation:

$$N = \frac{G(E_G) + O(E_O) + R(E_R) + U(E_U)}{2,000 \text{ lbs/ton}}$$

where:

N = tons of nitrogen oxide emissions for a twelve (12) month consecutive period
G = million cubic feet of natural gas used in the last twelve (12) months
O = gallons of No. 2 fuel oil used in last twelve (12) months
R = gallons of refinery blend fuel oil used in last twelve (12) months
U = gallons waste oil used in the last twelve (12) months

Emission Factors for Nitrogen Oxide

E_G = one hundred (100) pounds/ one (1) million cubic feet of natural gas
E_O = twenty-four (24) pounds/ one thousand (1000) gallons of No. 2 fuel oil
E_R = forty-seven (47) pounds/ one thousand (1000) gallons of refinery blend fuel oil
E_U = nineteen (19) pounds/ one thousand (1000) gallons of waste oil

Limit: Sulfur dioxide (SO₂) emissions shall be less than one hundred (100) tons per twelve (12) consecutive month period based on the following equation:

$$S = \frac{G(E_G) + O(E_O) + R(E_R) + U(E_U)}{2,000 \text{ lbs/ton}}$$

where:

S = tons of sulfur dioxide emissions for twelve (12)-month consecutive period
G = million cubic feet of natural gas used in the last twelve (12) months
O = gallons of No. 2 fuel oil used in last twelve (12) months with less than or equal to five tenths percent (0.5%) sulfur content
R = gallons of refinery blend fuel oil used in last twelve (12) months with less than or equal to one percent (1.0%) sulfur content
U = gallons of waste oil used in the last twelve (12) months less than or equal to one percent (1.0%) sulfur content

Emission Factors for Sulfur dioxide

E_G = six tenths (0.60) pounds/ one (1) million cubic feet of natural gas
E_O = seventy-eight and five tenths (78.5) pounds/ one thousand (1000) gallons of No. 2 fuel oil
E_R = seventy-eight and five tenths (78.5) pounds/ one thousand (1000) gallons of refinery blend fuel oil
E_U = one hundred forty-seven (147) pounds/ one thousand (1000) gallons of waste oil

Multiple Fuel Quarterly Report QUARTER: _____ YEAR: _____

Month	Fuel Types (units)	Column 1	Column 2		Column 1 + Column 2	Equation Results
		Usage This Month	Usage Previous 11 Months		Usage 12 Month Total	Emissions (tons per 12 months)
Month 1	Natural Gas (MMCF)			G		Nitrogen Oxides
	No. 2 Fuel Oil ≤ 0.5 wt% sulfur (gallons)			O		
	Refinery Blend Fuel Oil ≤ 1.0 wt% sulfur (gallons)			R		
	Waste Oil ≤ 1.0 wt% sulfur (gallons)			U		
	Natural Gas (MMCF)			G		Sulfur Dioxide
	No. 2 Fuel Oil ≤ 0.5 wt% sulfur (gallons)			O		
	Refinery Blend Fuel Oil ≤ 1.0 wt% sulfur (gallons)			R		
Waste Oil ≤ 1.0 wt% sulfur (gallons)			U			
Month 2	Natural Gas (MMCF)			G		Nitrogen Oxides
	No. 2 Fuel Oil ≤ 0.5 wt% sulfur (gallons)			O		
	Refinery Blend Fuel Oil ≤ 1.0 wt% sulfur (gallons)			R		
	Waste Oil ≤ 1.0 wt% sulfur (gallons)			U		
	Natural Gas (MMCF)			G		Sulfur Dioxide
	No. 2 Fuel Oil ≤ 0.5 wt% sulfur (gallons)			O		
	Refinery Blend Fuel Oil ≤ 1.0 wt% sulfur (gallons)			R		
Waste Oil ≤ 1.0 wt% sulfur (gallons)			U			
Month 3	Natural Gas (MMCF)			G		Nitrogen Oxides
	No. 2 Fuel Oil ≤ 0.5 wt% sulfur (gallons)			O		
	Refinery Blend Fuel Oil ≤ 1.0 wt% sulfur (gallons)			R		
	Natural Gas (MMCF)			G		
	Waste Oil ≤ 1.0 wt% sulfur (gallons)			U		
	No. 2 Fuel Oil ≤ 0.5 wt% sulfur (gallons)			O		
	Refinery Blend Fuel Oil ≤ 1.0 wt% sulfur (gallons)			R		
Waste Oil ≤ 1.0 wt% sulfur (gallons)			U			

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: Brooks Construction, Inc.
 Source Address: Portable
 FESOP Permit No.: F141-25742-05360 (formerly 141-00549)

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

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

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) OFFICE OF AIR QUALITY

ATTACHMENT A

ASPHALT PLANT SITE FUGITIVE DUST CONTROL PLAN

BROOKS CONSTRUCTION, INC. **PORTABLE**

- (a) Fugitive particulate matter (dust) emissions from paved roads, unpaved roads, and parking lots shall be controlled by one or more of the following measures:
 - (1) Paved roads and parking lots:
 - (A) Cleaning by vacuum sweeping on an as-needed basis (monthly at a minimum).
 - (B) Power brooming while wet either from rain or application of water.
 - (2) Unpaved roads and parking lots:
 - (A) Paving with asphalt.
 - (B) Treating with emulsified asphalt on an as-needed basis.
 - (C) Treating with water on an as-needed basis.
 - (D) Double chipping and sealing the road surface and maintaining on an as-needed basis.
- (b) Fugitive particulate matter (dust) emissions from aggregate stockpiles shall be controlled by one or more of the following measures.
 - (1) Maintaining minimum size and number of stock piles of aggregate.
 - (2) Treating around the stockpile area with emulsified asphalt on an as-needed basis.
 - (3) Treating around the stockpile area with water on an as-needed basis.
 - (4) Treating the stockpiles with water on an as-needed basis.
- (c) Fugitive particulate matter (dust) emissions from outdoor conveying of aggregates shall be controlled by the following measure:

Apply water at the feed and the intermediate point on an as-needed basis.
- (d) Fugitive particulate matter (dust) emissions resulting from the transferring of aggregates shall be controlled by one or more of the following measures:
 - (1) Minimizing the vehicular distance between the transfer points.
 - (2) Enclosing the transfer points.
 - (3) Applying water on transfer points on an as-needed basis.

- (e) 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:
 - (1) Tarping the aggregate hauling vehicles.
 - (2) Maintaining vehicle bodies in a condition to prevent leakage.
 - (3) Spraying the aggregates with water.
 - (5) Maintaining a ten (10) mile per hour speed limit in the yard.

- (f) Fugitive particulate matter (dust) emissions resulting from the loading and unloading shall be controlled by one or more of the following measures:
 - (1) Reducing free fall distance to a minimum.
 - (2) Reducing the rate of discharge of the aggregate.
 - (3) Spraying the aggregate with water on an as-needed basis.

An "as-needed basis" means the frequency or quantity of application necessary to minimize visible particulate matter emissions.

Indiana Department of Environmental Management Office of Air Quality

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

Source Description and Location

Source Name:	Brooks Construction, Inc.
Source Location:	Portable
Current Source Location:	7600 E N00S, Marion, IN 46952
County:	Grant
SIC Code:	2951 (Asphalt Paving Mixtures and Blocks)
Operation Permit No.:	F 141-25742-05360 (formerly 00549)
Operation Permit Issuance Date:	August 20, 2008
Minor Permit Revision No.:	053-30554-05360
Permit Reviewer:	Brian Williams

On May 16, 2011, the Office of Air Quality (OAQ) received an application from Brooks Construction, Inc. related to a modification to an existing portable drum hot mix asphalt plant.

Existing Approvals

The source was issued FESOP Renewal No. 141-25742-05360 (formerly 00549) on August 20, 2008. The source has since received the following approvals:

- (a) First Administrative Amendment No. 141-29190-05360 (formerly 00549), issued on May 25, 2010;
- (b) Second Administrative Amendment No. 141-30003-05360, issued on January 25, 2011; and
- (c) Relocation No. 053-30246-05360, issued on February 28, 2011.

County Attainment Status

The source is currently located in Grant County.

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

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

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

- (b) **PM_{2.5}**
Grant 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. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM_{2.5} emissions until 326 IAC 2-2 is revised.
- (c) **Other Criteria Pollutants**
Grant County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

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

Process/Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)							
	PM	PM ₁₀	SO ₂	NO _x	VOC	CO	Total HAPs	Maximum (Worst Case) HAP
Ducted Emissions								
Fuel Combustion (maximum (worst case))	15.60	12.43	99.00	40.52	2.23	34.03	11.08	9.90 HCl
Dryer/Mixer	112.50	37.50	43.50	41.25	24.00	97.50	7.99	2.33 Formaldehyde
Maximum (Worst Case) Emissions	112.50	37.50	99.00	41.25	24.00	97.50	11.08	9.90 HCl
Fugitive Emissions								
Asphalt Load-Out, Silo Filling, On-Site Yard	0.83	0.83	0	0	12.85	2.16	0.21	0.07 Formaldehyde
Hot Oil System	0	0	0	0	1.2E-03	0.06	1.3E-03	8.0E-04 Naphthalene
Material Storage Piles	2.38	0.83	0	0	0	0	0	0
Material Processing and Handling	4.85	2.29	0	0	0	0	0	0
Material Screening, and Conveying	19.95	6.98	0	0	0	0	0	0
Paved and Unpaved Roads (maximum (worst case))	88.76	22.62	0	0	0	0	0	0
Volatile Organic Liquid Storage Vessels	0	0	0	0	negl.	0	negl.	negl.
Total Fugitive Emissions	116.76	33.56	0	0	12.85	2.22	0.22	0.07 Formaldehyde
Total Limited/Controlled Emissions	229.26	71.06	99.00	41.25	36.85	99.72	11.30	9.90 HCl
Title V Major Source Thresholds	NA	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	NA	NA
negl. = negligible These emissions are based upon TSD to FESOP Renewal No. 141-25742-05360 (formerly 00549), issued on August 20, 2008.								

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

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by Brooks Construction, Inc. on May 16, 2011, requesting the ability to store and process certified asbestos-free factory second shingles and post consumer shingles in the aggregate mix. Shingles will not be ground at this plant. The source has also requested to install one additional RAP feed bin to the existing RAP system. Finally, the source requested that the descriptive information for the existing cold feed system be revised to reflect that there are two cold feed systems and clarify the maximum capacity. The unlimited and limited potential to emit for the cold feed system did not change due to this typographical error.

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

- (a) One (1) drum dryer/mixer, constructed after June 11, 1973, identified as Emissions Unit No. 2, with a maximum capacity of three hundred (300) tons per hour, equipped with one (1) ninety-two and one half (92.5) million British thermal units per hour (mmBtu/hr) natural gas-fired burner, using No. 2 distillate fuel oil, and refinery blend fuel oil, and waste oil as back-up fuels, processing certified asbestos-free factory second and/or post consumer waste shingles in the aggregate mix, controlled by one (1) baghouse with a knockout box, exhausting to Stack SV1. This source does not process slag in the aggregate mix, produce cold mix asphalt, or grind shingles.

Under 40 CFR 60.90, Subpart I - New Source Performance Standards for Hot Mix Asphalt Facilities, this is considered an affected hot-mix asphalt facility.

- (b) Material Handling and conveying operations, constructed in 2003, consisting of the following:
- (1) Material storage piles, consisting of limestone, sand, gravel, reclaimed asphalt pavement (RAP), and reclaimed ground asphalt shingles, with a combined maximum storage capacity of forty thousand (40,000) tons;
- (2) Two (2) Cold Feed systems each consisting of four (4) compartments, each holding twenty-five (25) tons per compartment, for a total aggregate holding capacity of two hundred (200) tons;

Note: The emission unit description has been revised to clarify there are two cold feed systems. In addition, the total aggregate holding capacity is two hundred (200) tons not four hundred (400) tons because each compartment is only capable of holding twenty-five (25) tons not one hundred (100) tons.

- (3) One (1) Recycled Asphalt Pavement (RAP) system, approved for modification in 2011, consisting of two (2) twenty-five (25) ton RAP feed bins, one (1) shaker, and one (1) conveyor;

Note: The RAP system was previously equipped with only one (1) twenty-five (25) ton RAP feed bin.

Enforcement Issues

There are no pending enforcement actions related to this revision.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – FESOP Revision

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

Process/ Emission Unit	PTE of Proposed Revision (tons/year)								
	PM	PM10*	PM2.5	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Shingle Storage Piles	0.002	0.001	0.001	0	0	0	0	0	0
Shingle Processing and Handling	0.42	0.20	0.03	0	0	0	0	0	0
Shingle Screening and Conveying	1.75	0.61	0.61	0	0	0	0	0	0
Unpaved and Paved Roads (worst case)	12.97	3.30	0.33	0	0	0	0	0	0
Total PTE of Proposed Revision	15.14	4.12	0.97	0	0	0	0	0	0

* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

This FESOP is being revised through a FESOP Minor Permit revision pursuant to 326 IAC 2-8-11.1(d)(4)(1) because the revision involves a modification with a potential to emit greater than or equal to five (5) tons and less than twenty-five (25) tons per year of PM.

PTE of the Entire Source After Issuance of the FESOP Revision

The table below summarizes the potential to emit of the entire source, with updated emissions shown as **bold** values and previous emissions shown as ~~strike through~~ values.

Process/ Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)								
	PM	PM10*	PM2.5***	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Ducted Emissions									
Fuel Combustion (maximum (worst case))	15.60	12.43	12.43	99.00	40.52	2.23	34.03	11.08	9.90 HCl
Dryer/Mixer	112.50	37.50	37.50	43.50	41.25	24.00	97.50	7.99	2.33 Formaldehyde
Dryer/Mixer Slag Processing	0	0	0	0	0	0	0	0	0
Worst Case Emissions	112.50	37.50	37.50	99.00	41.25	24.00	97.50	11.08	9.90 HCl
Fugitive Emissions									
Asphalt Load-Out, Silo Filling, On-Site Yard	0.83	0.83	0.83	0	0	12.85	2.16	0.21	0.07 Formaldehyde
Hot Oil System	0	0	0	0	0	1.2E-03	0.06	1.3E-03	8.0E-04 Naphthalene

Process/ Emission Unit	Potential To Emit of the Entire Source to accommodate the Proposed Revision (tons/year)								
	PM	PM10*	PM2.5***	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Material Storage Piles**	2.38 11	0.83 0.74	0.74	0	0	0	0	0	0
Material Processing and Handling	4.85	2.29	0.35	0	0	0	0	0	0
Material Screening and Conveying	19.95	6.98	6.98	0	0	0	0	0	0
Paved and Unpaved Roads (worst case)	88.76	22.62	2.26	0	0	0	0	0	0
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl.	0	negl.	negl.
Total Fugitive Emissions	116.76	33.56	11.16	0	0	12.85	2.22	0.22	0.07 Formaldehyde
Total PTE of Entire Source	229.26 228.99	71.06 70.97	48.66	99.0	41.25	36.85	99.72	11.30	9.90 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	N
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	100	NA	NA	NA	NA	NA	NA
negl. = negligible * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". ** The potential to emit from the material storage piles has been revised to include shingles and remove slag since the source does not use slag in the aggregate mix. *** PM2.5 limits have been added.									

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

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Revision (tons/year)								
	PM	PM10*	PM2.5	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Ducted Emissions									
Fuel Combustion (maximum (worst case))	15.60	12.43	12.43	99.00	40.52	2.23	34.03	11.08	9.90 HCl
Dryer/Mixer	112.50	37.50	37.50	43.50	41.25	24.00	97.50	7.99	2.33 Formaldehyde
Dryer/Mixer Slag Processing	0	0	0	0	0	0	0	0	0
Worst Case Emissions	112.50	37.50	37.50	99.00	41.25	24.00	97.50	11.08	9.90 HCl
Fugitive Emissions									
Asphalt Load-Out, Silo Filling, On-Site Yard	0.83	0.83	0.83	0	0	12.85	2.16	0.21	0.07 Formaldehyde
Hot Oil System	0	0	0	0	0	1.2E-03	0.06	1.3E-03	8.0E-04 Naphthalene
Material Storage Piles	2.11	0.74	0.74	0	0	0	0	0	0
Material Processing and Handling	4.85	2.29	0.35	0	0	0	0	0	0
Material Screening and Conveying	19.95	6.98	6.98	0	0	0	0	0	0
Paved and Unpaved Roads (worst case)	88.76	22.62	2.26	0	0	0	0	0	0
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl.	0	negl.	negl.
Total Fugitive Emissions	116.76	33.56	11.16	0	0	12.85	2.22	0.22	0.07 Formaldehyde
Total PTE of Entire Source	228.99	70.97	48.66	99.0	41.25	36.85	99.72	11.30	9.90 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	N
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	100	NA	NA	NA	NA	NA	NA
negl. = negligible * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".									

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

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

- (1) The Permittee shall use only certified asbestos-free factory second and/or post consumer waste shingles as an additive in its aggregate mix.

Note: This limit is necessary to ensure the source does not process shingles that contain asbestos, which is a hazardous air pollutant.

- (2) The Permittee shall not use slag as an aggregate additive in its hot mix asphalt operations.

Note: In 2009, IDEM became aware that aggregate mixes that contain blast furnace slag contribute significantly to SO₂ emissions from the mixer/dryer in asphalt plants. In addition, IDEM has determined that aggregate mixes that contain steel slag also contribute to SO₂ emissions from the mixer/dryer in asphalt plants. As a result, a new condition will be included in the permit to clarify that the source cannot process slag in the aggregate mix at the source. In addition, the emission calculations for fugitive emissions from storage piles have been updated to reflect that the source cannot store slag onsite.

- (3) The asphalt production rate shall not exceed 1,500,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Note: This limit was not adjusted due to this revision.

- (4) PM_{2.5} emissions from the dryer/mixer shall not exceed five hundredths (0.05) pounds per ton of asphalt processed.

Note: Prior to May 8, 2008, IDEM was not required to regulate PM_{2.5} emissions. As a result, no PM_{2.5} emission limit was included in the FESOP Renewal No. 141-25742-05360 (formerly 00549). However, IDEM is now required to regulate PM_{2.5} since it is a criteria air pollutant. Therefore, a new PM_{2.5} limit has been included in the permit to clarify the source must also limit PM_{2.5} emissions to less than 100 tons per year in order to render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2(PSD) not applicable.

Compliance with these limits, combined with the potential to emit PM_{2.5}, SO₂, and HAPs from all other emission units at this source, shall limit the source-wide total potential to emit of PM_{2.5} and SO₂ 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 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.

- (b) PSD Minor Source

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

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this proposed revision.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

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

Compliance Assurance Monitoring (CAM)

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

State Rule Applicability Determination

The following state rules are applicable to the proposed revision:

- (a) 326 IAC 2-8-4 (FESOP)
This revision to an existing Title V minor stationary source will not change the minor status, because the potential to emit criteria pollutants from the entire source will still be limited to less than the Title V major source threshold levels. Therefore, the source will still be subject to the provisions of 326 IAC 2-8 (FESOP). See PTE of the Entire Source After Issuance of the FESOP Revision Section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
This modification to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit of all attainment regulated pollutants from the entire source will continue to be less than the PSD major source threshold levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply. See PTE of the Entire Source After Issuance of the FESOP Revision Section above.
- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The proposed revision is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the new and modified units is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.
- (d) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (e) 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.

Asphalt Plant

The existing requirements did not change because of this revision. The source shall continue to comply with the applicable requirements and permit conditions as contained in FESOP Renewal No. 141-25742-05360 (formerly 00549), issued on August 20, 2008.

Compliance Determination, Monitoring and Testing Requirements

The existing compliance requirements will not change because of this revision. The source shall continue to comply with the applicable requirements and permit conditions as contained in FESOP Renewal No. 141-25742-05360 (formerly 00549), issued on August 20, 2008.

Proposed Changes

- (a) The following changes listed below are due to the proposed revision. Deleted language appears as ~~strike through~~ text and new language appears as **bold** text:
- (1) The emission unit description for the drum/dryer mixer in Sections A.2, D.1, and E.1 has been revised to reflect that the source processes shingles in the aggregate mix. See Proposed Changes (b) for an explanation of the additional changes to the drum/dryer mixer emission unit description.
 - (2) The emission unit description for the material storage piles in Sections A.2 and D.1 has been revised to reflect the addition of storage piles for reclaimed ground asphalt shingles.
 - (3) The emission unit description for the RAP system in Sections A.2 and D.1 has been revised to reflect the addition of one (1) new RAP feed bin.
 - (4) Condition D.1.3 has been revised to include a new limit that the source shall only use certified asbestos free shingles in the aggregate mix. See Proposed Changes (b) for an explanation of the additional changes to Condition D.1.3.
 - (5) Since the source processes shingles, they are required to obtain a certification from the supplier that the shingles do not contain asbestos or analyze a sample. In addition, they are required to keep records to verify compliance with this condition. Therefore, a Section D.1 - Asbestos Content has been included in the permit and Section D.1 - Record Keeping Requirements has been revised to include the new record keeping requirements.

...

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) drum dryer/mixer, constructed after June 11, 1973, identified as Emissions Unit No. 2, with a maximum capacity of three hundred (300) tons per hour, equipped with one (1) ninety-two and one half (92.5) million British thermal units per hour (mmBtu/hr) natural gas-fired burner, using No. 2 distillate fuel oil, and refinery blend fuel oil, and waste oil as back-up fuels, **processing certified asbestos-free factory second and/or post consumer waste shingles in the aggregate mix**, controlled by one (1) baghouse with a knockout box, exhausting to Stack SV1. **This source does not process slag in the aggregate mix, produce cold mix asphalt, or grind shingles.**

...

- (c) Material Handling and conveying operations, constructed in 2003, consisting of the following:
- (1) Material storage piles, consisting of limestone, sand, gravel, ~~slag, and~~ reclaimed asphalt pavement (RAP), **and reclaimed ground asphalt shingles**, with a

combined maximum storage capacity of forty thousand (40,000) tons;

...

- (5) One (1) Recycled Asphalt Pavement (RAP) system, **approved for modification in 2011**, consisting of ~~one~~ **two (42)** twenty-five (25) ton RAP feed bins, one (1) shaker, and one (1) conveyor;

...

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Drum Hot Mix Asphalt Plant

- (a) One (1) drum dryer/mixer, constructed after June 11, 1973, identified as Emissions Unit No. 2, with a maximum capacity of three hundred (300) tons per hour, equipped with one (1) ninety-two and one half (92.5) million British thermal units per hour (mmBtu/hr) natural gas-fired burner, using No. 2 distillate fuel oil, and refinery blend fuel oil, and waste oil as back-up fuels, **processing certified asbestos-free factory second and/or post consumer waste shingles in the aggregate mix**, controlled by one (1) baghouse with a knockout box, exhausting to Stack SV1. **This source does not process slag in the aggregate mix, produce cold mix asphalt, or grind shingles.**
- ...
- (c) Material Handling and conveying operations, constructed in 2003, consisting of the following:
- (1) Material storage piles, consisting of limestone, sand, gravel, ~~slag, and~~ reclaimed asphalt pavement (RAP), **and reclaimed ground asphalt shingles**, with a combined maximum storage capacity of forty thousand (40,000) tons;
- ...
- (5) One (1) Recycled Asphalt Pavement (RAP) system, **approved for modification in 2011**, consisting of ~~one~~ **two (42)** twenty-five (25) ton RAP feed bins, one (1) shaker, and one (1) conveyor;

...

D.1.3 ~~Particulate (PM10), and Carbon Monoxide (CO)~~ **FESOP Limits** [326 IAC 2-8-4] [326 IAC 2-2] **[326 IAC 2-4.1]**

- (a) Pursuant to 326 IAC 2-8-4, the amount of asphalt processed shall not exceed 1,500,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) PM10 emissions from the dryer/mixer shall not exceed five hundredths (0.05) pounds per ton of asphalt processed.
- (c) **PM2.5 emissions from the dryer/mixer shall not exceed five hundredths (0.05) pounds per ton of asphalt processed.**
- (d) **Pursuant to 326 IAC 2-8-4, the Permittee shall not use slag as an aggregate additive in its hot mix asphalt operations.**
- (ee) CO emissions from the dryer/mixer shall not exceed thirteen hundredths (0.13) pounds per ton of asphalt processed.
- (f) **Pursuant to 326 IAC 2-8-4, the Permittee shall use only certified asbestos-free factory second and/or post consumer waste shingles as an additive in its aggregate mix.**

~~Compliance with these limitations, combined with the limits and emissions from other emission units at this source, will satisfy 326 IAC 2-8-4 (FESOP), and will render 326 IAC 2-7, Part 70, and 326 IAC 2-2, PSD, not applicable.~~ **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 SO2 to less than 100 tons per twelve (12) consecutive month period, each, any single HAP to less than 10 tons per 12 consecutive month period, and any combination of HAPs to less than 25 tons per 12 consecutive month period, and shall render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (PSD), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable.

...

D.1.11 Asbestos Content

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

- (a) Providing shingle supplier certification that the factory second and/or post consumer waste shingles do not contain asbestos; or
- (b) Analyzing a sample of the factory second and/or post consumer waste shingles delivery to determine the asbestos content of the factory second shingles, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A determination of noncompliance pursuant to any of the methods specified above shall not be refuted by evidence of compliance pursuant to the other method.

D.1.142 Sulfur Dioxide (SO2) Emissions and Sulfur Content

...

D.1.123 Hydrogen Chloride (HCl) Emissions and Chlorine Content

...

D.1.134 Visible Emissions Notations

...

D.1.145 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

...

D.1.156 Broken or Failed Bag Detection

...

D.1.167 Broken or Failed Knockout Box Detection

...

D.1.178 Record Keeping Requirements

...

- (b) To document the compliance status with Condition D.1.3(f), the Permittee shall maintain records in accordance with (1) through (3) below.
 - (1) Calendar dates covered in the compliance determination period;
 - (2) A certification, signed by the owner or operator, that the records of the shingle supplier certifications represent all of the shingles used during the period; and
 - (3) If the shingle supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:
 - (i) Shingle supplier certifications;
 - (ii) The name of the shingle supplier(s); and
 - (iii) A statement from the shingle supplier(s) that certifies the asbestos content of the shingles from their company.

- (bc) To document the compliance status with Conditions D.1.4 and D.1.5, the Permittee shall maintain records in accordance with (1) through (7) below.
- ...
- (ed) To document the compliance status with Conditions D.1.4(e) and D.1.10 when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner and all other combustion equipment, 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.
- (de) 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 (SV1) 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).
- (ef) To document the compliance status with Condition D.1.145, the Permittee shall maintain the following:
- ...
- (fg) Section C - General Record Keeping Requirements, contains the Permittee's obligations with regard to the records required by this condition.

D.1.189 Reporting Requirements

SECTION E.1 FACILITY OPERATION CONDITIONS

Emissions Unit Description: Hot-Mix Asphalt Plant

- (a) One (1) drum dryer/mixer, constructed after June 11, 1973, identified as Emissions Unit No. 2, with a maximum capacity of three hundred (300) tons per hour, equipped with one (1) ninety-two and one half (92.5) million British thermal units per hour (mmBtu/hr) natural gas-fired burner, using No. 2 distillate fuel oil, and refinery blend fuel oil, and waste oil as back-up fuels, **processing certified asbestos-free factory second and/or post consumer waste shingles in the aggregate mix**, controlled by one (1) baghouse with a knockout box, exhausting to Stack SV1. **This source does not process slag in the aggregate mix, produce cold mix asphalt, or grind shingles.**

- (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) Section A.1 has been revised to clarify that this portable source was initially located in St. Joseph County.
 - (2) The emission unit description for the drum/dryer mixer in Sections A.2, D.1, and E.1 has been revised to clarify that the source does not use slag in the aggregate mix, produce cold mix asphalt, or grind shingles (see changes above).
 - (3) The emission unit description for the material storage piles in Sections A.2 and D.1 has been revised to reflect that the source is not permitted to have slag storage piles onsite. In addition, the limited potential to emit calculations have been revised to remove the slag storage piles, which were erroneously included.
 - (4) The emission unit description for the cold feed system in Sections A.2 and D.1 has been revised to correct a typographical error.
 - (5) The deadline for submitting the annual compliance certification in Section B - Annual

Compliance Certification has been revised from April 15 to July 1, since this portable source is no longer located in St. Joseph County.

- (6) Condition D.1.3 has been revised to include a new PM2.5 emission limit and a limit that the source cannot process slag in the aggregate mix (see changes above).
- (7) Condition D.1.8 has been revised to clarify that the source is also required to perform PM2.5 emission testing.
- (8) Condition D.1.9 has been revised to clarify that the source must operate the baghouse with knockout box for the dryer/mixer in order to comply with the PM2.5 emission limit.
- (9) This source is permitted to combust natural gas, No. 2 fuel oil, refinery blend fuel oil, and waste oil. As a result, IDEM included a multiple fuel usage limitation in FESOP Renewal No. 141-25742-05360 (formerly 00549) to allow the source flexibility. In order to determine compliance with this limit the source is required to keep records of each fuel used and input it into equations in Condition D.1.10. However, natural gas was mistakenly omitted from these equations. Therefore, Condition D.1.10 and the Multiple Fuel Quarterly Report have been updated to include natural gas. It was not necessary to revise the single fuel limitation to include natural gas because the unlimited NOx and SO2 emissions are less than 100 tons per year if the source only combusted natural gas.
- (10) Section D.1 - Reporting Requirements has been revised to correct typographical errors.
- (11) Section E.1 has been revised to include a new condition that clarifies that the source is required to perform testing at least once every five (5) years from the date of the last valid test in order to demonstrate compliance with NSPS Subpart I.

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

... **Initial** County Location: St. Joseph

...
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:

- ...
- (c) Material Handling and conveying operations, constructed in 2003, consisting of the following:
 - (1) Material storage piles, consisting of limestone, sand, gravel, ~~slag, and~~ reclaimed asphalt pavement (RAP), **and reclaimed ground asphalt shingles**, with a combined maximum storage capacity of forty thousand (40,000) tons;
 - (2) ~~One~~ **Two (42)** Cold Feed systems **each** consisting of four (4) compartments, each holding ~~one hundred~~ **twenty-five (4025)** tons **per compartment**, for a total aggregate holding capacity of ~~four~~ **two** hundred (**4200**) tons;

...
SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Drum Hot Mix Asphalt Plant

- ...
- (c) Material Handling and conveying operations, constructed in 2003, consisting of the following:
 - (1) Material storage piles, consisting of limestone, sand, gravel, ~~slag,~~ and reclaimed asphalt pavement (RAP), with a combined maximum storage capacity of forty thousand (40,000) tons;

(2) ~~One~~ **Two (42)** Cold Feed systems **each** consisting of four (4) compartments, each holding ~~one hundred~~ **twenty-five (40025)** tons **per compartment**, for a total aggregate holding capacity of ~~four two~~ **two hundred (4200)** tons;

D.1.8 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

The Permittee shall perform PM, ~~and~~ PM10, **and PM2.5** stack testing for the dryer/mixer utilizing methods as approved by the Commissioner to demonstrate compliance with Conditions D.1.1(b), D.1.2, ~~and~~ D.1.3(b), **and D.1.3(c)** at least once every five (5) years from the date of the most recent 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.1.9 Particulate Control

(a) In order to comply with Conditions D.1.1(b), D.1.2, ~~and~~ D.1.3(b), **and D.1.3(c)**, the baghouse with knockout box for the dryer/mixer shall be in operation and control emissions from the dryer/mixer at all times when the dryer/mixer is in operation.

D.1.10 Multiple Fuel Usage Limitation

(a) In order to comply with Condition D.1.4(e) when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner and all other combustion equipment, the Permittee shall limit fuel usage in the dryer/mixer burner and all other combustion equipment according to the following formulas:

(1) Nitrogen oxide emission calculation

$$N = \frac{G(E_G) + O(E_O) + R(E_R) + U(E_U)}{2,000 \text{ lbs/ton}}$$

where:

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

Emission Factors for Nitrogen Oxide

E_G = one hundred (100) pounds/ one (1) million cubic feet of natural gas

(2) Sulfur dioxide emission calculation

$$S = \frac{G(E_G) + O(E_O) + R(E_R) + U(E_U)}{2,000 \text{ lbs/ton}}$$

where:

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

Emission Factors for Sulfur dioxide

E_G = six tenths (0.60) pounds/ one (1) million cubic feet of natural gas

D.1.189 Reporting Requirements

A quarterly summary of the information to document compliance status with Conditions D.1.1, D.1.3(a), ~~D.1.3(b), D.1.3(c),~~ D.1.4(~~bd~~), D.1.4(~~ce~~), **and D.1.6(a)** ~~and D.1.10~~ shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this

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

...

E.1.2 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.1.1. These tests shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

...

OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
Multiple Fuel Quarterly Report

...

Limit: Nitrogen oxides (NO_x) emissions shall be less than one hundred (100) tons per twelve (12) consecutive month period based on the following equation:

$$N = \frac{G(E_G) + O(E_O) + R(E_R) + U(E_U)}{2,000 \text{ lbs/ton}}$$

where:

...

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

...

Emission Factors for Nitrogen Oxide

...

E_G = one hundred (100) pounds/ one (1) million cubic feet of natural gas

...

Limit: Sulfur dioxide (SO₂) emissions shall be less than one hundred (100) tons per twelve (12) consecutive month period based on the following equation:

$$S = \frac{G(E_G) + O(E_O) + R(E_R) + U(E_U)}{2,000 \text{ lbs/ton}}$$

where:

...

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

...

Emission Factors for Sulfur dioxide

...

E_G = six tenths (0.60) pounds/ one (1) million cubic feet of natural gas

...

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 May 16, 2011.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Minor Revision No. 053-30554-05360. The staff recommends to the Commissioner that this FESOP Minor Revision be approved.

IDEM Contact

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

**Appendix A: Unlimited Emissions Calculations
Shingle Storage Piles**

Company Name: Brooks Construction Company, Inc.
Source Address: 7600 E N00S, Marion, IN 46952
Permit Number: 053-30554-05360
Reviewer: Brian Williams

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

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

where E_f = emission factor (lb/acre/day)
 s = silt content (wt %)
 p =

125

 days of rain greater than or equal to 0.01 inches
 f =

15

 % of wind greater than or equal to 12 mph

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10/PM2.5 (tons/yr)
Ground Shingles	0.5	0.58	0.02	0.002	0.001
Totals				0.002	0.001

Methodology

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

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

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

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

Abbreviations

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

PM2.5 = PM10

PTE = Potential to Emit

**Appendix A Unlimited Emissions Calculations
Shingle Processing, Handling, Screening, and Conveying**

Company Name: Brooks Construction Company, Inc.
Source Address: 7600 E N00S, Marion, IN 46952
Permit Number: 053-30554-05360
Reviewer: Brian Williams

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

To estimate potential fugitive dust emissions from processing and handling of ground shingles (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 =	2,628,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	2,496,600	tons/yr
Percent Shingles in Aggregate Blend (weight %) =	5.0%	
Maximum Shingle Handling Throughput =	124,830	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 shingles into storage piles	0.14	0.07	0.01
Front-end loader dumping of shingles into feeder bins	0.14	0.07	0.01
Conveyor dropping shingles into dryer/mixer or batch tower	0.14	0.07	0.01
Total (tons/yr)	0.42	0.20	0.03

Methodology

The percent asphalt cement/binder and percent shingles provided by the source.

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

Maximum Shingle Handling Throughput (tons/yr) = [Maximum Material Handling Throughput (tons/yr)] * [Percent Shingles in Aggregate Blend (weight %)]

Unlimited Potential to Emit (tons/yr) = (Maximum Shingle Handling Throughput (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)

*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 ground shingle 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	1.56	0.54
Conveying	0.003	0.0011	0.19	0.07
Unlimited Potential to Emit (tons/yr) =			1.75	0.61

Methodology

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

Maximum Shingle Handling Throughput (tons/yr) = [Maximum Material Handling Throughput (tons/yr)] * [Percent Shingles in Aggregate Blend (weight %)]

Unlimited Potential to Emit (tons/yr) = (Maximum Shingle Handling Throughput (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)

Emission Factors from AP-42 Chapter 11.19.2 (dated 8/04), Table 11.19.2-2

**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: Unlimited Emissions Calculations
Unpaved Roads

Company Name: Brooks Construction Company, Inc.
Source Address: 7600 E N00S, Marion, IN 46952
Permit Number: 053-30554-05360
Reviewer: Brian Williams

Unpaved Roads at Industrial Site

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

Maximum Annual Asphalt Production	2,628,000	tons/yr
Percent Asphalt Cement/Binder (weight %)	5.0%	
Maximum Material Handling Throughput	2,496,600	tons/yr
Percent Shingles in Aggregate Blend (weight %)	5.0%	
Maximum Shingle Handling Throughput	124,830	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)
Shingle Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.4	5.6E+03	2.2E+05	500	0.095	527.7
Shingle Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	5.6E+03	9.5E+04	500	0.095	527.7
Shingle Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	3.0E+04	5.7E+05	500	0.095	2814.5
Shingle Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	3.0E+04	4.5E+05	500	0.095	2814.5
Total					7.1E+04	1.3E+06			6.7E+03

Average Vehicle Weight Per Trip = 18.9 tons/trip
Average Miles Per Trip = 0.095 miles/trip

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

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
W =	18.9	18.9	18.9	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

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

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

	PM	PM10	PM2.5	
Unmitigated Emission Factor, E_f	5.90	1.50	0.15	lb/mile
Mitigated Emission Factor, E_{ext}	3.88	0.99	0.10	lb/mile
Dust Control Efficiency	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Shingle Truck Enter Full	Dump truck (16 CY)	1.56	0.40	0.04	1.02	0.26	0.03	0.51	0.13	0.01
Shingle Truck Leave Empty	Dump truck (16 CY)	1.56	0.40	0.04	1.02	0.26	0.03	0.51	0.13	0.01
Shingle Loader Full	Front-end loader (3 CY)	8.30	2.12	0.21	5.46	1.39	0.14	2.73	0.70	0.07
Shingle Loader Empty	Front-end loader (3 CY)	8.30	2.12	0.21	5.46	1.39	0.14	2.73	0.70	0.07
Totals		19.72	5.03	0.50	12.97	3.30	0.33	6.48	1.65	0.17

Methodology

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

Abbreviations

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

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

Company Name: Brooks Construction Company, Inc.
Source Address: 7600 E N00S, Marion, IN 46952
Permit Number: 053-30554-05360
Reviewer: Brian Williams

Paved Roads at Industrial Site

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

Maximum Annual Asphalt Production =	2,628,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	2,496,600	tons/yr
Percent Shingles in Aggregate Blend (weight %) =	5.0%	
Maximum Shingle Handling Throughput =	124,830	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 miles (miles/yr)
Shingle Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.40	5.6E+03	2.2E+05	300	0.057	316.6
Shingle Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.00	5.6E+03	9.5E+04	300	0.057	316.6
Shingle Loader Full	Front-end loader (3 CY)	15.0	4.2	19.20	3.0E+04	5.7E+05	300	0.057	1688.7
Shingle Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	3.0E+04	4.5E+05	300	0.057	1688.7
Total					7.1E+04	1.3E+06			4.0E+03

Average Vehicle Weight Per Trip = 18.9 tons/trip
 Average Miles Per Trip = 0.057 miles/trip

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

	PM	PM10	PM2.5	
where k =	0.082	0.016	0.0024	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	18.9	18.9	18.9	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	0.00036	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)
sL =	0.6	0.6	0.6	g/m ² = Ubiquitous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months)

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

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

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.59	0.11	0.02	lb/mile
Mitigated Emission Factor, Eext =	0.54	0.10	0.02	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Shingle Truck Enter Full	Dump truck (16 CY)	0.09	0.02	0.00	0.09	0.02	0.00	0.04	0.01	0.00
Shingle Truck Leave Empty	Dump truck (16 CY)	0.09	0.02	0.00	0.09	0.02	0.00	0.04	0.01	0.00
Shingle Loader Full	Front-end loader (3 CY)	0.50	0.10	0.01	0.46	0.09	0.01	0.23	0.04	0.01
Shingle Loader Empty	Front-end loader (3 CY)	0.50	0.10	0.01	0.46	0.09	0.01	0.23	0.04	0.01
Totals		1.18	0.23	0.03	1.08	0.21	0.03	0.54	0.11	0.02

Methodology

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

Abbreviations

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

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

Company Name: Brooks Construction Company, Inc.
Source Address: 7600 E N00S, Marion, IN 46952
Permit Number: 053-30554-05360
Reviewer: Brian Williams

Asphalt Plant Limitations

Annual Asphalt Production Limitation =	1,500,000	ton/yr								
Natural Gas Limitation =	810.3	MMCF/yr								
No. 2 Fuel Oil Limitation =	2,530,000	gal/yr, and	0.50	% sulfur						
Refinery Blend Fuel Oil Limitation =	1,320,000	gal/yr, and	1.00	% sulfur						
Waste Oil Limitation =	750,000	gal/yr, and	1.00	% sulfur	0.65	% ash	0.400	% chlorine,	0.010	% lead
PM Dryer/Mixer Limitation =	0.150	lb/ton of asphlt production								
PM10 Dryer/Mixer Limitation =	0.050	lb/ton of asphlt production								
PM2.5 Dryer/Mixer Limitation =	0.050	lb/ton of asphlt production								
CO Dryer/Mixer Limitation =	0.130	lb/ton of asphlt production								
VOC Dryer/Mixer Limitation =	0.032	lb/ton of asphlt production								

Limited/Controlled Emissions

Process Description	Limited/Controlled Potential Emissions (tons/year)									
	Criteria Pollutants							Hazardous Air Pollutants		
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	HAPs	Maximum (Worst Case) HAP	
Ducted Emissions										
Fuel Combustion (worst case)	15.60	12.43	12.43	99.00	40.52	2.23	34.03	11.08	9.90	(hydrogen chloride)
Dryer/Mixer*	112.50	37.50	37.50	43.50	41.25	24.00	97.50	7.99	2.33	(formaldehyde)
Maximum (Worst Case) Emissions	112.50	37.50	37.50	99.00	41.25	24.00	97.50	11.08	9.90	(hydrogen chloride)
Fugitive Emissions										
Asphalt Load-Out, Silo Filling, On-Site Yard	0.83	0.83	0.83	0	0	12.85	2.16	0.21	0.07	(formaldehyde)
Hot Oil System	0	0	0	0	0	1.2E-03	0.06	1.3E-03	8.0E-04	(naphthalene)
Material Storage Piles	2.11	0.74	0.74	0	0	0	0	0	0	
Material Processing and Handling	4.85	2.29	0.35	0	0	0	0	0	0	
Material Screening and Conveying	19.95	6.98	6.98	0	0	0	0	0	0	
Paved and Unpaved Roads (worst case)	88.76	22.62	2.26	0	0	0	0	0	0	
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl.	0	negl.	negl.	
Total Fugitive Emissions	116.49	33.47	11.16	0	0	12.85	2.22	0.22	0.07	(formaldehyde)
Totals Limited/Controlled Emissions	228.99	70.97	48.66	99.00	41.25	36.85	99.72	11.30	9.90	(hydrogen chloride)

negl = negligible

*This source does not process blast furnace or steel slag.

Appendix A: Emissions Calculations
Limited Emissions
Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Brooks Construction Company, Inc.
Source Address: 7600 E N00S, Marion, IN 46952
Permit Number: 053-30554-05360
Reviewer: Brian Williams

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

Production and Fuel Limitations

Annual Asphalt Production Limitation =	1,500,000	ton/yr								
Natural Gas Limitation =	810.3	MMCF/yr								
No. 2 Fuel Oil Limitation =	2,530,000	gal/yr, and	0.50	% sulfur						
Refinery Blend Fuel Oil Limitation =	1,320,000	gal/yr, and	1.00	% sulfur						
Waste Oil Limitation =	750,000	gal/yr, and	1.00	% sulfur	0.65	% ash	0.40	% chlorine,	0.010	% lead

Limited Emissions

Criteria Pollutant	Emission Factor (units)				Limited Potential to Emit (tons/yr)					
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	Refinery Blend Fuel Oil * (lb/kgal)	Waste Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	Refinery Blend Fuel Oil (tons/yr)	Waste Oil (tons/yr)	Maximum (Worse Case) Fuel (tons/yr)	
PM	1.9	2.0	7	41.6	0.77	2.53	4.62	15.60	15.6	
PM10/PM2.5	7.6	3.3	8.3	33.15	3.08	4.17	5.48	12.43	12.43	
SO2	0.6	71.0	150.0	147.0	0.24	89.82	99.00	55.13	99.00	
NOx	100	20.0	20.0	19.0	40.52	25.30	13.20	7.13	40.52	
VOC	5.5	0.20	0.20	1.0	2.23	0.25	0.13	0.38	2.23	
CO	84	5.0	5.0	5.0	34.03	6.33	3.30	1.88	34.03	
Hazardous Air Pollutant										
HCl	0	0	0	26.4	0	0	0	9.90	9.90	
Antimony	0	0	5.25E-03	negl	0	0	3.47E-03	negl	3.5E-03	
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.1E-01	8.1E-05	7.08E-04	8.71E-04	4.13E-02	0.04	
Beryllium	1.2E-05	4.2E-04	2.78E-05	negl	4.9E-06	5.31E-04	1.83E-05	negl	5.3E-04	
Cadmium	1.1E-03	4.2E-04	3.98E-04	9.3E-03	4.5E-04	5.31E-04	2.63E-04	3.49E-03	3.5E-03	
Chromium	1.4E-03	4.2E-04	8.45E-04	2.0E-02	5.7E-04	5.31E-04	5.58E-04	7.50E-03	0.01	
Cobalt	8.4E-05	0	6.02E-03	2.1E-04	3.4E-05	0	3.97E-03	7.88E-05	4.0E-03	
Lead	5.0E-04	1.3E-03	1.51E-03	0.55	2.0E-04	1.59E-03	9.97E-04	2.1E-01	0.21	
Manganese	3.8E-04	8.4E-04	3.00E-03	6.8E-02	1.5E-04	1.06E-03	1.98E-03	2.55E-02	0.03	
Mercury	2.6E-04	4.2E-04	1.13E-04	0	1.1E-04	5.31E-04	7.46E-05	0	5.3E-04	
Nickel	2.1E-03	4.2E-04	8.45E-02	1.1E-02	8.5E-04	5.31E-04	5.58E-02	4.13E-03	0.06	
Selenium	2.4E-05	2.1E-03	6.83E-04	negl	9.7E-06	2.66E-03	4.51E-04	negl	2.7E-03	
1,1,1-Trichloroethane	0	0	2.36E-04	0	0	0	1.56E-04	0	1.6E-04	
1,3-Butadiene	0	0	0	0	0	0	0	0	0	
Acetaldehyde	0	0	0	0	0	0	0	0	0	
Acrolein	0	0	0	0	0	0	0	0	0	
Benzene	2.1E-03	0	2.14E-04	0	8.5E-04	0	1.41E-04	0	8.5E-04	
Bis(2-ethylhexyl)phthalate	0	0	0	2.2E-03	0	0	0	8.25E-04	8.3E-04	
Dichlorobenzene	1.2E-03	0	0	8.0E-07	4.9E-04	0	0	3.00E-07	4.9E-04	
Ethylbenzene	0	0	6.36E-05	0	0	0	4.20E-05	0	4.2E-05	
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	0	3.0E-02	7.72E-02	2.18E-02	0	0.08	
Hexane	1.8E+00	0	0	0	0.73	0	0	0	0.73	
Phenol	0	0	0	2.4E-03	0	0	0	9.00E-04	9.0E-04	
Toluene	3.4E-03	0	6.20E-03	0	1.4E-03	0	4.09E-03	0	4.1E-03	
Total PAH Haps	negl	0	1.13E-03	3.9E-02	negl	0	7.46E-04	1.47E-02	1.5E-02	
Polycyclic Organic Matter	0	3.30E-03	0	0	0	4.17E-03	0	0	4.2E-03	
Xylene	0	0	1.09E-04	0	0	0	7.19E-05	0	7.2E-05	
Total HAPs					0.76	0.09	0.10	10.20	11.08	(HCL)

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
 PM2.5 = Particulate Matter (< 2.5 um)

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.6, and Refinery Blend Fuel Oil: AP-42 Chapter 1.3 (dated 9/98), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11
 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

Notes

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

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

Company Name: Brooks Construction Company, Inc.
Source Address: 7600 E N00S, Marion, IN 46952
Permit Number: 053-30554-05360
Reviewer: Brian Williams

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

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.5	
Annual Asphalt Production Limitation =	1,500,000	tons/yr

Pollutant	Emission Factor (lb/ton asphalt)			Limited Potential to Emit (tons/yr)			
	Load-Out	Silo Filling	On-Site Yard	Load-Out	Silo Filling	On-Site Yard	Total
Total PM	5.2E-04	5.9E-04	NA	0.39	0.44	NA	0.83
Organic PM	3.4E-04	2.5E-04	NA	0.26	0.19	NA	0.45
TOC	0.004	0.012	0.001	3.12	9.14	0.83	13.1
CO	0.001	0.001	3.5E-04	1.01	0.88	0.26	2.16

PM/HAPs	0.018	0.022	0	0.040
VOC/HAPs	0.046	0.116	0.012	0.174
non-VOC/HAPs	2.4E-04	2.5E-05	6.4E-05	3.3E-04
non-VOC/non-HAPs	0.23	0.13	0.06	0.42

Total VOCs	2.93	9.14	0.8	12.8
Total HAPs	0.06	0.14	0.012	0.21
Worst Single HAP				0.067
				(formaldehyde)

Abbreviations

TOC = Total Organic Compounds

CO = Carbon Monoxide

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

Methodology

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

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

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

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

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

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

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

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

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

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

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

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

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

Notes

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

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

Company Name: Brooks Construction Company, Inc.
Source Address: 7600 E N00S, Marion, IN 46952
Permit Number: 053-30554-05360
Reviewer: Brian Williams

Organic Particulate-Based Compounds (Table 11.1-15)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Limited Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of Total Organic PM)	Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)	Load-out	Silo Filling	Onsite Yard	Total
PAH HAPs										
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	0.47%	6.6E-04	8.9E-04	NA	1.6E-03
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	7.2E-05	2.7E-05	NA	9.8E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	1.8E-04	2.5E-04	NA	4.3E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	4.9E-05	1.1E-04	NA	1.6E-04
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	1.9E-05	0	NA	1.9E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	5.6E-06	0	NA	5.6E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	4.9E-06	0	NA	4.9E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	5.9E-06	0	NA	5.9E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	2.0E-05	1.8E-05	NA	3.8E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	2.6E-04	4.0E-04	NA	6.6E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	9.5E-07	0	NA	9.5E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	1.3E-04	2.9E-04	NA	4.1E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	2.0E-03	1.9E-03	NA	3.9E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	1.2E-06	0	NA	1.2E-06
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	6.1E-03	1.0E-02	NA	0.016
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	3.2E-03	3.5E-03	NA	6.7E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	5.6E-05	5.7E-05	NA	1.1E-04
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	2.1E-03	3.4E-03	NA	5.5E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	3.8E-04	8.4E-04	NA	1.2E-03
Total PAH HAPs							0.015	0.022	NA	0.037
Other semi-volatile HAPs										
Phenol		PM/HAP	---	Organic PM	1.18%	0	3.0E-03	0	0	3.0E-03

Abbreviations

PM = Particulate Matter

HAP = Hazardous Air Pollutant

POM = Polycyclic Organic Matter

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

Notes

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

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

Organic Volatile-Based Compounds (Table 11.1-16)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Limited Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of TOC)	Silo Filling and Asphalt Storage Tank (% by weight of TOC)	Load-out	Silo Filling	Onsite Yard	Total
VOC		VOC	---	TOC	94%	100%	2.93	9.14	0.78	12.85
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	2.0E-01	2.4E-02	5.4E-02	0.280
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	1.4E-03	5.0E-03	3.8E-04	0.007
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	2.2E-02	1.0E-01	5.9E-03	0.129
Total non-VOC/non-HAPS					7.30%	1.40%	0.228	0.128	0.060	0.42
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	1.6E-03	2.9E-03	4.3E-04	5.0E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	3.0E-04	4.5E-04	7.9E-05	8.3E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	1.5E-03	3.6E-03	4.0E-04	5.5E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	4.1E-04	1.5E-03	1.1E-04	2.0E-03
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	6.6E-06	3.7E-04	1.7E-06	3.7E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	4.7E-04	2.1E-03	1.2E-04	2.7E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	3.4E-03	0	9.1E-04	4.3E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	8.7E-03	3.5E-03	2.3E-03	0.015
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	2.7E-03	6.3E-02	7.3E-04	0.067
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	4.7E-03	9.1E-03	1.2E-03	0.015
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	5.6E-05	2.8E-05	1.5E-05	9.9E-05
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	2.5E-05	0	2.5E-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%	2.3E-04	4.9E-04	6.0E-05	7.8E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	2.4E-04	0	6.4E-05	3.0E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	6.6E-03	5.7E-03	1.7E-03	0.014
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	4.1E-05	0	1.1E-05	5.1E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	1.3E-02	1.8E-02	3.4E-03	0.034
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	2.5E-03	5.2E-03	6.6E-04	8.4E-03
Total volatile organic HAPs					1.50%	1.30%	0.047	0.119	0.012	0.178

Abbreviations

TOC = Total Organic Compounds

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

MTBE = Methyl tert butyl ether

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

**Appendix A: Emissions Calculations
Unlimited Potential Fugitive Emissions
Hot Oil System**

Company Name: Brooks Construction Company, Inc.
Source Address: 7600 E N00S, Marion, IN 46952
Permit Number: 053-30554-05360
Reviewer: Brian Williams

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

Maximum Fuel Input Rate To Hot Oil Heater = 1.5 MMBtu/hr
 Equivalent Natural Gas Usage = 13.1 MMCF/yr
 Equivalent No. 2 Fuel Oil Usage = 93,857 gal/yr, and

Criteria Pollutant	Emission Factors		Unlimited/Uncontrolled Potential to Emit (tons/yr)		Maximum (Worse Case) PTE
	Natural Gas (lb/ft3)	No. 2* Fuel Oil (lb/gal)	Natural Gas	No. 2*, Refinery Blend and Waste Oil	
VOC	2.60E-08	2.65E-05	1.71E-04	0.001	0.001
CO	8.90E-06	0.0012	0.058	0.056	0.058
Hazardous Air Pollutant					
Formaldehyde:	2.60E-08	3.50E-06	1.71E-04	1.64E-04	1.71E-04
Acenaphthene		5.30E-07		2.49E-05	2.49E-05
Acenaphthylene		2.00E-07		9.39E-06	9.39E-06
Anthracene		1.80E-07		8.45E-06	8.45E-06
Benzo(b)fluoranthene		1.00E-07		4.69E-06	4.69E-06
Fluoranthene		4.40E-08		2.06E-06	2.06E-06
Fluorene		3.20E-08		1.50E-06	1.50E-06
Naphthalene		1.70E-05		7.98E-04	7.98E-04
Phenanthrene		4.90E-06		2.30E-04	2.30E-04
Pyrene		3.20E-08		1.50E-06	1.50E-06

Total HAPs 1.25E-03

Maximum (Worst) Single HAP 7.98E-04 (Naphthalene)

Abbreviations

CO = Carbon Monoxide

VOC = Volatile Organic Compound

Methodology

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

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

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

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

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

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

Notes

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

*Since there are no specific AP-42 HAP emission factors for Refinery Blend and Waste Oil, it was assumed that HAP emissions from Refinery Blend and Waste Oil were equal to HAP emissions from No. 2 fuel oil.

**Appendix A: Emissions Calculations
Potential Fugitive Emissions
Material Storage Piles**

Company Name: Brooks Construction Company, Inc.
Source Address: 7600 E N00S, Marion, IN 46952
Permit Number: 053-30554-05360
Reviewer: Brian Williams

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

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

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

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10/PM2.5 (tons/yr)
Limestone	1.6	1.85	1.80	0.608	0.213
Sand	2.6	3.01	1.80	0.989	0.346
RAP	0.5	0.58	1.80	0.190	0.067
Gravel	1.6	1.85	0.90	0.304	0.106
Ground Shingles	0.5	0.58	0.20	0.021	0.007
Totals				2.11	0.74

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)

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

Methodology

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

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

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

**Maximum pile size (acres) based on FESOP No. 039-17738-03325

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

Company Name: Brooks Construction Company, Inc.
Source Address: 7600 E N00S, Marion, IN 46952
Permit Number: 053-30554-05360
Reviewer: Brian Williams

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

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

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

where: E_f = Emission factor (lb/ton)

k (PM) =	0.74	= particle size multiplier (0.74 assumed for aerodynamic diameter \leq 100 μ m)
k (PM10) =	0.35	= particle size multiplier (0.35 assumed for aerodynamic diameter \leq 10 μ m)
k (PM2.5) =	0.053	= particle size multiplier (0.053 assumed for aerodynamic diameter \leq 2.5 μ m)
U =	10.2	= worst case annual mean wind speed (Source: NOAA, 2005*)
M =	4.0	= material % moisture content of aggregate (Source: AP-42 Section 11.1.1.1)
E_f (PM) =	2.27E-03	lb PM/ton of material handled
E_f (PM10) =	1.07E-03	lb PM10/ton of material handled
E_f (PM2.5) =	1.62E-04	lb PM2.5/ton of material handled

Annual Asphalt Production Limitation =	1,500,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	1,425,000	tons/yr

Type of Activity	Limited PTE of PM (tons/yr)	Limited PTE of PM10 (tons/yr)	Limited PTE of PM2.5
Truck unloading of materials into storage piles	1.62	0.76	0.12
Front-end loader dumping of materials into feeder bins	1.62	0.76	0.12
Conveyor dropping material into dryer/mixer or batch tower	1.62	0.76	0.12
Total (tons/yr)	4.85	2.29	0.35

Methodology

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

Limited Potential to Emit (tons/yr) = (Maximum Material Handling Throughput (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)

Raw materials may include limestone, sand, recycled asphalt pavement (RAP), gravel, slag, and other additives

*Worst case annual mean wind speed (South Bend, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2005

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)
Screening	0.025	0.0087	17.81	6.20
Conveying	0.003	0.0011	2.14	0.78
Limited Potential to Emit (tons/yr)			19.95	6.98

Abbreviations

PM = Particulate Matter PM10 = Particulate Matter (<10 μ m) PTE = Potential to Emit

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).

Appendix A: Emissions Calculations Limited Fugitive Emissions Unpaved Roads

Company Name: Brooks Construction Company, Inc.
Source Address: 7600 E N00S, Marion, IN 46952
Permit Number: 053-30554-05360
Reviewer: Brian Williams

Unpaved Roads at Industrial Site

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

Annual Asphalt Production Limitation =	1,500,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	1,425,000	tons/yr
Maximum Asphalt Cement/Binder Throughput =	75,000	tons/yr
No. 2 Fuel Oil Limitation =	2,530,000	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.4	6.4E+04	2.5E+06	500	0.095	6024.2
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	6.4E+04	1.1E+06	500	0.095	6024.2
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	2.1E+03	1.0E+05	500	0.095	197.3
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	2.1E+03	2.5E+04	500	0.095	197.3
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	2.7E+02	1.2E+04	500	0.095	25.3
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	2.7E+02	3.2E+03	500	0.095	25.3
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	3.4E+05	6.5E+06	500	0.095	32129.3
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	3.4E+05	5.1E+06	500	0.095	32129.3
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.0	6.3E+04	2.6E+06	500	0.095	5918.6
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.0	6.3E+04	1.1E+06	500	0.095	5918.6
Total						9.4E+05	1.9E+07		8.9E+04

Average Vehicle Weight Per Trip =	20.3	tons/trip
Average Miles Per Trip =	0.095	miles/trip

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

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 Plc)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
W =	20.3	20.3	20.3	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

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

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

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

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

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM10 (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)	18.36	4.68	0.47	12.07	3.08	0.31	6.04	1.54	0.15
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	18.36	4.68	0.47	12.07	3.08	0.31	6.04	1.54	0.15
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.601	0.153	0.02	0.395	0.101	0.01	0.198	0.050	0.01
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.601	0.153	0.02	0.395	0.101	0.01	0.198	0.050	0.01
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.077	0.020	0.00	0.051	0.013	0.00	0.025	0.006	0.00
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.077	0.020	0.00	0.051	0.013	0.00	0.025	0.006	0.00
Aggregate/RAP Loader Full	Front-end loader (3 CY)	97.91	24.95	2.50	64.38	16.41	1.64	32.19	8.20	0.82
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	97.91	24.95	2.50	64.38	16.41	1.64	32.19	8.20	0.82
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	18.04	4.60	0.46	11.86	3.02	0.30	5.93	1.51	0.15
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	18.04	4.60	0.46	11.86	3.02	0.30	5.93	1.51	0.15
Totals		269.96	68.80	6.88	177.51	45.24	4.52	88.76	22.62	2.26

Abbreviations

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

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)

**Appendix A: Emissions Calculations
Limited Fugitive Emissions
Paved Roads**

Company Name: Brooks Construction Company, Inc.
Source Address: 7600 E N00S, Marion, IN 46952
Permit Number: 053-30554-05360
Reviewer: Brian Williams

Paved Roads at Industrial Site

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

Annual Asphalt Production Limitation =	1,500,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	1,425,000	tons/yr
Maximum Asphalt Cement/Binder Throughput =	75,000	tons/yr
No. 2 Fuel Oil Limitation =	2,530,000	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per day (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.40	6.4E+04	2.5E+06	500	0.095	6024.2
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.00	6.4E+04	1.1E+06	500	0.095	6024.2
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.00	2.1E+03	1.0E+05	500	0.095	197.3
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	2.1E+03	2.5E+04	500	0.095	197.3
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.00	2.7E+02	1.2E+04	500	0.095	25.3
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	2.7E+02	3.2E+03	500	0.095	25.3
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.20	3.4E+05	6.5E+06	500	0.095	32129.3
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	3.4E+05	5.1E+06	500	0.095	32129.3
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	17.0	24.0	41.00	6.3E+04	2.6E+06	500	0.095	5918.6
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	17.0	0	17.00	6.3E+04	1.1E+06	500	0.095	5918.6
Total						9.4E+05	1.9E+07		8.9E+04

Average Vehicle Weight Per Trip =	20.3	tons/trip
Average Miles Per Trip =	0.095	miles/trip

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

	PM	PM10	PM2.5	
where k =	0.082	0.016	0.0024	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	20.3	20.3	20.3	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	0.00036	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-1)
sL =	0.6	0.6	0.6	g/m ² = Ubiquitous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for sum)

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

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

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

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	1.98	0.39	0.06	1.81	0.35	0.05	0.91	0.18	0.03
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	1.98	0.39	0.06	1.81	0.35	0.05	0.91	0.18	0.03
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.065	0.013	1.86E-03	0.059	0.012	1.71E-03	0.030	5.8E-03	8.53E-04
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.065	0.013	1.86E-03	0.059	0.012	1.71E-03	0.030	5.8E-03	8.53E-04
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	8.3E-03	1.6E-03	2.39E-04	7.6E-03	1.5E-03	2.19E-04	3.8E-03	7.4E-04	1.09E-04
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	8.3E-03	1.6E-03	2.39E-04	7.6E-03	1.5E-03	2.19E-04	3.8E-03	7.4E-04	1.09E-04
Aggregate/RAP Loader Full	Front-end loader (3 CY)	10.57	2.06	0.30	9.66	1.88	0.28	4.83	0.94	0.14
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	10.57	2.06	0.30	9.66	1.88	0.28	4.83	0.94	0.14
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	1.95	0.38	0.06	1.78	0.35	0.05	0.89	0.17	0.03
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	1.95	0.38	0.06	1.78	0.35	0.05	0.89	0.17	0.03
Totals		29.13	5.67	0.84	26.64	5.18	0.77	13.32	2.59	0.38

Methodology

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

Abbreviations

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



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

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

TO: John Brooks
Brooks Construction
6525 Ardmore Ave/PO Box 9560
Fort Wayne IN 46809

DATE: July 1, 2011

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

SUBJECT: Final Decision
FESOP
053-30554-05360

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:
Jim Helm, Bruce Carter Associates, Consultant
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

Mail Code 61-53

IDEM Staff	DPABST 7/1/2011 Brooks Construction 053-30554-05360 (final)		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

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		John Brooks Brooks Construction 6525 Ardmore Ave/PO Box 9560 Fort Wayne IN 46809 (Source CAATS) (CONFIRM DELIVERY)									
2		John Brooks Exec VP Brooks Construction 6525 Ardmore Ave/PO Box 9560 Fort Wayne IN 46809 (RO CAATS)									
3		Marion City Council and Mayors Office 301 S. Branson Street Marion IN 46952-4052 (Local Official)									
4		Grant County Commissioners 401 South Adams Marion IN 46953 (Local Official)									
5		Ms. Mary Shipley 10968 E 100 S Marion IN 46953 (Affected Party)									
6		Grant County Health Department 401 S. Adams St, Courthouse Complex Marion IN 46953-2031 (Health Department)									
7		Mr. Thomas Lee Clevenger 4005 South Franks Lane Selma IN 47383 (Affected Party)									
8		Mark Zeltwanger 26545 CR 52 Nappanee IN 46550 (Affected Party)									
9		Jim Heim Bruce Carter Associates 616 South 4th Street Elkhart IN 46516 (Consultant)									
10											
11											
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.
---	--	--	--