NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

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

for Brooks Construction Company Inc. in Allen County

Significant Permit Revision No.: 777-41254-05190

The Indiana Department of Environmental Management (IDEM) has received an application from Brooks Construction Company Inc., located at 5536 Hoagland Rd., Poe, Indiana 46745, for a significant revision of its FESOP issued on March 27, 2019. If approved by IDEM’s Office of Air Quality (OAQ), this proposed revision would allow Brooks Construction Company Inc. to make certain changes at its existing portable drum mix asphalt plant and portable concrete crusher. Brooks Construction Company Inc. has applied to construct and operate a new dryer/mixer, cold mix storage bins, and storage silo.

The applicant intends to construct and operate new equipment that will emit air pollutants; therefore, the permit contains new or different permit conditions. The potential to emit regulated air pollutants will continue to be limited to less than the Title V and PSD major threshold levels. IDEM has reviewed this application and has developed preliminary findings, consisting of a draft permit and several supporting documents, which would allow the applicant to make this change.

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

Allen County Public Library
900 Library Plaza
Fort Wayne IN 46802

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

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

How can you participate in this process?

The date that this notice is posted on IDEM’s website (https://www.in.gov/idem/5474.htm) marks the beginning of a 30-day public comment period. If the 30th day of the comment period falls on a day when IDEM offices are closed for business, all comments must be postmarked or delivered in person on the next business day that IDEM is open.

You may request that IDEM hold a public hearing about this draft permit. If adverse comments concerning the air pollution impact of this draft permit are received, with a request for a public hearing, IDEM will decide whether or not to hold a public hearing. IDEM could also decide to hold a public meeting instead of, or in addition to, a public hearing. If a public hearing or meeting is held, IDEM will make a separate announcement of the date, time, and location of that hearing or meeting. At a hearing, you would have an opportunity to submit written comments and make verbal comments. At a meeting, you would have an opportunity to submit written comments, ask questions, and discuss any air pollution concerns with IDEM staff.
Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEM’s mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEM at the address below. Please refer to permit number SPR 777-41254-05190 in all correspondence.

Comments should be sent to:

Brian Wright
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for Brian Wright or (317) 234-6544
Or dial directly: (317) 234-6544
Fax: (317) 232-6749 attn: Brian Wright
E-mail: Bwright1@idem.IN.gov

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

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

What will happen after IDEM makes a decision?

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

If you have any questions, please contact Brian Wright of my staff at the above address.

Madhurima Das
Madhurima D. Moulik, Ph.D., Section Chief
Permits Branch
Office of Air Quality
Mr. John Brooks  
Brooks Construction Company Inc.  
6525 Ardmore Ave.  
Fort Wayne, IN 46809  

Re: 777-41254-05190  
Significant Revision to  
F777-33971-05190

Dear Mr. Brooks:

Brooks Construction Company Inc. was issued a Federally Enforceable State Operating Permit (FESOP) No. F777-33971-05190, on June 8, 2014, for a portable drum mix asphalt plant and portable concrete crusher located at 5536 Hoagland Rd., Poe, Indiana 46745. On March 27, 2019, the Office of Air Quality (OAQ) received an application from the source requesting to construct and operate a new dryer/mixer, cold mix bins, and storage silo. Pursuant to the provisions of 326 IAC 2-8-11.1, these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-8-11.1(f). Pursuant to the provisions of 326 IAC 2-8-11.1, a Significant Permit Revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

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

(a) One (1) asphalt counterflow drum mixer/dryer capable of processing 400 tons per hour of raw material, approved in 2019 for construction, using blast furnace slag and steel slag in the aggregate mix, equipped with one (1) 134 million (MM) British thermal units (Btu) per hour No. 2 distillate fuel oil-fired burner, using refinery blend fuel oil or waste oil as a back-up fuel, with one (1) jet pulse baghouse for particulate matter (PM) control, exhausting at one (1) stack (ID No. S/V-1);

Under NSPS Subpart I, the hot mix asphalt facility and associated processes are considered an affected facility.

(b) Other categories with emissions below insignificant thresholds:

1. One (1) 12,500 gallon fuel oil storage tank (ID No. Tank 11);
2. One (1) 15,000 gallon waste fuel oil storage tank (ID No. Tank 12);
3. One (1) cold feed system consisting of eight (8) compartments;
4. One (1) asphalt mix storage silo with a total aggregate holding capacity of 300 tons;

The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this permit revision approval. Prior to any proposed change in construction which may affect
the potential to emit (PTE) of the proposed project, the change must be approved by the
Office of Air Quality (OAQ).

2. This approval to construct does not relieve the Permittee of the responsibility to comply
with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-
20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the
rules promulgated thereunder, as well as other applicable local, state, and federal
requirements.

Effective Date of the Permit

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

Commenced Construction

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

5. All requirements and conditions of this construction approval shall remain in effect unless
modified in a manner consistent with procedures established pursuant to 326 IAC 2.

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

All other conditions of the permit shall remain unchanged and in effect. Please find attached the
entire FESOP as revised. The permit references the below-listed attachment(s). Since these
attachments have been provided in previously issued approvals for this source, IDEM OAQ has not
included a copy of these attachments with this revision:

Attachment A: Fugitive Dust Control Plan
Attachment B: 40 CFR 63, Subpart I, Hot Mix Asphalt Facilities

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

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

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

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

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5.
If you have any questions regarding this matter, please contact Brian Wright, 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) 234-6544 or (800) 451-6027, and ask for Brian Wright or (317) 234-6544.

Sincerely,

Madhurima D. Moulik, Ph.D., Section Chief
Permits Branch
Office of Air Quality

Attachments: Revised permit and Technical Support Document.

cc: File - Allen County
Allen County Health Department
U.S. EPA, Region 5
Compliance and Enforcement Branch
New Source Review and Federally Enforceable State Operating Permit Renewal
OFFICE OF AIR QUALITY

Brooks Construction Company, Inc. Portable

(herin 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: F169-33971-05190 |
| Master Agency ID No. 103165 |
| Issued by: Original signed by: |
| Nathan C. Bell, Section Chief Permits Branch |
| Office of Air Quality |
| Issuance Date: July 8, 2014 |
| Expiration Date: July 8, 2024 |

Relocation No. 003-35758-05190, issued on May 15, 2015.

| Significant Permit Revision No. 003-41254-05190 |
| Issued by: |
| Madhurima D. Moulik, Ph.D., Section Chief Permits Branch |
| Office of Air Quality |
| Issuance Date: |
| Expiration Date: July 8, 2024 |
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SECTION A

SOURCE SUMMARY

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

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

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

<table>
<thead>
<tr>
<th>Current Source Address</th>
<th>5536 Hoagland Rd., Poe, Indiana 46745</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Source Phone Number</td>
<td>260-478-1990</td>
</tr>
<tr>
<td>SIC Code</td>
<td>2951 (Asphalt Paving Mixtures and Blocks)</td>
</tr>
<tr>
<td>County Location</td>
<td>Allen</td>
</tr>
<tr>
<td>Source Location Status</td>
<td>Attainment for all criteria pollutants</td>
</tr>
<tr>
<td>Source Status</td>
<td>Federally Enforceable State Operating Permit Program</td>
</tr>
<tr>
<td></td>
<td>Minor Source, under PSD and Emission Offset Rules</td>
</tr>
<tr>
<td></td>
<td>Minor Source, Section 112 of the Clean Air Act</td>
</tr>
<tr>
<td></td>
<td>Not 1 of 28 Source Categories</td>
</tr>
</tbody>
</table>

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

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

(a) One (1) asphalt counterflow drum mixer/dryer capable of processing 400 tons per hour of raw material, approved in 2019 for construction, using blast furnace slag, steel slag, and recycled asphalt shingles in the aggregate mix, equipped with one (1) 134 million (MM) British thermal units (Btu) per hour No. 2 distillate fuel oil-fired burner, using refinery blend fuel oil or waste oil as a back-up fuel, with one (1) jet pulse baghouse for particulate matter (PM) control, exhausting at one (1) stack (ID No. S/V-1); Under NSPS Subpart I, the hot mix asphalt facility and associated processes are considered an affected facility.

(b) One (1) 30,000 gallon liquid asphalt storage tank (ID No. Tank 10), constructed in 1989.

(c) Paved and unpaved roads

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

This portable source also includes the following insignificant activities:

(a) Fuel oil-fired combustion sources with heat input equal to or less than two (2) million Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight including:

(1) One (1) hot oil heater, with a maximum rated capacity of 0.7 MMBtu per hour, exhausting through one (1) stack (ID No. S/V-2).

(b) Combustion source flame safety purging on startup.

(c) A petroleum fuel other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
(d) Other categories with emissions below insignificant thresholds:

(1) Cutting, welding, and grinding operations for repair and maintenance only;
(2) One (1) 12,500 gallon fuel oil storage tank (ID No. Tank 11);
(3) One (1) 15,000 gallon waste fuel oil storage tank (ID No. Tank 12);
(4) One (1) drag slat conveyor;
(5) One (1) cold feed system consisting of eight (8) compartments;
(6) Two (2) hot mix storage silo with a total maximum storage capacity of 300 tons; and
(7) Two (2) recycled asphalt pavement (RAP) feed bins with a maximum holding capacity of 25 tons each.

(e) One (1) portable diesel-fired generator, approved for construction in 2014, with a maximum output of 750 kw.

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

Under NSPS Subpart I, the hot mix asphalt facility and associated processes are considered an affected facility.

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, F169-33971-05190, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

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

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

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

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

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

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

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

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U.S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

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

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

(1) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and
(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

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

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

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

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-8-4(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

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

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

IDEM, OAQ may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.
B.11 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)]

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

1. Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

2. A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

3. Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

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

1. Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

2. A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

3. Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

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

The Permittee shall implement the PMPs.

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

The Permittee shall implement the PMPs.

(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 within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;
   Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
   Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
   Facsimile Number: 317-233-6865
5. For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:
   Indiana Department of Environmental Management
   Compliance and Enforcement Branch, Office of Air Quality
   100 North Senate Avenue
   MC 61-53 IGCN 1003
   Indianapolis, Indiana 46204-2251
   within two (2) working days of the time when emission limitations were exceeded due to the emergency.
   The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:
   (A) A description of the emergency;
   (B) Any steps taken to mitigate the emissions; and
   (C) Corrective actions taken.
   The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
   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 F169-33971-05190 and issued pursuant to permitting programs approved into the state implementation plan have been either:

   1. incorporated as originally stated,

   2. revised, or

   3. deleted.

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

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

The Permittee’s right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source’s existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.
B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination
[326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.16 Permit Renewal [326 IAC 2-8-3(h)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(42). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

(b) A timely renewal application is one that is:

(1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
If the Permittee submits a timely and complete application for renewal of this permit, the source’s failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

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

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

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

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

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

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

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

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any approval required by 326 IAC 2-8-11.1 has been obtained;

(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

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

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590
in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee’s copy of this permit; and

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

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

(b) Emission Trades [326 IAC 2-8-15(b)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(b).

(c) Alternative Operating Scenarios [326 IAC 2-8-15(c)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.

(d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.19 Source Modification Requirement [326 IAC 2-8-11.1]
A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]
Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee’s right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

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

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.
B.21 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

(a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

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

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

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

(a) The Permittee shall pay annual fees to IDEM, OAQ no later than thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Failure to pay may result in administrative enforcement action or revocation of this permit.

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

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

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

Entire Source

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

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

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

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

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

(a) Pursuant to 326 IAC 2-8:

(1) The potential to emit any regulated pollutant, except particulate matter (PM) and greenhouse gases (GHGs), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

(2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and

(3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(4) The potential to emit greenhouse gases (GHGs) from the entire source shall be limited to less than one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per twelve (12) consecutive month period.

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

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

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

C.3 Opacity  [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
(b) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4, when located in any of the following areas:

1. Clark County, Jeffersonville Township.
2. Dearborn County, Lawrenceburg Township.
3. Dubois County, Bainbridge Township.
4. Lake County, an area bounded on the north by Lake Michigan, on the west by the Indiana-Illinois state line, on the south by U.S. 30 from the state line to the intersection of I-65 to the intersection of I-94 then following I-94 to the Lake-Porter county line, and on the east by the Lake-Porter county line.
5. Marion County, except the area of Washington Township east of Fall Creek and the area of Franklin Township south of Thompson Road and east of Five Points Road.
6. St. Joseph County, the area north of Kern Road and east of Pine Road.
7. Vanderburgh County, the area included in the city of Evansville and Pigeon Township.
8. Vigo County, the area within a five-tenths (0.5) kilometer radius circle centered at UTM Coordinates Zone 16 East four hundred sixty-four and fifty-two hundredths (464.52) kilometers North four thousand three hundred sixty-nine and twenty-one hundredths (4,369.21) kilometers.

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

C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]
The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]
The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

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

C.7 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]
Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the attached plan as in Attachment A.

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]
(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work
or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

   (A) Asbestos removal or demolition start date;

   (B) Removal or demolition contractor; or

   (C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

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

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

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

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

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

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

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

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

(a) For new units:
Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units shall be implemented on and after the date of initial start-up.

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

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

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

The notification which shall be submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
C.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]

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

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

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

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

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

(a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERPs) consistent with safe operating procedures.

(b) Upon direct notification by IDEM, OAQ that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate episode level. [326 IAC 1-5-3]

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

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

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

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

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

   (1) initial inspection and evaluation;

   (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

   (3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

   (1) monitoring results;

   (2) review of operation and maintenance procedures and records; and/or
(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

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

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

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

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

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

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following, where applicable:

(AA) All calibration and maintenance records.

(BB) All original strip chart recordings for continuous monitoring instrumentation.

(CC) Copies of all reports required by the FESOP.

Records of required monitoring information include the following, where applicable:

(AA) The date, place, as defined in this permit, and time of sampling or measurements.

(BB) The dates analyses were performed.

(CC) The company or entity that performed the analyses.

(DD) The analytical techniques or methods used.

(EE) The results of such analyses.

(FF) The operating conditions as existing at the time of sampling or measurement.

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

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.
C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B - Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an “authorized individual” as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

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

(c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

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

Portable Source Requirement

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

(a) This permit is approved for operation in all areas of Indiana, except Lake County, LaPorte County, and Porter County, because of the additional requirements for these specific counties. This determination is based on the requirements of Prevention of Significant Deterioration in 326 IAC 2-2 and Emission Offset in 326 IAC 2-3.

(b) A request to relocate shall be submitted to IDEM, OAQ at least thirty (30) days prior to the intended date of relocation. This submittal shall include the following:

(1) A list of governmental officials entitled to receive notice of application to relocate. IC 13-15-3-1

(2) A list of adjacent landowners that the Permittee will send written notice to not more than ten (10) days after submission of the request to relocate. IC 13-15-8

(3) The new location address of the portable source.

(4) Whether or not this portable source will be relocated to another source.

(5) If relocating to another source:

(A) Name, location address, and permit number of the source this portable source is relocating to.
(B) Whether or not the sources will be considered as one source. See Non Rule Policy (NRP) Air-005 and Air-006.

(6) If the sources will be considered as one source, whether or not the source to be relocated to has received the necessary approvals from IDEM to allow the relocation.

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

(c) A "Relocation Site Approval" letter shall be obtained prior to relocating.

(d) A valid operation permit consists of this document and any subsequent "Relocation Site Approval" letter specifying the current location of the portable plant.

**Stratospheric Ozone Protection**

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

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with applicable standards for recycling and emissions reduction.
### SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

<table>
<thead>
<tr>
<th>Emissions Unit Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) One (1) asphalt counterflow drum mixer/dryer capable of processing 400 tons per hour of raw material, approved in 2019 for construction, using blast furnace slag, steel slag, and recycled asphalt shingles in the aggregate mix, equipped with one (1) 134 million (MM) British thermal units (Btu) per hour No. 2 distillate fuel oil-fired burner, using refinery blend fuel oil or waste oil as a back-up fuel, with one (1) jet pulse baghouse for particulate matter (PM) control, exhausting at one (1) stack (ID No. S/V-1);</td>
</tr>
<tr>
<td>Under NSPS Subpart I, the hot mix asphalt facility and associated processes are considered an affected facility.</td>
</tr>
<tr>
<td>(b) One (1) 30,000 gallon liquid asphalt storage tank (ID No. Tank 10), constructed in 1989.</td>
</tr>
<tr>
<td>(c) Paved and unpaved roads</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insignificant Activities:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Fuel oil-fired combustion sources with heat input equal to or less than two (2) million Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight including:</td>
</tr>
<tr>
<td>(1) One (1) hot oil heater, with a maximum rated capacity of 0.7 MMBtu per hour, exhausting through one (1) stack (ID No. S/V-2).</td>
</tr>
<tr>
<td>(b) Combustion source flame safety purging on startup.</td>
</tr>
<tr>
<td>(c) A petroleum fuel other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.</td>
</tr>
<tr>
<td>(d) Other categories with emissions below insignificant thresholds:</td>
</tr>
<tr>
<td>(1) Cutting, welding, and grinding operations for repair and maintenance only;</td>
</tr>
<tr>
<td>(2) One (1) 12,500 gallon fuel oil storage tank (ID No. Tank 11);</td>
</tr>
<tr>
<td>(3) One (1) 15,000 gallon waste fuel oil storage tank (ID No. Tank 12);</td>
</tr>
<tr>
<td>(4) One (1) drag slat conveyor;</td>
</tr>
<tr>
<td>(5) One (1) cold feed system consisting of eight (8) compartments;</td>
</tr>
<tr>
<td>(6) Two (2) hot mix storage silo with a total maximum storage capacity of 300 tons; and</td>
</tr>
<tr>
<td>(7) Two (2) recycled asphalt pavement (RAP) feed bins with a maximum holding capacity of 25 tons each.</td>
</tr>
</tbody>
</table>

Under NSPS Subpart I, the hot mix asphalt facility and associated processes are considered an affected facility.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)
Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 PSD Minor Limit [326 IAC 2-2]

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

(a) The amount of hot-mix asphalt processed shall not exceed 1,475,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) PM emissions from the dryer/mixer shall not exceed 0.215 pounds per ton of asphalt processed.

(c) The amount of concrete processed shall not exceed 50,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) PM emissions from the concrete crusher shall not exceed 0.0054 pounds per ton of concrete processed.

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

D.1.2 PM10, PM2.5, VOC, and CO Limitations [326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-3]

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), 326 IAC 2-3 (Emission Offset) not applicable, the Permittee shall comply with the following:

(a) The amount of hot-mix asphalt processed shall not exceed 1,475,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The PM10 emissions from the dryer/mixer shall not exceed 0.096 pounds per ton of asphalt processed.

(c) The PM2.5 emissions from the dryer/mixer shall not exceed 0.116 pounds per ton of asphalt processed.

(d) The amount of concrete processed shall not exceed 50,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(e) The PM10 emissions from the concrete crusher shall not exceed 0.0024 pounds per ton of concrete processed.

(f) The PM2.5 emissions from the concrete crusher shall not exceed 0.0024 pounds per ton of concrete processed.

(g) The CO emissions from the dryer/mixer shall not exceed 0.130 pounds per ton of asphalt processed.

(h) The VOC emissions from the dryer/mixer shall not exceed 0.032 pounds per ton of asphalt processed.

Compliance with these limits, combined with the potential to emit PM10, PM2.5, VOC, and CO from all other emission units at this source, shall limit the source-wide total potential to emit of PM10, PM2.5, VOC, and CO to less than 100 tons per 12 consecutive month period, each, potential to emit of Total HAP to less than 25 tons per 12 consecutive month period, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-3 (Emission Offset) not applicable.
D.1.3 FESOP Limits: SO2 and HAPs [326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-4.1]
Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), 326 IAC 2-3 (Emission Offset), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAPs)) not applicable, the Permittee shall comply with the following:

(a) Slag and Fuel Specifications

(1) The sulfur content of the No. 2 distillate fuel oil combusted in the dryer burner shall not exceed 0.50% by weight.

(2) The sulfur content of the No. 4 distillate fuel oil combusted in the dryer burner shall not exceed 1.00% by weight.

(3) The sulfur content of the waste oil combusted in the dryer burner shall not exceed 1.00% by weight.

(4) The chlorine of the waste oil combusted in the dryer burner shall not exceed 0.40% by weight.

(5) HCl emissions from the dryer/mixer shall not exceed 26.4 pounds of HCl per 1,000 gallons of waste oil burned.

(6) The sulfur content of the blast furnace slag shall not exceed 1.50% by weight.

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

(8) SO2 emissions from the dryer/mixer shall not exceed 0.74 pounds per ton of blast furnace slag processed in the aggregate mix.

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

(b) Single Fuel and Slag Usage Limitations:

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

(A) No. 2 fuel oil usage shall not exceed 1,361,341 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(B) No. 4 fuel oil usage shall not exceed 644,368 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(C) Waste oil usage shall not exceed 657,518 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;

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

(2) Blast furnace slag usage shall not exceed 132,750 tons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(3) Steel slag usage shall not exceed 132,750 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
Multiple Fuel and Slag Usage Limitations:
When combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, in conjunction with the use of slag in the aggregate mix, emissions from the dryer/mixer shall be limited as follows:

1. SO₂ emissions shall not exceed 97.45 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

2. NOₓ emissions from the dryer/mixer shall not exceed 40.56 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

3. HCl emissions shall not exceed 8.68 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

Compliance with these limits, combined with the potential to emit SO₂, NOₓ, and HAPs from all other emission units at this source, shall limit the source-wide total potential to emit of SO₂ and NOₓ to less than 100 tons per twelve (12) consecutive month period, each, any single HAP to less than ten (10) tons per twelve (12) consecutive month period, and total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), 326 IAC 2-3 (Emission Offset), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable.

D.1.4 Particulate Emission Limits [326 IAC 6-2]
Pursuant to 326 IAC 6-2-4, the particulate emissions from the hot oil heater, shall not exceed six tenths (0.6) pounds of particulate matter per MMBtu heat input.

D.1.5 Particulate Matter (PM) [326 IAC 6.5-1-2]

(a) Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the drum dryer/mixer shall be limited to 0.03 grains per dry standard cubic foot (gr/dscf) for particulate matter, when located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.

(b) Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the concrete crusher operation shall be limited to 0.03 grains per dry standard cubic foot (gr/dscf) for particulate matter, when located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.

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

D.1.6 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), the Permittee shall comply with the following:
(1) The sulfur dioxide (SO2) emissions from the dryer/mixer burner shall not exceed five tenths (0.5) pounds per MMBtu when using distillate oil.

(2) The sulfur dioxide (SO2) emissions from the dryer/mixer burner shall not exceed one and six tenths (1.6) pounds per MMBtu heat input when using residual oil.

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

(b) Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

D.1.7 New Facilities; General Reduction Requirements [326 IAC 8-1-6]

In order to render the requirements of 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) not applicable, the Permittee shall comply with the following:

(a) The amount of hot-mix asphalt processed shall not exceed 1,475,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The VOC emissions from the dryer/mixer shall not exceed 0.032 pounds per ton of asphalt processed.

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

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

A Preventive Maintenance Plan is required for these facilities and any 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.1.9 Particulate Control (PM/PM10/PM2.5)

(a) In order to comply with Conditions D.1.1(b), D.1.2(b), D.1.2(c), and D.1.5 the baghouse for particulate control shall be in operation and control emissions from the dryer/mixer at all times when the dryer/mixer is in operation.

(b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.1.10 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11][326 IAC 6.5-1-2(a)] [40 CFR 60, Subpart I]

In order to demonstrate compliance with Conditions D.1.1(b), D.1.2(b), and D.1.2(c), the Permittee shall perform PM, PM10, and PM2.5 testing of the jet-pulse baghouse, controlling particulate emissions from dryer/mixer, within five (5) years of the most recent valid compliance demonstration. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable particulate matter.
D.1.11 Sulfur Dioxide (SO₂) Emissions and Sulfur Content

(a) Compliance with the fuel limitations established in Conditions D.1.3(a)(1) through D.1.3(a)(3), and D.1.6, shall be determined utilizing one of the following options. Pursuant to 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements), compliance shall be demonstrated on a thirty (30) day calendar-month average.

(1) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or

(2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.

(3) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

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

D.1.12 Hydrogen Chloride (HCl) Emissions

The Permittee shall demonstrate compliance with the waste oil chlorine content limits established in Conditions D.1.3(a)(4) and D.1.3(a)(5), by providing a vendor analysis of each fuel delivery accompanied by a vendor certification.

D.1.13 Multiple Fuel and Slag Usage Limitations

(a) In order to comply with the Condition D.1.3(c)(1) when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner in conjunction with the use of slag in the aggregate mix, the Permittee shall determine sulfur dioxide (SO₂) emissions according to the following formula:

Sulfur Dioxide (SO₂) Emission Calculation

\[ S = \frac{O(E_O) + F(E_F) + W(E_W) + B(E_B) + T(E_T)}{2,000 \text{ lbs/ton}} \]

where:

- \( S \) = tons of sulfur dioxide emissions for a 12-month consecutive period
- \( O \) = gallons of No. 2 fuel oil used in the last 12 months
- \( F \) = gallons of No. 4 fuel oil used in the last 12 months
- \( W \) = gallons of waste oil used in the last 12 months
- \( B \) = tons of blast furnace slag used in the last 12 months
- \( T \) = tons of steel slag used in the last 12 months
- \( E_O \) = 0.071 lb SO₂/gallon of No. 2 fuel oil
- \( E_F \) = 0.150 lb SO₂/gallon of No. 4 fuel oil
- \( E_W \) = 0.147 lb SO₂/gallon of waste oil
- \( E_B \) = 0.74 lb/ton of blast furnace slag used
- \( E_T \) = 0.0014 lb/ton of steel slag used

(b) In order to comply with the Condition D.1.3(c)(2) when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, the Permittee shall determine nitrogen oxide (NOx) emissions according to the following formula:
N = O(E_O) + F(E_F) + W(E_W)  
where:
N = tons of nitrogen oxide emissions for twelve (12) month consecutive period  
O = gallons of No. 2 fuel oil used in the last 12 months  
F = gallons of No. 4 fuel oil used in the last 12 months  
W = gallons of waste oil used in the last 12 months  
E_O = 0.024 lb/gallon of No. 2 fuel oil  
E_F = 0.047 lb/gallon of No. 4 fuel oil  
E_W = 0.019 lb/gallon of waste oil

(c) In order to comply with the Condition D.1.3(c)(3) when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, the Permittee shall according to the following formulas:

HCl Emission Calculation

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

where:
HCl = tons of hydrogen chloride emissions for twelve (12) month consecutive period  
W = gallons of waste oil used in the last 12 months  
E_W = 0.0264 lb HCl/gallon of waste oil

D.1.14 Shingle Asbestos Content

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

(1) Providing shingle supplier certification that the factory second shingles do not contain asbestos; or

(2) Analyzing a sample of the factory second 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.

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

D.1.15 Visible Emissions Notations

(a) Visible emission notations from the conveyors, screens, material transfer points, concrete crusher, and dryer/mixer stack exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

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

D.1.16 Parametric Monitoring

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 of the normal range, the Permittee shall take a reasonable response. The normal range for this unit is a pressure drop between two (2.0) and eight (8.0) inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test. Section C - Response to Excursions 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.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated or replaced at least once every six (6) months, or other time period specified by the manufacturer. The Permittee shall maintain records of the manufacturer specifications, if used.

D.1.17 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

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

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

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

D.1.18 Record Keeping Requirements

(a) To document the compliance status with Conditions D.1.1(a), D.1.2(a), and D.1.7(a), the Permittee shall keep records of the amount of asphalt processed through the dryer/mixer each month and each compliance period.

(d) To document the compliance status with Conditions D.1.3, D.1.6, D.1.11, D.1.12, D.1.13, and D.1.14, the Permittee shall maintain records in accordance with (1) through (7) below. Records maintained for (1) through (7) below shall be taken monthly and shall be
complete and sufficient to establish compliance with the limits established in Conditions D.1.3, D.1.6, D.1.11, D.1.12, D.1.13, and D.1.14.

(1) Calendar dates covered in the compliance determination period;

(2) Actual fuel usage, sulfur content, heat content, and equivalent sulfur dioxide and nitrogen oxide emission rates for each fuel used at the source since the last compliance determination period;

(3) Actual waste oil usage and chlorine content, and equivalent hydrogen chloride emission rate for waste oil used at the source since the last compliance determination period;

(4) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

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

  (i) Fuel supplier certifications;

  (ii) The name of the fuel supplier; and

  (iii) A statement from the fuel supplier that certifies the sulfur content of the No. 2 fuel oil, No. 4 fuel oil, refinery blend fuel oil, and waste oil, and the chlorine content of waste oil.

(6) 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

(7) If the shingle supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

  (A) Shingle supplier certifications;

  (B) The name of the shingle supplier(s); and

  (C) A statement from the shingle supplier(s) that certifies the asbestos content of the shingles from their company.

(e) To document the compliance status with Conditions D.1.1(c) and D.1.2(d) the Permittee shall keep records of the amount of concrete processed through the concrete crusher each month and each compliance period.

(f) To document the compliance status with Condition D.1.15, the Permittee shall maintain records of visible emission notations of the dryer/mixer stack exhaust once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

(g) To document the compliance status with Condition D.1.16, the Permittee shall maintain records once per day of the pressure drop during normal operation. The Permittee shall include in its daily record when the pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g., the process did not operate that day).

(h) Pursuant to 326 IAC 8-9, the Permittee shall maintain a record and submit to the department a report containing the following information for Tank 11.
(1) The vessel identification number.

(2) The vessel dimensions.

(3) The vessel capacity.

(4) A description of the emission control equipment for each vessel described in 326 IAC 8-9-4(a) and 326 IAC 8-9-4(b), or a schedule for installation of emission control equipment on vessels described in 326 IAC 8-9-4(a) or 326 IAC 8-9-4(b) with a certification that the emission control equipment meets the applicable standards.

These records shall be maintained for the life of the vessel.

(i) 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

Quarterly summaries of the information to document compliance status with Conditions D.1.1(a), D.1.1(c), D.1.2(a), D.1.2(d), D.1.3, D.1.7(a), D.1.13, shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The reports submitted by the Permittee do require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) asphalt counterflow drum mixer/dryer capable of processing 400 tons per hour of raw material, approved in 2019 for construction, using blast furnace slag, steel slag, and recycled asphalt shingles in the aggregate mix, equipped with one (1) 134 million (MM) British thermal units (Btu) per hour No. 2 distillate fuel oil-fired burner, using refinery blend fuel oil or waste oil as a back-up fuel, with one (1) jet pulse baghouse for particulate matter (PM) control, exhausting at one (1) stack (ID No. S/V-1);

Under NSPS Subpart I, the hot mix asphalt facility and associated processes are considered an affected facility.

(b) One (1) 30,000 gallon liquid asphalt storage tank (ID No. Tank 10), constructed in 1989.

Insignificant Activities:

(a) Fuel oil-fired combustion sources with heat input equal to or less than two (2) million Btu per hour and firing fuel containing less than five-tenths (0.5) percent sulfur by weight including:

(1) One (1) hot oil heater, with a maximum rated capacity of 0.7 MMBtu per hour, exhausting through one (1) stack (ID No. S/V-2).

(d) Other categories with emissions below insignificant thresholds:

(5) One (1) cold feed system consisting of eight (8) compartments;

(6) Two (2) hot mix storage silo with a total maximum storage capacity of 300 tons; and

(7) Two (2) recycled asphalt pavement (RAP) feed bins with a maximum holding capacity of 25 tons each.

Under NSPS Subpart I, the hot mix asphalt facility and associated processes are considered an affected facility.

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

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

E.1.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

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

(b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
E.1.2 New Source Performance Standards (NSPS) for Hot-mix Asphalt Facilities [40 CFR Part 60, Subpart I] [326 IAC 12]

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

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

E.1.3 Testing Requirements [40 CFR Part 60, Subpart I][326 IAC 12][326 IAC 2-8.5(a)(1), (4)][326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition E.1.2, the Permittee shall perform stack testing as required under NSPS 40 CFR 60, Subpart I, within five (5) years of the most recent valid compliance demonstration, or at such other times specified by 40 CFR 60.8, utilizing methods as approved by the Commissioner. 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
COMPLIANCE AND ENFORCEMENT BRANCH

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION

Source Name: Brooks Construction Company, Inc.
Current Source Address: 5536 Hoagland Rd., Poe, Indiana 46745
FESOP Permit No.: F169-33971-05190

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: ____________________________
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)

EMERGENCY OCCURRENCE REPORT

Source Name: Brooks Construction Company, Inc.
Current Source Address: 5536 Hoagland Rd., Poe, Indiana 46745
FESOP Permit No.: F169-33971-05190

This form consists of 2 pages

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

☐ This is an emergency as defined in 326 IAC 2-7-1(12)
   - The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours
     (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
     - The Permittee must submit notice in writing or by facsimile within two (2) working days
       (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16
<table>
<thead>
<tr>
<th>Date/Time Emergency started:</th>
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</thead>
<tbody>
<tr>
<td>Date/Time Emergency was corrected:</td>
</tr>
<tr>
<td>Was the facility being properly operated at the time of the emergency? <strong>Y</strong> <strong>N</strong></td>
</tr>
<tr>
<td>Describe:</td>
</tr>
<tr>
<td>Type of Pollutants Emitted: TSP, PM-10, SO₂, VOC, NOₓ, CO, Pb, other:</td>
</tr>
<tr>
<td>Estimated amount of pollutant(s) emitted during emergency:</td>
</tr>
<tr>
<td>Describe the steps taken to mitigate the problem:</td>
</tr>
<tr>
<td>Describe the corrective actions/response steps taken:</td>
</tr>
<tr>
<td>Describe the measures taken to minimize emissions:</td>
</tr>
<tr>
<td>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:</td>
</tr>
</tbody>
</table>

Form Completed by: ____________________________
Title / Position: ____________________________
Date: ______________________________________
Phone: ____________________________
## FESOP Quarterly Report

Source Name: Brooks Construction Company, Inc.
Current Source Address: 5536 Hoagland Rd., Poe, Indiana 46745
FESOP Permit No.: F169-33971-05190
Facility: Asphalt Drum Mixer/Dryer
Parameter: Hot Mix Asphalt Production
Limit: The amount of hot-mix asphalt processed shall not exceed 1,475,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

<table>
<thead>
<tr>
<th>QUARTER:</th>
<th>YEAR:</th>
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<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 1 + Column 2</th>
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<tbody>
<tr>
<td></td>
<td>Asphalt Production This Month (tons)</td>
<td>Asphalt Production Previous 11 Months (tons)</td>
<td>Asphalt Production 12 Month Total (tons)</td>
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</tbody>
</table>

- [ ] No deviation occurred in this quarter.
- [ ] Deviation/s occurred in this quarter.
  Deviation has been reported on: ___________________________

Submitted by: _________________________________________
Title / Position: _________________________________________
Signature: _________________________________________
Date: _________________________________________
Phone: _________________________________________
**Indiana Department of Environmental Management**  
**Office of Air Quality**  
**Compliance and Enforcement Branch**  

**FESOP Quarterly Report**

**Source Name:** Brooks Construction Company, Inc.  
**Current Source Address:** 5536 Hoagland Rd, Poe, Indiana 46745  
**FESOP No.:** F169-33971-05190  
**Facility:** Concrete Crusher  
**Parameter:** Amount of concrete processed  
**Limit:** The amount of concrete processed shall not exceed 50,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

**Quarter:** _______________  
**Year:** _______________

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 1 + Column 2</th>
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</thead>
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<td>Concrete Processed Previous 11 Months (tons)</td>
<td>Concrete Processed 12 Month Total (tons)</td>
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</table>

- [ ] No deviation occurred in this quarter.
- [ ] Deviation/s occurred in this quarter.
  Deviation has been reported on: ___________________________

**Submitted by:** ___________________________  
**Title / Position:** ___________________________  
**Signature:** ___________________________  
**Date:** ___________________________  
**Phone:** ___________________________
### FESOP Quarterly Report

**Source Name:** Brooks Construction Company, Inc.  
**Current Source Address:** 5536 Hoagland Rd., Poe, Indiana 46745  
**FESOP Permit No.:** F169-33971-05190  
**Facility:** Asphalt Drum Mixer/Dryer  
**Parameter:** Blast Furnace Slag Usage  
**Limit:** Blast furnace slag usage shall not exceed 132,750 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

<table>
<thead>
<tr>
<th>QUARTER:</th>
<th>YEAR:</th>
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<tr>
<th>Month</th>
<th>Column 1 Blast Furnace Slag Usage (tons)</th>
<th>Column 2 Blast Furnace Slag Usage (tons)</th>
<th>Column 1 + Column 2 Blast Furnace Slag Usage (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Month</td>
<td>Previous 11 Months</td>
<td>12 Month Total</td>
<td></td>
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</tbody>
</table>

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

Submitted by: _________________________________________  
**Title / Position:** _________________________________________  
**Signature:** _________________________________________  
**Date:** _________________________________________  
**Phone:** _________________________________________
**FESOP Quarterly Report**

Source Name: Brooks Construction Company, Inc.
Current Source Address: 5536 Hoagland Rd., Poe, Indiana 46745
FESOP Permit No.: F169-33971-05190
Facility: Asphalt Drum Mixer/Dryer
Parameter: Steel Slag Usage
Limit: Steel slag usage shall not exceed 132,750 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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<thead>
<tr>
<th>QUARTER:</th>
<th>YEAR:</th>
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<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 1 + Column 2</th>
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<tbody>
<tr>
<td></td>
<td>Steel Slag Usage (tons)</td>
<td>Steel Slag Usage (tons)</td>
<td>Steel Slag Usage (tons)</td>
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<tr>
<td>This Month</td>
<td>Previous 11 Months</td>
<td>12 Month Total</td>
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- □ No deviation occurred in this quarter.
- □ Deviation/s occurred in this quarter.
  Deviation has been reported on: ___________________________

Submitted by: _________________________________________  
Title / Position: _________________________________________  
Signature: _________________________________________  
Date: _________________________________________  
Phone: _________________________________________
Source Name: Brooks Construction Company, Inc.
Current Source Address: 5536 Hoagland Rd, Poe, Indiana 46745
FESOP No.: F169-33971-05190
Facility: Asphalt Drum Mixer/Dryer;
Parameter: Multiple Fuel / SO2, NOx, and HCl Emissions
Limit:

Sulfur dioxide (SO2) emissions shall not exceed 97.45 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.13(a).

Nitrogen Oxides (NOx) emissions shall not exceed 40.56 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.13(b).

Hydrogen Chloride (HCl) emissions shall not exceed 8.68 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.13(c).
<table>
<thead>
<tr>
<th>Month</th>
<th>Fuel/Slag (units)</th>
<th>Column 1</th>
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<th>Column 1 +Column 2</th>
<th>Equation Results</th>
<th>Equation Results</th>
<th>Equation Results</th>
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<td>Usage</td>
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<td>Usage</td>
<td>Sulfur Dioxide</td>
<td>Nitrogen Oxides</td>
<td>Hydrogen Chloride</td>
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<td>This Month</td>
<td>Previous 11 Months</td>
<td>12 Month Total</td>
<td>(SO2) Emissions</td>
<td>(NOx) Emissions</td>
<td>(HCL) Emissions</td>
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<td>Waste Fuel Oil (gallons)</td>
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☐ No deviation occurred in this reporting period. Submitted by: ____________________________ Date: __________________

☐ Deviation/s occurred in this reporting period. Title / Position: ____________________________ Phone: __________________

Deviation has been reported on: ____________ Signature: ________________________________
This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B –Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C- General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

- NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.
- THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

<table>
<thead>
<tr>
<th>Permit Requirement (specify permit condition #)</th>
<th>Date of Deviation:</th>
<th>Duration of Deviation:</th>
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<th>Number of Deviations:</th>
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<th>Probable Cause of Deviation:</th>
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<th>Response Steps Taken:</th>
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<th>Probable Cause of Deviation:</th>
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<th>Response Steps Taken:</th>
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<td>Permit Requirement (specify permit condition #)</td>
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<td>Response Steps Taken:</td>
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<tr>
<th>Permit Requirement (specify permit condition #)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Deviation:</td>
</tr>
<tr>
<td>Number of Deviations:</td>
</tr>
<tr>
<td>Probable Cause of Deviation:</td>
</tr>
<tr>
<td>Response Steps Taken:</td>
</tr>
</tbody>
</table>

<table>
<thead>
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</tr>
<tr>
<td>Probable Cause of Deviation:</td>
</tr>
<tr>
<td>Response Steps Taken:</td>
</tr>
</tbody>
</table>

Form Completed by: ________________________________
Title / Position: ________________________________
Date: ________________________________
Phone: ________________________________
Source Description and Location

Source Name: Brooks Construction Company Inc.
Source Location: Portable
Initial Source Location: 5536 Hoagland Rd., Poe, IN 46745
County: Allen
SIC Code: 2951 (Asphalt Paving Mixtures and Blocks)
Operation Permit No.: F 777-33971-05190
Operation Permit Issuance Date: July 8, 2014
Significant Permit Revision No.: 777-41254-05190
Permit Reviewer: Brian Wright

Existing Approvals

The source was issued FESOP Renewal No. F777-33971-05190 on July 8, 2014. The source has since received the following approval:

(a) Relocation No. 777-35758-05190, issued on May 15, 2015.

County Attainment Status

The source is currently located in Allen County.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO₂</td>
<td>Better than national standards.</td>
</tr>
<tr>
<td>CO</td>
<td>Unclassifiable or attainment effective November 15, 1990.</td>
</tr>
<tr>
<td>O₃</td>
<td>Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard.¹</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Unclassifiable or attainment effective April 5, 2005, for the annual PM₂.₅ standard.</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Unclassifiable or attainment effective December 13, 2009, for the 24-hour PM₂.₅ standard.</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>Unclassifiable effective November 15, 1990.</td>
</tr>
<tr>
<td>NO₂</td>
<td>Cannot be classified or better than national standards.</td>
</tr>
<tr>
<td>Pb</td>
<td>Unclassifiable or attainment effective December 31, 2011.</td>
</tr>
</tbody>
</table>

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

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (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. Allen 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$_{2.5}$
Allen County has been classified as attainment for PM$_{2.5}$. Therefore, direct PM$_{2.5}$, SO$_2$, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

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

### Fugitive Emissions

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

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

The fugitive emissions of hazardous air pollutants (HAP) are counted toward the determination of Part 70 Permit applicability and source status under Section 112 of the Clean Air Act (CAA).

### Greenhouse Gas (GHG) Emissions

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

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

### Source Status - Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed revision, after consideration of all enforceable limits established in the effective permits. If the control equipment has
been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

<p>| Source-Wide Emissions Prior to Revision (ton/year) |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|</p>
<table>
<thead>
<tr>
<th></th>
<th>PM$^1$</th>
<th>PM$_{10}^1$</th>
<th>PM$_{2.5}^{1,2}$</th>
<th>SO$_2$</th>
<th>NO$_x$</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP$^3$ (HCl)</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PTE of Entire Source Excluding Fugitives*</td>
<td>158.91</td>
<td>70.87</td>
<td>85.93</td>
<td>99.00</td>
<td>41.00</td>
<td>23.60</td>
<td>95.98</td>
<td>8.68</td>
<td>9.57</td>
</tr>
<tr>
<td>Fugitives from NSPS/NESHAP Source Category (Source Wide)</td>
<td>90.09</td>
<td>28.13</td>
<td>13.07</td>
<td>0</td>
<td>0</td>
<td>12.63</td>
<td>2.12</td>
<td>0.00</td>
<td>0.21</td>
</tr>
<tr>
<td>Total PTE of Entire Source</td>
<td>249.00</td>
<td>99.00</td>
<td>99.00</td>
<td>99.00</td>
<td>41.00</td>
<td>36.24</td>
<td>98.11</td>
<td>8.68</td>
<td>9.78</td>
</tr>
</tbody>
</table>

1 Under the Part 70 Permit program (40 CFR 70), PM$_{10}$ and PM$_{2.5}$, not particulate matter (PM), are each considered as a “regulated air pollutant.”

2 PM$_{2.5}$ listed is direct PM$_{2.5}$.

3 Single highest source-wide HAP

*Fugitive HAP emissions are always included in the source-wide emissions.

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no PSD regulated pollutant is emitted at a rate of two hundred fifty (250) tons per year or more and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing source is not a major source of HAP, as defined in 40 CFR 63.2, because HAP emissions are 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.

(c) These emissions are based on the TSD of FESOP Renewal No. F777-33971-05190, issued on July 8, 2014.

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by Brooks Construction Company Inc. on March 27, 2019, relating to the construction and operation of a new counterflow drum mixer, cold feed bins, and storage silo.

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

(a) One (1) asphalt counterflow drum mixer/dryer capable of processing 400 tons per hour of raw material, approved in 2019 for construction, using blast furnace slag and steel slag in the aggregate mix, equipped with one (1) 134 million (MM) British thermal units (Btu) per hour No. 2 distillate fuel oil-fired burner, using refinery blend fuel oil or waste oil as a back-up fuel, with one (1) jet pulse baghouse for particulate matter (PM) control, exhausting at one (1) stack (ID No. S/V-1);

Under NSPS Subpart I, the hot mix asphalt facility and associated processes are considered an affected facility.
(b) Other categories with emissions below insignificant thresholds:

1. One (1) 12,500 gallon fuel oil storage tank (ID No. Tank 11);
2. One (1) 15,000 gallon waste fuel oil storage tank (ID No. Tank 12);
3. One (1) cold feed system consisting of eight (8) compartments;
4. One (1) asphalt mix storage silo with a total aggregate holding capacity of 300 tons;

As part of this permitting action, the following emission units are being removed from the permit:

(a) One (1) concrete crusher, with a maximum capacity of less than one hundred fifty (150) tons per hour and a limited throughput of 50,000 tons per twelve (12) consecutive month period.

(b) One (1) 8,000 gallon fuel oil storage tank (ID No. Tank 11);

**Enforcement Issues**

IDEM is aware that equipment has been constructed prior to receipt of the proper permit. IDEM is reviewing this matter and will take the appropriate action. This proposed approval is intended to satisfy the requirements of the construction permit rules.

**Emission Calculations**

See Appendix A of this Technical Support Document for detailed emission calculations.

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

Pursuant to 326 IAC 2-1.1-1(12), Potential to Emit is defined as “the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency.”

The following table is used to determine the appropriate permit level under 326 IAC 2-8-11.1 (Permit Revisions). This table reflects the PTE before controls of the proposed revision. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

<table>
<thead>
<tr>
<th>Process / Emission Unit</th>
<th>PM</th>
<th>PM$_{10}$</th>
<th>PM$_{2.5}$</th>
<th>SO$_2$</th>
<th>NO$_X$</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP$^2$</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dryer Fuel Combustion (worst case)</td>
<td>174.40</td>
<td>138.97</td>
<td>138.97</td>
<td>628.84</td>
<td>197.04</td>
<td>4.19</td>
<td>20.96</td>
<td>110.68 HCl</td>
<td>121.66</td>
</tr>
<tr>
<td>Dryer/Mixer (Process)</td>
<td>49,056.00</td>
<td>11,388.00</td>
<td>2,628.00</td>
<td>101.62</td>
<td>96.36</td>
<td>56.06</td>
<td>227.76</td>
<td>5.43 Formaldehyde</td>
<td>18.68</td>
</tr>
<tr>
<td>Dryer/Mixer Slag Processing (worst case)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>544.52</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total PTE Before Controls of the New Emission Units:</td>
<td>49,056</td>
<td>11,388</td>
<td>2,628</td>
<td>1,173</td>
<td>197.48</td>
<td>56.07</td>
<td>227.87</td>
<td>110.68 HCl</td>
<td>121.67</td>
</tr>
</tbody>
</table>
Appendix A of this TSD reflects the detailed potential emissions of the proposed revision.

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

(i) PM, PM$_{10}$, or direct PM$_{2.5}$.
(ii) Sulfur dioxide (SO$_2$).
(iii) Nitrogen oxides (NO$_X$).
(iv) Volatile Organic Compounds (VOC).

Pursuant to 326 IAC 2-8-11.1(f)(1)(G), this FESOP is being revised through a FESOP Significant Permit Revision because the proposed revision is not an Administrative Amendment or Minor Permit revision and the proposed revision has a potential to emit greater than or equal to ten (10) tons per year of a single HAP and/or twenty-five (25) tons per year of any combination of HAPs.

Pursuant to 326 IAC 2-8-11.1(f)(1)(H), this FESOP is being revised through a FESOP Significant Permit Revision because the proposed revision is not an Administrative Amendment or Minor Permit revision and the proposed revision has a potential to emit greater than or equal to one hundred (100) tons per year of carbon monoxide (CO).

The table below summarizes the after issuance source-wide potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of the revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.
Source-Wide Emissions After Issuance (ton/year)

<table>
<thead>
<tr>
<th></th>
<th>PM¹</th>
<th>PM₁₀¹</th>
<th>PM₂.₅¹⁻²</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP³</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title V Major Source</td>
<td>NA</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>10</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>Thresholds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSD Major Source</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Thresholds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹Under the Part 70 Permit program (40 CFR 70), PM₁₀ and PM₂.₅, not particulate matter (PM), are each considered as a “regulated air pollutant.”
²PM₂.₅ listed is direct PM₂.₅.
³Single highest source-wide HAP
*Fugitive HAP emissions are always included in the source-wide emissions.

Appendix A of this TSD reflects the detailed potential to emit of the entire source after issuance.

Federal Rule Applicability Determination

Due to the proposed revision, federal rule applicability has been reviewed as follows:

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

(a) The dryer/mixer, cold mix asphalt bins, and storage silo are subject to the New Source Performance Standards for Hot Mix Asphalt Facilities, 40 CFR 60, Subpart I and 326 IAC 12, because they are part of a hot mix asphalt facility modified after June 11, 1973. The units subject to this rule include the following:

These units are subject to the following portions of Subpart I.

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

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

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

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

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

**Compliance Assurance Monitoring (CAM):**

Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited 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.
Due to this revision, state rule applicability has been reviewed as follows:

**326 IAC 2-2 (PSD)**
PSD and Emission Offset applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP Revision section of this document.

The PSD limits will not change as a result of this modification.

**326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))**
The new emission unit(s) will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

**326 IAC 2-6 (Emission Reporting)**
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, LaPorte, or Lawrenceburg Township, Dearborn County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.

**326 IAC 2-8-4 (FESOP) and 326 IAC 20 (Hazardous Air Pollutants)**
FESOP applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP Revision section of this document.

The FESOP and HAP limits will not change as a result of this modification.

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

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

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

**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.

**326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)**
This source was constructed after December 13, 1985 and has potential fugitive particulate emissions of twenty-five (25) tons per year or more. Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the Fugitive Dust Control Plan that is included as Attachment A to the permit.

**326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)**
This source is not subject to the requirements of 326 IAC 6-5, because the source has potential fugitive particulate emissions of less than twenty-five (25) tons per year.

**326 IAC 6.5 (Particulate Matter Limitations Except Lake County)**
The potential to emit particulate matter (PM) before controls for the entire source is greater than one hundred (100) tons per year, and this existing portable hot-mix asphalt plant is authorized to relocate to Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties. Therefore,
pursuant to 6.5-1-2(a), PM emissions from the dryer/mixer shall continue to not exceed seven hundredths (0.07) gram per dry standard cubic meter (g/dscm) (three-hundredths (0.03) grain per dry standard cubic foot (dscf)) when located in Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.

This limitation is more stringent than the applicable requirement of four hundredths (0.04) grains per dry standard cubic foot established by New Source Performance Standard for Hot Mix Asphalt Facilities, 40 CFR 60, Subpart I (incorporated by reference as 326 IAC 12). Therefore, compliance with 326 IAC 6.5-1-2(a) will also assure compliance with the grain loading limitation specified in 326 IAC 12 and 40 CFR 60, Subpart I. This existing source comply with this limit by using a baghouse when located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.

326 IAC 6.8 (Particulate Matter Limitations for Lake County)
Pursuant to 326 IAC 6.8-1-1(a), this source (located in Allen County) is not subject to the requirements of 326 IAC 6.8 because it is not located in Lake County.

State Rule Applicability – Individual Facilities

Due to the proposed revision, state rule applicability has been reviewed as follows:

Dryer/Mixer

326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)
Pursuant to 326 IAC 7-1.1-1, the dryer/mixer is subject to the requirements of 326 IAC 7-1.1 since the SO2 emissions from the unit are greater than twenty-five (25) tons per twelve (12) consecutive month period. The Permittee shall meet the following limits for each fuel type burned in the dryer/mixer:

Pursuant to 326 IAC 7-1.1-2, the sulfur dioxide emissions from the 120 MMBtu/hr dryer burning distillate oil shall be limited to 0.5 lb/MMBtu heat input. This equates to a fuel oil sulfur content limit of 0.49%. Therefore, the sulfur content of the fuel must be less than or equal to 0.49% in order to comply with this rule. The source will comply with this rule by using No. 2 distillate oil with a sulfur content of 0.49% or less in the dryer burner. The distillate oil sulfur dioxide emissions calculated as follows:

\[
\begin{align*}
1 \text{ gal fuel} & \times 7.09 \text{ lbs fuel} \times 64 \text{ lb/lb mole SO}_2 \times 0.0049 \text{ lbs S} = 0.496 \text{ lbs SO}_2 \\
0.14 \text{ MMBtu} & \quad \text{gal fuel} \quad 32 \text{ lb/lb mole S} \quad \text{lb fuel} \quad \text{MMBtu}
\end{align*}
\]

Pursuant to 326 IAC 7-1.1-2, the sulfur dioxide emissions from the 120 MMBtu/hr dryer burning refinery blend fuel oil (a residual oil) shall be limited to 1.6 pounds per MMBtu heat input. This equates to a refinery blend fuel oil sulfur content limit of 1.42%. Therefore, the sulfur content of the fuel must be less than or equal to 1.42% in order to comply with this rule. The source will comply with this rule by using refinery blend fuel oil with a sulfur content of 1.0% or less. The refinery blend fuel oil sulfur dioxide emissions are calculated as follows:

\[
\begin{align*}
1 \text{ gal fuel} & \times 7.88 \text{ lbs fuel} \times 64 \text{ lb/lb mole SO}_2 \times 0.0142 \text{ lbs S} = 1.599 \text{ lbs SO}_2 \\
0.14 \text{ MMBtu} & \quad \text{gal fuel} \quad 32 \text{ lb/lb mole S} \quad \text{lb fuel} \quad \text{MMBtu}
\end{align*}
\]

Pursuant to 326 IAC 7-1.1-2, the sulfur dioxide emissions from the 120 MMBtu/hr dryer burning waste oil (a residual oil) shall be limited to 1.6 pounds per MMBtu heat input. This equates to a waste oil sulfur content limit of 1.42% (assuming that waste oil has a density of 7.88 pounds per gallon). Therefore, the sulfur content of the fuel must be less than or equal to 1.42% in order to comply with this rule. The source will comply with this rule by using waste oil with a sulfur content of 1.0% or less. The waste oil sulfur dioxide emissions are calculated as follows:

\[
\begin{align*}
1 \text{ gal fuel} & \times 7.88 \text{ lbs fuel} \times 64 \text{ lb/lb mole SO}_2 \times 0.0142 \text{ lbs S} = 1.599 \text{ lbs SO}_2 \\
0.14 \text{ MMBtu} & \quad \text{gal fuel} \quad 32 \text{ lb/lb mole S} \quad \text{lb fuel} \quad \text{MMBtu}
\end{align*}
\]
326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements)
Pursuant to 326 IAC 7-2-1(c) the dryer/mixer is subject to 326 IAC 7-2-1(c)(3) since it has SO2 emissions greater than . This rule requires the source to submit to the Office of Air Quality upon request records of sulfur content, heat content, fuel consumption, and sulfur dioxide emission rates based on a calendar-month average.

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
In order to render the requirements of 326 IAC 8-1-6 not applicable, the Permittee shall comply with the following:

(a) The amount of asphalt processed in the dryer/mixer shall not exceed 1,475,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month; and

(b) VOC emissions from the dryer/mixer shall not exceed 0.032 pound of VOC per ton of asphalt produced.

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

326 IAC 8-5-2 (Asphalt Paving Rules)
This source is not subject to the requirements of 326 IAC 8-5-2 since the source will not process emulsified or cutback asphalt.

Compliance Determination and Monitoring Requirements

Testing Requirements:

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Control Device</th>
<th>Timeframe for Testing or Date of Initial Validation Demonstration</th>
<th>Pollutant/Parameter</th>
<th>Frequency of Testing</th>
<th>Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dryer/Mixer</td>
<td>Baghouse</td>
<td>90 days after startup of the dryer/mixer</td>
<td>PM/PM10/PM2.5</td>
<td>Once every five (5) years</td>
<td>40 CFR 60, Subpart I</td>
</tr>
</tbody>
</table>

These testing requirements are required to ensure compliance with 40 CFR 60, Subpart I, 326 IAC 2-8 (FESOP), and 326 IAC 6.5 (Particulate Matter Limitations Except Lake County).

There are no new or modified compliance requirements included with this revision.

Proposed Changes

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

1. Sections A.2 and A.3 have been amended as follows in order to incorporate the new units and remove units no longer located at the site:

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

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

(a) One (1) asphalt parallel flow drum mixer/dryer capable of processing 400 tons per hour of raw material, approved in 2012 for modification to use certified ground asbestos-free shingles, and approved in 2014 for modification to use blast furnace slag and steel slag in the aggregate mix, equipped with one (1) 120 million (MM) British thermal units (Btu) per
hour No. 2 distillate fuel oil-fired burner, using refinery blend fuel oil or waste oil as a back-up fuel, with one (1) jet pulse baghouse for particulate matter (PM) control, exhausting at one (1) stack (ID No. S/V-1);

(a) One (1) asphalt counterflow drum mixer/dryer capable of processing 400 tons per hour of raw material, approved in 2019 for construction, using blast furnace slag, steel slag, and recycled asphalt shingles in the aggregate mix, equipped with one (1) 134 million (MM) British thermal units (Btu) per hour No. 2 distillate fuel oil-fired burner, using refinery blend fuel oil or waste oil as a back-up fuel, with one (1) jet pulse baghouse for particulate matter (PM) control, exhausting at one (1) stack (ID No. S/V-1);

Under NSPS Subpart I, the hot mix asphalt facility and associated processes are considered an affected facility.

(b) One (1) concrete crusher, with a maximum capacity of less than one hundred fifty (150) tons per hour and a limited throughput of 50,000 tons per twelve (12) consecutive month period.

(cb) One (1) 30,000 gallon liquid asphalt storage tank (ID No. Tank 10), constructed in 1989.

dc) Paved and unpaved roads

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

This portable source also includes the following insignificant activities:

*****

(d) Other categories with emissions below insignificant thresholds:

(2) One (1) 8,000 12,500 gallon fuel oil storage tank (ID No. Tank 11);

(3) One (1) 15,000 gallon waste fuel oil storage tank (ID No. Tank 12);

(34) One (1) drag slat conveyor;

(45) One (1) cold feed system consisting of four (4) eight (8) compartments with a total aggregate holding capacity of 100 tons;

(56) One (1) Two (2) hot mix storage silo with a total maximum storage capacity of 4300 tons; and

(67) Two (2) recycled asphalt pavement (RAP) feed bins with a maximum holding capacity of 25 tons each.

*****

(2) Section D.1 has been amended as follows in order to incorporate the new units:

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) asphalt parallel flow drum mixer/dryer capable of processing 400 tons per hour of raw material, approved in 2012 for modification to use certified ground asbestos-free shingles, and approved in 2014 for modification to use blast furnace slag and steel slag in the aggregate mix,
equipped with one (1) 120 million (MM) British thermal units (Btu) per hour No. 2 distillate fuel oil-fired burner, using refinery blend fuel oil or waste oil as a back-up fuel, with one (1) jet pulse baghouse for particulate matter (PM) control, exhausting at one (1) stack (ID No. S/V-1);

(a) One (1) asphalt counterflow drum mixer/dryer capable of processing 400 tons per hour of raw material, approved in 2019 for construction, using blast furnace slag, steel slag, and recycled asphalt shingles in the aggregate mix, equipped with one (1) 134 million (MM) British thermal units (Btu) per hour No. 2 distillate fuel-fired burner, using refinery blend fuel oil or waste oil as a back-up fuel, with one (1) jet pulse baghouse for particulate matter (PM) control, exhausting at one (1) stack (ID No. S/V-1);

(b) One (1) concrete crusher, with a maximum capacity of less than one hundred fifty (150) tons per hour and a limited throughput of 50,000 tons per twelve (12) consecutive month period.

(c) One (1) 30,000 gallon liquid asphalt storage tank (ID No. Tank 10), constructed in 1989.

(d) Paved and unpaved roads

Insignificant Activities:

*****

(d) Other categories with emissions below insignificant thresholds:

*****

(2) One (1) 8,000 12,500 gallon fuel oil storage tank (ID No. Tank 11);

(3) One (1) 15,000 gallon waste fuel oil storage tank (ID No. Tank 12);

(4) One (1) drag slat conveyor;

(5) One (1) cold feed system consisting of four (4) eight (8) compartments with a total aggregate holding capacity of 400 300 tons;

(6) One (1) Two (2) hot mix storage silo with a total maximum storage capacity of 4300 tons; and

(7) Two (2) recycled asphalt pavement (RAP) feed bins with a maximum holding capacity of 25 tons each.

*****

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

*****

D.1.5 Particulate Matter (PM) [326 IAC 6.5-1-2]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the conveyors, screens, material transfer points, concrete crusher, dryer/mixer, and paved and unpaved road shall be limited to 0.03 grains per dry standard cubic foot (gr/dscf) for particulate matter.

(a) Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the drum dryer/mixer shall be limited to 0.03 grains per dry standard cubic foot (gr/dscf) for particulate matter, when located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.

(b) Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the concrete crusher operation shall be
limited to 0.03 grains per dry standard cubic foot (gr/dscf) for particulate matter, when located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.

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

******

2. Section E.1 has been amended as follows in order to incorporate the new units:

SECTION E.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) asphalt parallel flow drum mixer/dryer capable of processing 400 tons per hour of raw material, approved in 2012 for modification to use certified ground asbestos-free shingles, and approved in 2014 for modification to use blast furnace slag and steel slag in the aggregate mix, equipped with one (1) 120 million (MM) British thermal units (Btu) per hour No. 2 distillate fuel oil-fired burner, using refinery blend fuel oil or waste oil as a back-up fuel, with one (1) jet pulse baghouse for particulate matter (PM) control, exhausting at one (1) stack (ID No. S/V-1);

(a) One (1) asphalt counterflow drum mixer/dryer capable of processing 400 tons per hour of raw material, approved in 2019 for construction, using blast furnace slag, steel slag, and recycled asphalt shingles in the aggregate mix, equipped with one (1) 134 million (MM) British thermal units (Btu) per hour No. 2 distillate fuel oil-fired burner, using refinery blend fuel oil or waste oil as a back-up fuel, with one (1) jet pulse baghouse for particulate matter (PM) control, exhausting at one (1) stack (ID No. S/V-1);

(cb) One (1) 30,000 gallon liquid asphalt storage tank (ID No. Tank 10), constructed in 1989.

(dc) Paved and unpaved roads

Insignificant Activities:

******

(d) Other categories with emissions below insignificant thresholds:

(45) One (1) cold feed system consisting of four (4) eight (8) compartments with a total aggregate holding capacity of 100 tons;

(56) One (1) Two (2) hot mix storage silo with a total maximum storage capacity of 4300 tons; and

(67) Two (2) recycled asphalt pavement (RAP) feed bins with a maximum holding capacity of 25 tons each.

******

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

******
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 March 27, 2019. Additional information was received on April 12, 2019.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Significant Permit Revision No. 777-41254-05190. The staff recommends to the Commissioner that the FESOP Significant Permit Revision be approved.

IDEM Contact

(a) If you have any questions regarding this permit, please contact Brian Wright, 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) 234-6544 or (800) 451-6027, and ask for Brian Wright or (317) 234-6544.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: http://www.in.gov/idem/airquality/2356.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.
### Appendix A.1: Unlimited Emissions Calculations

#### Entire Source - Drum Mix

Company Name: Brooks Construction Company Inc.  
Source Address: 5536 Hoagland Rd., Poe, Indiana 46745  
Permit Number: 777-41254-05190  
Reviewer: Brian Wright

#### Asphalt Plant Maximum Capacity - Drum Mix

- **Maximum Hourly Asphalt Production:** 400 ton/hr  
- **Maximum Annual Asphalt Production:** 3,044,000 ton/yr  
- **Maximum Annual Blast Furnace Slag Usage:** 1,471,680 ton/yr  
- **Maximum Annual Steel Slag Usage:** 1,471,680 ton/yr

#### Fuel Usage

- **Natural Gas Usage:** 0 MMCF/yr  
- **No. 2 Fuel Oil Usage:** 8,384,571 gal/yr, 0.50% sulfur  
- **No. 4 Fuel Oil Usage:** 8,384,571 gal/yr, 1.00% sulfur  
- **Residual (No. 5 or No. 6) Fuel Oil Usage:** 0 gal/yr, 0.50% sulfur  
- **Propane Usage:** 0 gal/yr, 0.20 gr/100 ft³ sulfur  
- **Butane Usage:** 0 gal/yr, 0.22 gr/100 ft³ sulfur  
- **Used/Waste Oil Usage:** 8,384,571 gal/yr, 1.00% sulfur, 0.65% ash, 0.400% chlorine, 0.040% lead

#### Emission Factors

- **Unlimited PM Dryer/Mixer Emission Factor:** 28.0 lb/ton of asphalt production  
- **Unlimited PM10 Dryer/Mixer Emission Factor:** 6.5 lb/ton of asphalt production  
- **Unlimited PM2.5 Dryer/Mixer Emission Factor:** 1.5 lb/ton of asphalt production  
- **Unlimited VOC Dryer/Mixer Emission Factor:** 0.032 lb/ton of asphalt production  
- **Unlimited CO Dryer/Mixer Emission Factor:** 0.13 lb/ton of asphalt production  
- **Unlimited Blast Furnace Slag SO2 Dryer/Mixer Emission Factor:** 0.74 lb/ton of slag processed  
- **Unlimited Steel Slag SO2 Dryer/Mixer Emission Factor:** 0.0014 lb/ton of slag processed

#### Unlimited/Uncontrolled Emissions

<table>
<thead>
<tr>
<th>Process Description</th>
<th>Criteria Pollutants</th>
<th>Unlimited/Uncontrolled Potential to Emit (tons/year)</th>
<th>Hazardous Air Pollutants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PM</td>
<td>PM10</td>
<td>PM2.5</td>
</tr>
<tr>
<td><strong>Ducted Emissions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dryer Fuel Combustion (worst case)</td>
<td>174.46</td>
<td>1.36</td>
<td>1.36</td>
</tr>
<tr>
<td>Dryer/Mixer (Process)</td>
<td>49,956.00</td>
<td>11,388.00</td>
<td>2,626.00</td>
</tr>
<tr>
<td>Dryer/Mixer Slag Processing (worst case)</td>
<td>0.04</td>
<td>0.07</td>
<td>0.07</td>
</tr>
<tr>
<td><strong>Worst Case Emissions</strong></td>
<td>49,956.04</td>
<td>11,388.07</td>
<td>2,626.07</td>
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<tr>
<td><strong>Fugitive Emissions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asphalt Load-Out, Into Filing, On-Site Yard</td>
<td>1.94</td>
<td>1.94</td>
<td>1.94</td>
</tr>
<tr>
<td>Material Storage Pits</td>
<td>2.38</td>
<td>0.63</td>
<td>0.63</td>
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<tr>
<td>Material Processing and Handling</td>
<td>19.85</td>
<td>7.38</td>
<td>7.38</td>
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<tr>
<td>Material Crushing, Screenng, and Conveying</td>
<td>68.56</td>
<td>24.33</td>
<td>24.33</td>
</tr>
<tr>
<td>Unpaved and Paved Roads (worst case)</td>
<td>124.43</td>
<td>31.71</td>
<td>31.71</td>
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<tr>
<td>Vital Organic Liquid Storage Vessels</td>
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<td>0</td>
</tr>
<tr>
<td><strong>Total Fugitive Emissions</strong></td>
<td>217.16</td>
<td>68.20</td>
<td>31.69</td>
</tr>
</tbody>
</table>

negl = negligible

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

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

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

### Maximum Capacity

<table>
<thead>
<tr>
<th>Maximum Fuel Input Rate</th>
<th>MMBtu/hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas Usage</td>
<td>154</td>
</tr>
<tr>
<td>No. 2 Fuel Oil Usage</td>
<td>900</td>
</tr>
<tr>
<td>Residual (No. 5 or No. 6) Fuel Oil Usage</td>
<td>8,384,571</td>
</tr>
<tr>
<td>Propane Usage</td>
<td>0</td>
</tr>
<tr>
<td>Butane Usage</td>
<td>0</td>
</tr>
<tr>
<td>Used/Waste Oil Usage</td>
<td>8,384,571</td>
</tr>
</tbody>
</table>

### Unlimited/Uncontrolled Emissions

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Natural Gas (lb/MMCF)</th>
<th>No. 2 Fuel Oil (lb/bgal)</th>
<th>Propane (lb/bgal)</th>
<th>Butane (lb/bgal)</th>
<th>Used/ Waste Oil (lb/bgal)</th>
<th>Natural Gas (tons/yr)</th>
<th>No. 2 Fuel Oil (tons/yr)</th>
<th>Propane (tons/yr)</th>
<th>Butane (tons/yr)</th>
<th>Used/Waste Oil (tons/yr)</th>
<th>Worse Case Fuel Oil (tons/yr)</th>
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</thead>
<tbody>
<tr>
<td>PM</td>
<td>0.5</td>
<td>15</td>
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<td>0.5</td>
<td>0</td>
<td>9.3 x 10^-3</td>
<td>2.0 x 10^-3</td>
<td>0.0</td>
<td>0.0</td>
<td>6.33 x 10^-3</td>
<td>8.45 x 10^-2</td>
</tr>
<tr>
<td>PM2.5</td>
<td>0.5</td>
<td>15</td>
<td>0.5</td>
<td>0.5</td>
<td>0</td>
<td>8.45 x 10^-2</td>
<td>2.0 x 10^-2</td>
<td>0.0</td>
<td>0.0</td>
<td>8.45 x 10^-2</td>
<td>8.45 x 10^-2</td>
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<tr>
<td>SO2</td>
<td>0.0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>9.9 x 10^-4</td>
<td>0</td>
<td>0.0</td>
<td>0.0</td>
<td>9.9 x 10^-4</td>
<td>9.9 x 10^-4</td>
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<tr>
<td>NOx</td>
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<td>0</td>
<td>0</td>
<td>6.02 x 10^-3</td>
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<td>0.0</td>
<td>0.0</td>
<td>6.02 x 10^-3</td>
<td>6.02 x 10^-3</td>
</tr>
<tr>
<td>CO</td>
<td>0.0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2.7 x 10^-4</td>
<td>0</td>
<td>0.0</td>
<td>0.0</td>
<td>2.7 x 10^-4</td>
<td>2.7 x 10^-4</td>
</tr>
<tr>
<td>VOC</td>
<td>5.0</td>
<td>0.20</td>
<td>0.20</td>
<td>0.20</td>
<td>0.20</td>
<td>3.52 x 10^-3</td>
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<td>0.0</td>
<td>0.0</td>
<td>3.52 x 10^-3</td>
<td>3.52 x 10^-3</td>
</tr>
</tbody>
</table>

**Notes:**
- **Acetaldehyde**: Emission Factor (units) = 2.2 x 10^-3, Emission Factor (tons/yr) = 4.61 x 10^-4
- **Benzene**: Emission Factor (units) = 1.2 x 10^-3, Emission Factor (tons/yr) = 3.9E-02

**Methodology:**
- Natural Gas Usage (MMCF/yr) = Maximum Fuel Input Rate (MMBtu/hr) * [Btu/MMCF] x [Btu/MMC](100 MMBtu/hr)
- Oil Usage (gals/yr) = Maximum Fuel Input Rate (MMBtu/hr) * [Btu/MMC] x [Btu/MMC](100 MMBtu/hr)
- Propane Usage (gals/yr) = Maximum Fuel Input Rate (MMBtu/hr) * [Btu/MMC] x [Btu/MMC](100 MMBtu/hr)
- Used/Waste Oil Usage (gals/yr) = Maximum Fuel Input Rate (MMBtu/hr) * [Btu/MMC] x [Btu/MMC](100 MMBtu/hr)
- Natural Gas Usage: Unlimited/Uncontrolled Potential to Emit (tons/yr) = Maximum Natural Gas Usage (MMCF/yr) * [Emission Factor (lb/MMCF)] / [MMBtu/1000 lbs]

**Emission Factor:**
- Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = Maximum Natural Gas Usage (MMCF/yr) * [Emission Factor (lb/MMCF)] / [MMBtu/1000 lbs]
### Appendix A.1: Unlimited Emissions Calculations

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

**Company Name:** Brooks Construction Company Inc.

**Source Address:** 5536 Hoagland Rd., Poe, Indiana 46745

** Permit Number:** 777-41294-06190

**Reviewer:** Brian Wright

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

#### Maximum Capacity

| Maximum Fuel Input Rate | 134 MMBtu/hr |

<table>
<thead>
<tr>
<th>Natural Gas Usage</th>
<th>(MMCF/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 2 Fuel Oil Usage</td>
<td>(bbl/gal)</td>
</tr>
<tr>
<td>No. 4 Fuel Oil Usage</td>
<td>(bbl/gal)</td>
</tr>
<tr>
<td>Residual (No. 5 or No. 6) Fuel Oil Usage</td>
<td>(bbl/gal)</td>
</tr>
<tr>
<td>Propane Usage</td>
<td>(bbl/gal)</td>
</tr>
<tr>
<td>Butane Usage</td>
<td>(bbl/gal)</td>
</tr>
<tr>
<td>Used/Waste Oil Usage</td>
<td>(bbl/gal)</td>
</tr>
</tbody>
</table>

#### Unlimited/Uncontrolled Emissions

<table>
<thead>
<tr>
<th>CO2e Fraction</th>
<th>Natural Gas</th>
<th>No. 2 Fuel Oil</th>
<th>No. 4 Fuel Oil</th>
<th>Residual (No. 5 or No. 6) Fuel Oil</th>
<th>Propane</th>
<th>Butane</th>
<th>Used/Waste Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>(lb/MMCF)</td>
<td>(lb/kgal)</td>
<td>(lb/kgal)</td>
<td>(lb/kgal)</td>
<td>(lb/kgal)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO2</td>
<td>120,161.84</td>
<td>22,501.41</td>
<td>24,153.46</td>
<td>12,500.00</td>
<td>22,024.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH4</td>
<td>2.49</td>
<td>0.91</td>
<td>0.97</td>
<td>1.00</td>
<td>0.67</td>
<td>0.89</td>
<td></td>
</tr>
<tr>
<td>N2O</td>
<td>2.2</td>
<td>0.26</td>
<td>0.19</td>
<td>0.53</td>
<td>0.9</td>
<td>0.9</td>
<td>0.18</td>
</tr>
<tr>
<td>Total</td>
<td>CO2e</td>
<td>(tons/yr)</td>
<td>(tons/yr)</td>
<td>(tons/yr)</td>
<td>(tons/yr)</td>
<td></td>
<td>(tons/yr)</td>
</tr>
<tr>
<td></td>
<td>94,337.26</td>
<td>101,600.70</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>92,336.04</td>
</tr>
</tbody>
</table>

#### CO2e Equivalent Emissions (tons/yr)

| CO2e Equivalent Emissions (tons/yr) | 0.00 | 94,752.83 | 101,600.70 | 0.00 | 0.00 | 0.00 | 92,650.00 |

#### Methodology

**Fuel Usage from TSD Appendix A.1, page 1 of 14.**

**Abbreviations**

- PTE = Potential to Emit
- EF = Emission Factor

**Natural Gas Usage (MMCF/yr):**

- [Maximum Fuel Input Rate (MMBtu/hr) * 8,760 hrs/yr] / 1,000 MMBtu

**Fuel Oil Usage (gal/yr):**

- [Maximum Fuel Input Rate (MMBtu/hr) * 8,760 hrs/yr] / 0.140 MMBtu

**Propane Usage (gal/yr):**

- [Maximum Fuel Input Rate (MMBtu/hr) * 8,760 hrs/yr] / 0.0915 MMBtu

**Butane Usage (gal/yr):**

- [Maximum Fuel Input Rate (MMBtu/hr) * 8,760 hrs/yr] / 0.102 MMBtu

**Emission Factors for CO2, CH4, and N2O from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF.**

**Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal.**

**Emission Factors for N2O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2.**

**Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal.**

**Emission Factors for CO2 and N2O from AP-42 Chapter 1.5 (dated 7/08), Table 1.5-1.**

**Emission Factors for CO2, CH4, and N2O from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal.**

**Emission Factor (EF) Conversions:**

- Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Natural Gas (MMBtu/scf) * Conversion Factor (1,000,000 scf/MMCF)]

- Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of the Fuel Oil (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]

- Propane: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Gasoline (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]

- Butane: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Gasoline (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]

- Waste Oil: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Waste Oil (MMBtu/kgal) * Conversion Factor (1000 gal/kgal)]

**Emission Factor (EF) Conversions:**

- Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Natural Gas (MMBtu/scf) * Conversion Factor (1,000,000 scf/MMCF)]

- Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of the Fuel Oil (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]

- Waste Oil: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Waste Oil (MMBtu/kgal) * Conversion Factor (1000 gal/kgal)]

**Global Warming Potential (GWP):**

- CO2: 1
- CH4: 25
- N2O: 298
The following calculations determine the unlimited/uncontrolled emissions from the aggregate drying/mixing process:

Maximum Hourly Asphalt Production = 400 tons/hr

Maximum Annual Asphalt Production = 3,504,000 tons/yr

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Natural Gas</th>
<th>No. 2 Fuel Oil</th>
<th>Waste Oil</th>
<th>Natural Gas</th>
<th>No. 2 Fuel Oil</th>
<th>Waste Oil</th>
<th>Worse Case PTE</th>
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<tbody>
<tr>
<td>PM10</td>
<td>6.5</td>
<td>6.5</td>
<td>6.5</td>
<td>11388</td>
<td>11388</td>
<td>11388</td>
<td>11388</td>
</tr>
<tr>
<td>PM2.5**</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td>2628</td>
<td>2628</td>
<td>2628</td>
<td>2628</td>
</tr>
<tr>
<td>SO2***</td>
<td>0.0034</td>
<td>0.011</td>
<td>0.006</td>
<td>6.0</td>
<td>19.3</td>
<td>101.6</td>
<td>101.6</td>
</tr>
<tr>
<td>NOx***</td>
<td>0.026</td>
<td>0.055</td>
<td>0.055</td>
<td>45.6</td>
<td>96.4</td>
<td>96.4</td>
<td>96.4</td>
</tr>
<tr>
<td>VOC**</td>
<td>0.032</td>
<td>0.032</td>
<td>0.032</td>
<td>96.1</td>
<td>96.1</td>
<td>96.1</td>
<td>96.1</td>
</tr>
<tr>
<td>CO</td>
<td>0.15</td>
<td>0.15</td>
<td>0.15</td>
<td>227.9</td>
<td>227.9</td>
<td>227.9</td>
<td>227.9</td>
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Hazardous Air Pollutants

<table>
<thead>
<tr>
<th>Hazardous Air Pollutant</th>
<th>Uncontrolled Emission Factors (lb/ton)</th>
<th>Unlimited/Uncontrolled Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCl</td>
<td>2.10E-04</td>
<td>3.68E-01</td>
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<tr>
<td>Antimony</td>
<td>1.80E-07</td>
<td>1.80E-07</td>
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<tr>
<td>Arsenic</td>
<td>5.60E-07</td>
<td>5.60E-07</td>
</tr>
<tr>
<td>Beryllium</td>
<td>4.10E-07</td>
<td>4.10E-07</td>
</tr>
<tr>
<td>Chromium</td>
<td>5.50E-06</td>
<td>5.50E-06</td>
</tr>
<tr>
<td>Cobalt</td>
<td>2.60E-08</td>
<td>2.60E-08</td>
</tr>
<tr>
<td>Lead</td>
<td>9.20E-07</td>
<td>9.20E-07</td>
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<tr>
<td>Manganese</td>
<td>7.70E-08</td>
<td>7.70E-08</td>
</tr>
<tr>
<td>Mercury</td>
<td>2.40E-07</td>
<td>2.40E-07</td>
</tr>
<tr>
<td>Nickel</td>
<td>3.00E-05</td>
<td>3.00E-05</td>
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<tr>
<td>Selenium</td>
<td>3.00E-07</td>
<td>3.00E-07</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>1.30E-03</td>
<td>1.30E-03</td>
</tr>
<tr>
<td>Acreton</td>
<td>2.60E-05</td>
<td>2.60E-05</td>
</tr>
<tr>
<td>Benzene</td>
<td>3.90E-04</td>
<td>3.90E-04</td>
</tr>
<tr>
<td>Ethylene</td>
<td>2.40E-04</td>
<td>2.40E-04</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>3.10E-03</td>
<td>3.10E-03</td>
</tr>
<tr>
<td>Hexane</td>
<td>9.20E-04</td>
<td>9.20E-04</td>
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<tr>
<td>Methyl chloroform</td>
<td>4.80E-05</td>
<td>4.80E-05</td>
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<tr>
<td>MIB</td>
<td>2.00E-05</td>
<td>2.00E-05</td>
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<tr>
<td>Propionic acid</td>
<td>1.30E-04</td>
<td>1.30E-04</td>
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<tr>
<td>Quinone</td>
<td>1.60E-04</td>
<td>1.60E-04</td>
</tr>
<tr>
<td>Toluene</td>
<td>2.00E-04</td>
<td>2.00E-04</td>
</tr>
<tr>
<td>Total PAH Haps</td>
<td>1.90E-04</td>
<td>1.90E-04</td>
</tr>
<tr>
<td>Xylene</td>
<td>2.00E-04</td>
<td>2.00E-04</td>
</tr>
</tbody>
</table>

Total HAPs 18.68

Methodology: Worst Single HAP 5.43 (formaldehyde)

Abbreviations:
- PM = Particulate Matter
- SO2 = Sulfur Dioxide
- CO = Carbon Monoxide
- PAH = Polycyclic Aromatic Hydrocarbons
- NOx = Nitrous Oxides
- HAP = Hazardous Air Pollutants
- VOC = Volatile Organic Compounds
- HCl = Hydrogen Chloride
**Greenhouse Gas (CO2e) Emissions from the Drum-Mix Plant (Dryer/Mixer) Process Emissions**

**Company Name:** Brooks Construction Company Inc.  
**Source Address:** 5536 Hoagland Rd., Poe, Indiana 46745  
**Permit Number:** 777-41254-05190  
**Reviewer:** Brian Wright

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

\[
\text{Maximum Hourly Asphalt Production} = \frac{400}{\text{ton/hr}} \\
\text{Maximum Annual Asphalt Production} = \frac{3,504,000}{\text{ton/yr}}
\]

### Emission Factor (lb/ton)

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Natural Gas</th>
<th>No. 2 Fuel Oil</th>
<th>Waste Oil</th>
<th>Global Warming Potentials (GWP)</th>
<th>Natural Gas</th>
<th>No. 2 Fuel Oil</th>
<th>Waste Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO2</td>
<td>33</td>
<td>33</td>
<td>33</td>
<td>1</td>
<td>57,816.00</td>
<td>57,816.00</td>
<td>57,816.00</td>
</tr>
<tr>
<td>CH4</td>
<td>0.0120</td>
<td>0.0120</td>
<td>0.0120</td>
<td>25</td>
<td>21.02</td>
<td>21.02</td>
<td>21.02</td>
</tr>
<tr>
<td>N2O</td>
<td>268</td>
<td>9</td>
<td>0</td>
<td>298</td>
<td>57,837.02</td>
<td>57,837.02</td>
<td>57,837.02</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>58,341.60</td>
<td>58,341.60</td>
<td>58,341.60</td>
</tr>
</tbody>
</table>

**CO2e Equivalent Emissions (tons/yr)**

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>CO2e Equivalent Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>58,341.60</td>
</tr>
</tbody>
</table>

**Methodology**

Natural gas, No. 2 fuel oil, and waste oil represent the worst possible emissions scenario. AP-42 did not provide emission factors for any other fuels. Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-7 and 11.1-8

There are no emission factors for N2O available in either the 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no N2O emission anticipated from this process.

Unlimited/Uncontrolled Potential to Emit (tons/yr) = (Maximum Annual Asphalt Production (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)

Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (25) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (298).

**Abbreviations**

CO2 = Carbon Dioxide  
CH4 = Methane  
N2O = Nitrogen Dioxide  
PTE = Potential to Emit
Appendix A.1: Unlimited Emissions Calculations

Dryer/Mixer Slag Processing

Company Name: Brooks Construction Company Inc.
Source Address: 5536 Hoagland Rd., Poe, Indiana 46745
Permit Number: 777-41254-05190
Reviewer: Brian Wright

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

<table>
<thead>
<tr>
<th>Maximum Annual Blast Furnace Slag Usage = 1,471,680 ton/yr</th>
<th>1.5% sulfur</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Annual Steel Slag Usage = 1,471,680 ton/yr</td>
<td>0.66% sulfur</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Slag</th>
<th>SO2 Emission Factor (lb/ton)</th>
<th>Unlimited Potential to Emit SO2 (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blast Furnace Slag*</td>
<td>0.74</td>
<td>544.5</td>
</tr>
<tr>
<td>Steel Slag**</td>
<td>0.0014</td>
<td>1.03</td>
</tr>
</tbody>
</table>

Methodology

The maximum annual slag usage was provided by the source.

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

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

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

Abbreviations

SO2 = Sulfur Dioxide
Appendix A.1: Unlimited Emissions Calculations

Hot Oil Heater

Fuel Combustion with Maximum Capacity < 100 MMBlu/hr

Company Name: Brooks Construction Company Inc.
Source Location: 5536 Hoagland Rd., Poe, Indiana 46745
Permit Number: 777-41254-05190
Reviewer: Brian Wright

Maximum Hot Oil Heater Fuel Input Rate = 0.70 MMBtu/hr
Natural Gas Usage = 0.00 MMCF/yr
No. 2 Fuel Oil Usage = 43,800 gal/yr, and 0.50 % sulfur

Unlimited/Uncontrolled Emissions

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Natural Gas (lb/MMCF)</th>
<th>No. 2 Fuel Oil (lb/kgal)</th>
<th>Natural Gas (tons/yr)</th>
<th>No. 2 Fuel Oil (tons/yr)</th>
<th>PM2.5/PM10</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>1.8</td>
<td>2.0</td>
<td>0.000</td>
<td>0.044</td>
<td>0.04</td>
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<tr>
<td>SO2</td>
<td>0.6</td>
<td>71.0</td>
<td>0.000</td>
<td>1.500</td>
<td>1.55</td>
</tr>
<tr>
<td>NOx</td>
<td>100</td>
<td>20.0</td>
<td>0.000</td>
<td>0.438</td>
<td>0.44</td>
</tr>
<tr>
<td>VOC</td>
<td>5.5</td>
<td>0.20</td>
<td>0.000</td>
<td>0.004</td>
<td>0.00</td>
</tr>
<tr>
<td>CO</td>
<td>84</td>
<td>5.0</td>
<td>0.000</td>
<td>0.110</td>
<td>0.11</td>
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</table>

Hazardous Air Pollutant

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Natural Gas (lb/MMCF)</th>
<th>No. 2 Fuel Oil (lb/kgal)</th>
<th>Natural Gas (tons/yr)</th>
<th>No. 2 Fuel Oil (tons/yr)</th>
<th>PM2.5/PM10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>2.0E-04</td>
<td>5.6E-04</td>
<td>0.0E+00</td>
<td>1.2E-05</td>
<td>1.2E-05</td>
</tr>
<tr>
<td>Beryllium</td>
<td>1.2E-05</td>
<td>4.2E-04</td>
<td>0.0E+00</td>
<td>9.2E-06</td>
<td>9.2E-06</td>
</tr>
<tr>
<td>Cadmium</td>
<td>3.1E-03</td>
<td>4.2E-04</td>
<td>3.1E-03</td>
<td>9.2E-06</td>
<td>9.2E-06</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.4E-03</td>
<td>4.2E-04</td>
<td>0.0E+00</td>
<td>9.2E-06</td>
<td>9.2E-06</td>
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<tr>
<td>Cobalt</td>
<td>8.4E-05</td>
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<td>0.0E+00</td>
<td>0.0E+00</td>
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<tr>
<td>Lead</td>
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<td>1.8E-05</td>
<td>1.8E-05</td>
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<td>Mercury</td>
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<td>9.2E-06</td>
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<td>4.6E-05</td>
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<td>Selenium</td>
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<td>4.6E-05</td>
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<tr>
<td>Benzene</td>
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<td>0.0E+00</td>
<td>2.1E-03</td>
<td>0.0E+00</td>
<td>0.0E+00</td>
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<td>Dichlorobenzene</td>
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<td>0.0E+00</td>
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<td>0.0E+00</td>
<td>0.0E+00</td>
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<tr>
<td>Ethylbenzene</td>
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<td>1.34E-03</td>
<td>1.3E-03</td>
</tr>
<tr>
<td>Formaldehyde</td>
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<td>0.0E+00</td>
<td>1.8E+00</td>
<td>0.0E+00</td>
<td>0.0E+00</td>
</tr>
<tr>
<td>Hexane</td>
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<td>0.0E+00</td>
<td>1.1E+00</td>
<td>0.0E+00</td>
<td>0.0E+00</td>
</tr>
<tr>
<td>Phenol</td>
<td>3.4E-03</td>
<td>0.0E+00</td>
<td>3.4E-03</td>
<td>0.0E+00</td>
<td>0.0E+00</td>
</tr>
<tr>
<td>Toluene</td>
<td>3.4E-03</td>
<td>0.0E+00</td>
<td>3.4E-03</td>
<td>0.0E+00</td>
<td>0.0E+00</td>
</tr>
<tr>
<td>Total PAH Haps</td>
<td>neg</td>
<td>neg</td>
<td>neg</td>
<td>neg</td>
<td>neg</td>
</tr>
</tbody>
</table>

Total PAH Haps = 7.23E-05, 7.2E-05

Worst Single HAP = 0.0E+00

Methodology

Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBlu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBlu]
Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBlu/hr)] * [8,760 hrs/yr] * [1 gal/140 MMBlu]
Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]

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

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
NOx = Nitrous Oxides
VOC = Volatile Organic Compounds
CO = Carbon Monoxide
HAP = Hazardous Air Pollutant
HCl = Hydrogen Chloride
PAH = Polynuclear Hydrocarbon

Equivalent Natural Gas Usage (MMCF) = Maximum Fuel Input Rate (MMBlu/hr) * [8,760 hrs/yr] * [1 MMCF/1,000 MMBlu]
Equivalent Oil Usage (gal) = Maximum Fuel Input Rate (MMBlu/hr) * [8,760 hrs/yr] * [1 gal/140 MMBlu]
Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
# Appendix A.1: Unlimited Emissions Calculations

## Greenhouse Gas (CO2e) Emissions from Hot Oil Heater Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Brooks Construction Company Inc.  
Source Address: 5536 Hoagland Rd., Poe, Indiana 46745  
Permit Number: 777-41254-05190  
Reviewer: Brian Wright

Maximum Hot Oil Heater Fuel Input Rate = $0.70\text{ MMBtu/hr}$  
Natural Gas Usage = $0.00\text{ MMCF/yr}$  
No. 2 Fuel Oil Usage = $43,800.00\text{ gal/yr}$, $0.50\%$ sulfur

## Unlimited/Uncontrolled Emissions

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Emission Factor (units)</th>
<th>Global Warming Potentials (GWP)</th>
<th>Unlimited/Uncontrolled Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Natural Gas (lb/MMCF)</td>
<td>No. 2 Fuel Oil (lb/kgal)</td>
<td>Natural Gas Fuel Oil (tons/yr)</td>
</tr>
<tr>
<td>CO2</td>
<td>120,161.84</td>
<td>22,501.41</td>
<td>0.00</td>
</tr>
<tr>
<td>CH4</td>
<td>2.49</td>
<td>0.91</td>
<td>25</td>
</tr>
<tr>
<td>N2O</td>
<td>2.2</td>
<td>0.26</td>
<td>298</td>
</tr>
</tbody>
</table>

**Methodology**

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.  
Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]  
Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]  
Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)  
Natural Gas: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/MMBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2  
No. 2 Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/MMBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 5/10), Table 1.3-8  

**Emission Factor (EF) Conversions**

Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu)] * Conversion Factor (2.20462 lbs/kg) * Heating Value of Natural Gas (MMBtu/scf) * Conversion Factor (1,000,000 scf/MMCF)  
Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu)] * Conversion Factor (2.20462 lbs/kg) * Heating Value of the Fuel Oil (MMBtu/gal) * Conversion Factor (1000 gal/kgal)  

Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]  
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]  

Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (25) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (298).  

**Abbreviations**

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

**CO2e Equivalent Emissions (tons/yr)**

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>CO2e Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.00</td>
</tr>
</tbody>
</table>

**Worse Case CO2e Emissions (tons/yr)**

- 494.98
### Unlimited Emissions Calculations

**Company Name:** Brooks Construction Company Inc.  
**Source Address:** 5536 Hoagland Rd., Poe, Indiana 46745  
**Permit Number:** 777-41254-05190  
**Reviewer:** Brian Wright

The following calculations determine the unlimited/uncontrolled emissions from the combustion of natural gas and No. 2 fuel oil in the hot oil heating system, which is used to heat a specially designed transfer oil. The hot transfer oil is then pumped through a piping system that passes through the asphalt cement storage tanks, in order to keep the asphalt cement at the correct temperature.

Maximum Fuel Input Rate To Hot Oil Heater = 0.70 MMBtu/hr  
Natural Gas Usage = 0.00 MMCF/yr, and  
No. 2 Fuel Oil Usage = 43,800.00 gal/yr

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Natural Gas (lb/ft³)</th>
<th>No. 2 Fuel Oil (lb/gal)</th>
<th>Natural Gas</th>
<th>No. 2 Fuel Oil</th>
<th>Worse Case PTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC</td>
<td>2.60E-08</td>
<td>2.65E-05</td>
<td>0.00E+00</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>CO</td>
<td>8.90E-06</td>
<td>0.0012</td>
<td>0.000</td>
<td>0.026</td>
<td>0.026</td>
</tr>
<tr>
<td>Greenhouse Gas as CO²e*</td>
<td>26.00</td>
<td>28.00</td>
<td>0.000</td>
<td>613.20</td>
<td>613.20</td>
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<tr>
<td>Hazardous Air Pollutant</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>2.60E-08</td>
<td>3.50E-06</td>
<td>0.00E+00</td>
<td>7.67E-05</td>
<td>7.67E-05</td>
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<tr>
<td>Acenaphthene</td>
<td>5.30E-07</td>
<td>1.16E-05</td>
<td>1.16E-05</td>
<td>1.16E-05</td>
<td>1.16E-05</td>
</tr>
<tr>
<td>Acenaphthylene</td>
<td>2.00E-07</td>
<td>4.38E-06</td>
<td>4.38E-06</td>
<td>4.38E-06</td>
<td>4.38E-06</td>
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<tr>
<td>Anthracene</td>
<td>1.80E-07</td>
<td>3.94E-06</td>
<td>3.94E-06</td>
<td>3.94E-06</td>
<td>3.94E-06</td>
</tr>
<tr>
<td>Benzo/bfluoranthene</td>
<td>1.00E-07</td>
<td>2.19E-06</td>
<td>2.19E-06</td>
<td>2.19E-06</td>
<td>2.19E-06</td>
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<tr>
<td>Fluoranthene</td>
<td>4.40E-08</td>
<td>9.64E-07</td>
<td>9.64E-07</td>
<td>9.64E-07</td>
<td>9.64E-07</td>
</tr>
<tr>
<td>Fluorene</td>
<td>3.20E-08</td>
<td>7.01E-07</td>
<td>7.01E-07</td>
<td>7.01E-07</td>
<td>7.01E-07</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>1.70E-05</td>
<td>3.72E-04</td>
<td>3.72E-04</td>
<td>3.72E-04</td>
<td>3.72E-04</td>
</tr>
<tr>
<td>Phenanthrene</td>
<td>4.90E-06</td>
<td>1.07E-04</td>
<td>1.07E-04</td>
<td>1.07E-04</td>
<td>1.07E-04</td>
</tr>
<tr>
<td>Pyrene</td>
<td>3.20E-08</td>
<td>7.01E-07</td>
<td>7.01E-07</td>
<td>7.01E-07</td>
<td>7.01E-07</td>
</tr>
</tbody>
</table>

Total HAPs: 5.81E-4  
Worst Single HAP: 3.72E-4 (Naphthalene)

**Methodology**

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

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

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

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

Unlimited Potential to Emit CO²e (tons/yr) = Unlimited Potential to Emit CO2 (tons/yr) * CO2 GWP (1)

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

**Note:** There are no emission factors for CH4 and N2O available in either 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no CH4 and N2O emission anticipated from this process.

**Abbreviations**

CO = Carbon Monoxide  
VOC = Volatile Organic Compound  
CO2 = Carbon Dioxide
Appendix A.1: Unlimited Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions

Company Name: Brooks Construction Company Inc.
Source Address: 5536 Hoagland Rd., Poe, Indiana 46745
Permit Number: 777-41254-05190
Reviewer: Brian Wright

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

Asphalt Temperature, T = 325°F
Asphalt Volatility Factor, V = -0.5
Maximum Annual Asphalt Production = 3,504,000 tons/yr

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Load-Out</th>
<th>Silo Filling</th>
<th>On-Site Yard</th>
<th>Load-Out</th>
<th>Silo Filling</th>
<th>On-Site Yard</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PM</td>
<td>5.2E-04</td>
<td>5.9E-04</td>
<td>NA</td>
<td>0.91</td>
<td>1.03</td>
<td>NA</td>
<td>1.94</td>
</tr>
<tr>
<td>Organic PM</td>
<td>3.4E-04</td>
<td>2.5E-04</td>
<td>NA</td>
<td>0.60</td>
<td>0.445</td>
<td>NA</td>
<td>1.04</td>
</tr>
<tr>
<td>TOC</td>
<td>0.004</td>
<td>0.012</td>
<td>0.001</td>
<td>7.29</td>
<td>21.35</td>
<td>1.927</td>
<td>30.6</td>
</tr>
<tr>
<td>CO</td>
<td>0.001</td>
<td>0.001</td>
<td>3.5E-04</td>
<td>2.36</td>
<td>2.067</td>
<td>0.617</td>
<td>5.05</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th>PM/HAPs</th>
<th>VOC/HAPs</th>
<th>non-VOC/HAPs</th>
<th>non-VOC/non-HAPs</th>
<th>Total VOCs</th>
<th>Total HAPs</th>
<th>Worst Single HAP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.042</td>
<td>0.050</td>
<td>0.03</td>
<td>0.093</td>
<td>6.85</td>
<td>0.15</td>
<td>0.155</td>
</tr>
</tbody>
</table>

Methodology

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

Unlimited/Uncontrolled Potential to Emit (tons/yr) = (Maximum Annual Asphalt Production (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)


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

Total PM/Ef = 0.000181 + 0.00141(-V)e^((0.0251)(T+460)-20.43)
Organic PM Ef = 0.00141(-V)e^((0.0251)(T+460)-20.43)
TOC Ef = 0.0172(-V)e^((0.0251)(T+460)-20.43)
CO Ef = 0.00558(-V)e^((0.0251)(T+460)-20.43)

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

Total PM/Ef = 0.000332 + 0.00105(-V)e^((0.0251)(T+460)-20.43)
Organic PM Ef = 0.00105(-V)e^((0.0251)(T+460)-20.43)
TOC Ef = 0.0504(-V)e^((0.0251)(T+460)-20.43)
CO Ef = 0.00488(-V)e^((0.0251)(T+460)-20.43)

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

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

Abbreviations

TOC = Total Organic Compounds
CO = Carbon Monoxide
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound
### Appendix A.1: Unlimited Emissions Calculations

Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)

| Company Name: | Brooks Construction Company Inc. |
| Source Address: | 5536 Hoagland Rd., Poe, Indiana 46745 |
| Permit Number: | 777-41254-05190 |
| Reviewer: | Brian Wright |

#### Organic Particulate-Based Compounds (Table 11.1-15)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CASRN</th>
<th>Category</th>
<th>HAP Type</th>
<th>Source</th>
<th>Load-out and Onsite Yard (% by weight of Total Organic PM)</th>
<th>Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)</th>
<th>Unlimited/Uncontrolled Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PAH HAPs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acenaphthene</td>
<td>83-32-9</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.26%</td>
<td>0.014%</td>
<td>1.6E-03</td>
</tr>
<tr>
<td>Acenaphthylene</td>
<td>208-96-8</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0076%</td>
<td>0.0095%</td>
<td>2.1E-03</td>
</tr>
<tr>
<td>Anthracene</td>
<td>120-12-7</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.07%</td>
<td>0.013%</td>
<td>1.7E-04</td>
</tr>
<tr>
<td>Benzo(a)anthracene</td>
<td>56-55-3</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.019%</td>
<td>0.056%</td>
<td>6.2E-05</td>
</tr>
<tr>
<td>Benzo(b)fluoranthene</td>
<td>205-99-2</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0076%</td>
<td>0</td>
<td>4.5E-05</td>
</tr>
<tr>
<td>Benzo(k)fluoranthene</td>
<td>207-08-9</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0022%</td>
<td>0</td>
<td>1.3E-05</td>
</tr>
<tr>
<td>Benzo(g,h,i)perylene</td>
<td>191-24-2</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0019%</td>
<td>0</td>
<td>1.1E-05</td>
</tr>
<tr>
<td>Benzo(a)pyrene</td>
<td>50-32-8</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0023%</td>
<td>0</td>
<td>1.4E-05</td>
</tr>
<tr>
<td>Benzo(e)pyrene</td>
<td>192-97-2</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0078%</td>
<td>0.0095%</td>
<td>8.9E-05</td>
</tr>
<tr>
<td>Chrysene</td>
<td>218-01-9</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.103%</td>
<td>0.21%</td>
<td>9.3E-04</td>
</tr>
<tr>
<td>Dibenz(a,h)anthracene</td>
<td>53-70-3</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.00037%</td>
<td>0</td>
<td>2.2E-06</td>
</tr>
<tr>
<td>Fluoranthene</td>
<td>206-44-0</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.05%</td>
<td>0.15%</td>
<td>3.0E-04</td>
</tr>
<tr>
<td>Fluorene</td>
<td>86-73-7</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.77%</td>
<td>1.01%</td>
<td>4.6E-03</td>
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<tr>
<td>Indeno(1,2,3-cd)pyrene</td>
<td>193-39-5</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.00047%</td>
<td>0</td>
<td>2.8E-06</td>
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<tr>
<td>2-Methylnaphthalene</td>
<td>91-57-6</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>2.38%</td>
<td>5.27%</td>
<td>1.4E-02</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>1.25%</td>
<td>1.82%</td>
<td>6.2E-03</td>
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<tr>
<td>Phenanthrene</td>
<td>85-01-8</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.81%</td>
<td>1.80%</td>
<td>8.8E-03</td>
</tr>
<tr>
<td>Pyrene</td>
<td>129-00-0</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.15%</td>
<td>0.44%</td>
<td>8.8E-03</td>
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<tr>
<td><strong>Total PAH HAPs</strong></td>
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<td></td>
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<td></td>
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<td>0.086</td>
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<td><strong>Other semi-volatile HAPs</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Phenol</td>
<td>PM/HAP</td>
<td>---</td>
<td>Organic PM</td>
<td>1.18%</td>
<td>0</td>
<td>7.0E-03</td>
<td>0</td>
</tr>
</tbody>
</table>

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

**Methodology**

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


**Abbreviations**

PM = Particulate Matter

HAP = Hazardous Air Pollutant

POM = Polycyclic Organic Matter
### Organic Volatile-Based Compounds (Table 11.1-16)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CASRN</th>
<th>Category</th>
<th>HAP Type</th>
<th>Source</th>
<th>Load-out and Onsite Yard (% by weight of TOC)</th>
<th>Silo Filling and Asphalt Storage Tank (% by weight of TOC)</th>
<th>Unlimited/Uncontrolled Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methane</td>
<td>74-82-8</td>
<td>non-VOC/non-HAP</td>
<td>---</td>
<td>TOC</td>
<td>6.50%</td>
<td>0.26%</td>
<td>4.7E-01 5.8E-02 1.3E-01 1.3E-01 0.854</td>
</tr>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>non-VOC/non-HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.048%</td>
<td>0.055%</td>
<td>3.4E-03 1.2E-02 8.9E-04 0.016</td>
</tr>
<tr>
<td>Ethylene</td>
<td>74-85-1</td>
<td>non-VOC/non-HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.71%</td>
<td>1.10%</td>
<td>5.2E-02 2.3E-01 1.4E-02 0.300</td>
</tr>
<tr>
<td>Total non-VOC/non-HAPS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.30%</td>
<td>1.40%</td>
<td>0.532 0.299 0.141 0.97</td>
</tr>
<tr>
<td>Volatile organic HAPs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.052%</td>
<td>0.032%</td>
<td>3.8E-03 6.8E-03 1.0E-03 1.2E-02</td>
</tr>
<tr>
<td>Benzene</td>
<td>71-43-2</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.006%</td>
<td>0.0049%</td>
<td>7.0E-04 1.8E-03 1.9E-04 1.9E-03</td>
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<tr>
<td>Bromomethane</td>
<td>74-83-9</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.049%</td>
<td>0.039%</td>
<td>3.6E-03 8.3E-03 9.4E-04 1.3E-02</td>
</tr>
<tr>
<td>2-Butanone</td>
<td>78-93-3</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.013%</td>
<td>0.016%</td>
<td>9.5E-04 3.4E-03 2.5E-04 4.6E-03</td>
</tr>
<tr>
<td>Carbon Disulfide</td>
<td>75-15-0</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.00021%</td>
<td>0.004%</td>
<td>1.5E-05 8.5E-04 4.0E-06 8.7E-04</td>
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<tr>
<td>Chloroethane</td>
<td>75-00-3</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.015%</td>
<td>0.023%</td>
<td>1.1E-03 4.9E-03 2.9E-04 6.3E-03</td>
</tr>
<tr>
<td>Chloromethane</td>
<td>74-87-3</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.11%</td>
<td>0</td>
<td>8.0E-03 0 2.1E-03 1.0E-02</td>
</tr>
<tr>
<td>Cumene</td>
<td>92-82-8</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.28%</td>
<td>0.038%</td>
<td>2.0E-02 8.1E-03 5.4E-03 0.034</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.086%</td>
<td>0.099%</td>
<td>6.4E-03 1.5E-01 1.7E-03 0.155</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>100-54-3</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.15%</td>
<td>0.10%</td>
<td>1.1E-02 2.1E-02 2.9E-03 0.035</td>
</tr>
<tr>
<td>Isocynate</td>
<td>540-04-1</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.00018%</td>
<td>0.00031%</td>
<td>1.3E-04 6.8E-05 3.5E-05 2.3E-04</td>
</tr>
<tr>
<td>Methylen Chloride</td>
<td>75-09-2</td>
<td>non-VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0</td>
<td>0.00027%</td>
<td>0 5.8E-05 0 5.8E-05</td>
</tr>
<tr>
<td>MTBE</td>
<td>1634-04-4</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0</td>
<td>0</td>
<td>5.3E-04 0 1.2E-03 0.14E-04 1.8E-03</td>
</tr>
<tr>
<td>Styrene</td>
<td>100-42-5</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.0073%</td>
<td>0.0054%</td>
<td>5.3E-04 1.2E-03 1.4E-04 1.8E-03</td>
</tr>
<tr>
<td>Tetrachloroethene</td>
<td>127-18-4</td>
<td>non-VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.0077%</td>
<td>0</td>
<td>5.8E-04 0 1.5E-04 7.1E-04</td>
</tr>
<tr>
<td>Toluene</td>
<td>100-88-3</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.21%</td>
<td>0.062%</td>
<td>1.5E-02 1.3E-02 4.0E-03 0.033</td>
</tr>
<tr>
<td>Trichloroethane</td>
<td>71-55-6</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0</td>
<td>0</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>Trichloroethylene</td>
<td>79-01-6</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.0013%</td>
<td>0</td>
<td>9.5E-05 0 2.5E-05 1.2E-04</td>
</tr>
<tr>
<td>Trichlorofluoromethane</td>
<td>75-69-4</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.41%</td>
<td>0.20%</td>
<td>3.0E-02 4.3E-02 7.9E-03 0.089</td>
</tr>
<tr>
<td>m/p-Xylene</td>
<td>1330-20-7</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.08%</td>
<td>0.057%</td>
<td>5.6E-03 1.2E-02 1.5E-03 2.0E-02</td>
</tr>
<tr>
<td>o-Xylene</td>
<td>95-47-6</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.09%</td>
<td>0.057%</td>
<td>5.6E-03 1.2E-02 1.5E-03 2.0E-02</td>
</tr>
</tbody>
</table>

**Total volatile organic HAPs**

<table>
<thead>
<tr>
<th></th>
<th>Load-out</th>
<th>Silo Filling</th>
<th>Onsite Yard</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.50%</td>
<td>1.30%</td>
<td>0.109</td>
<td>0.278</td>
<td>0.029</td>
</tr>
</tbody>
</table>

**Methodology**

Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Speciation Profile (%)] * [TOC (tons/yr)]


**Abbreviations**

TOC = Total Organic Compounds  
HAP = Hazardous Air Pollutant  
VOC = Volatile Organic Compound  
MTBE = Methyl tert butyl ether
Appendix A.1: Unlimited Emissions Calculations

Material Storage Piles

Company Name: Brooks Construction Company Inc.
Source Address: 5536 Hoagland Rd., Poe, Indiana 46745
Permit Number: 777-41254-05190
Reviewer: Brian Wright

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.

\[
Ef = 1.7^{*}(s/1.5)^{*}(365-p)/235^{*}(f/15)
\]

where \( Ef \) = 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

<table>
<thead>
<tr>
<th>Material</th>
<th>Silt Content (wt %)*</th>
<th>Emission Factor (lb/acre/day)</th>
<th>Maximum Anticipated Pile Size (acres)**</th>
<th>PTE of PM (tons/yr)</th>
<th>PTE of PM10/PM2.5 (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand</td>
<td>2.6</td>
<td>3.01</td>
<td>0.80</td>
<td>0.439</td>
<td>0.154</td>
</tr>
<tr>
<td>Limestone</td>
<td>1.8</td>
<td>1.85</td>
<td>1.30</td>
<td>0.439</td>
<td>0.154</td>
</tr>
<tr>
<td>RAP</td>
<td>0.5</td>
<td>0.58</td>
<td>1.40</td>
<td>0.148</td>
<td>0.052</td>
</tr>
<tr>
<td>Gravel</td>
<td>1.6</td>
<td>1.85</td>
<td>1.20</td>
<td>0.406</td>
<td>0.142</td>
</tr>
<tr>
<td>Shingles</td>
<td>0.5</td>
<td>0.58</td>
<td>1.40</td>
<td>0.148</td>
<td>0.052</td>
</tr>
<tr>
<td>Slag</td>
<td>3.8</td>
<td>4.40</td>
<td>1.00</td>
<td>0.803</td>
<td>0.281</td>
</tr>
</tbody>
</table>

**Totals** 2.38 0.83

Methodology
\[
PTE \text{ of PM (tons/yr)} = (\text{Emission Factor (lb/acre/day)}) \times (\text{Maximum Pile Size (acres)}) \times (\text{ton/2000 lbs}) \times (8760 \text{ hours/yr})
\]
\[
PTE \text{ of PM10/PM2.5 (tons/yr)} = (\text{Potential PM Emissions (tons/yr)}) \times 35%
\]
*Silt content values obtained from AP-42 Table 13.2.4-1 (dated 1/95)
**Maximum anticipated pile size (acres) provided by the source.
PM2.5 = PM10

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PTE = Potential to Emit
RAP = Recycled Asphalt Pavement
Appendix A.1: Unlimited Emissions Calculations

Material Processing, Handling, Crushing, Screening, and Conveying

Company Name: Brooks Construction Company Inc.
Source Address: 5536 Hoagland Rd., Poe, Indiana 46745
Permit Number: 777-41254-05190
Reviewer: Brian Wright

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

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

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

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

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

Maximum Annual Asphalt Production = 3,504,000 tons/yr
Percent Asphalt Cement/Binder (weight %) = 5.0%
Maximum Material Handling Throughput = 3,328,800 tons/yr

<table>
<thead>
<tr>
<th>Type of Activity</th>
<th>Unlimited/Uncontrolled PTE of PM</th>
<th>Unlimited/Uncontrolled PTE of PM10</th>
<th>Unlimited/Uncontrolled PTE of PM2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(tons/yr)</td>
<td>(tons/yr)</td>
<td>(tons/yr)</td>
</tr>
<tr>
<td>Truck unloading of materials into storage piles</td>
<td>3.77</td>
<td>1.78</td>
<td>0.27</td>
</tr>
<tr>
<td>Front-end loader dumping of materials into feeder bins</td>
<td>3.77</td>
<td>1.78</td>
<td>0.27</td>
</tr>
<tr>
<td>Conveyor dropping material into dryer/mixer or batch tower</td>
<td>3.77</td>
<td>1.78</td>
<td>0.27</td>
</tr>
<tr>
<td>Total (tons/yr)</td>
<td>11.32</td>
<td>5.35</td>
<td>0.81</td>
</tr>
</tbody>
</table>

Methodology

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

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

Material Screening and Conveying (AP-42 Section 11.19.2)

To estimate potential fugitive dust emissions from raw material crushing, screening, and conveying, AP-42 emission factors for Crushed Stone Processing Operations, Section 11.19.2 (dated 8/04) are utilized.

<table>
<thead>
<tr>
<th>Operation</th>
<th>Uncontrolled Emission Factor for PM (lbs/ton)*</th>
<th>Uncontrolled Emission Factor for PM10 (lbs/ton)*</th>
<th>Unlimited/Uncontrolled PTE of PM (tons/yr)</th>
<th>Unlimited/Uncontrolled PTE of PM10/PM2.5 (tons/yr)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening</td>
<td>0.025</td>
<td>0.0087</td>
<td>41.61</td>
<td>14.48</td>
</tr>
<tr>
<td>Conveying</td>
<td>0.003</td>
<td>0.0011</td>
<td>4.99</td>
<td>1.83</td>
</tr>
<tr>
<td>Total (tons/yr)</td>
<td>46.58</td>
<td>16.31</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Methodology

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

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

Raw materials may include stone, gravel, slag, and recycled asphalt pavement (RAP).

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

*Uncontrolled emissions factors for PM/PM10 represent tertiary crushing of stone with moisture content ranging from 0.21 to 1.3 percent by weight (Table 11.19.2-2). The bulk moisture content of aggregate in the storage piles at a hot mix asphalt production plant typically stabilizes between 3 to 5 percent by weight (Source: AP-42 Section 11.1.1.1).

**Assumes PM10 = PM2.5

Abbreviations

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

*Worst case annual mean wind speed (Indianapolis, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2006

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

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

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

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

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

Maximum Annual Asphalt Production = 3,504,000 tons/yr
Percent Asphalt Cement/Binder (weight %) = 5.0%
Maximum Material Handling Throughput = 3,328,800 tons/yr

<table>
<thead>
<tr>
<th>Type of Activity</th>
<th>Unlimited/Uncontrolled PTE of PM</th>
<th>Unlimited/Uncontrolled PTE of PM10</th>
<th>Unlimited/Uncontrolled PTE of PM2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(tons/yr)</td>
<td>(tons/yr)</td>
<td>(tons/yr)</td>
</tr>
<tr>
<td>Truck unloading of materials into storage piles</td>
<td>3.77</td>
<td>1.78</td>
<td>0.27</td>
</tr>
<tr>
<td>Front-end loader dumping of materials into feeder bins</td>
<td>3.77</td>
<td>1.78</td>
<td>0.27</td>
</tr>
<tr>
<td>Conveyor dropping material into dryer/mixer or batch tower</td>
<td>3.77</td>
<td>1.78</td>
<td>0.27</td>
</tr>
<tr>
<td>Total (tons/yr)</td>
<td>11.32</td>
<td>5.35</td>
<td>0.81</td>
</tr>
</tbody>
</table>

Methodology

The percent asphalt cement/binder provided by the source.

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

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

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

Material Screening and Conveying (AP-42 Section 11.19.2)

To estimate potential fugitive dust emissions from raw material crushing, screening, and conveying, AP-42 emission factors for Crushed Stone Processing Operations, Section 11.19.2 (dated 8/04) are utilized.

<table>
<thead>
<tr>
<th>Operation</th>
<th>Uncontrolled Emission Factor for PM (lbs/ton)*</th>
<th>Uncontrolled Emission Factor for PM10 (lbs/ton)*</th>
<th>Unlimited/Uncontrolled PTE of PM (tons/yr)</th>
<th>Unlimited/Uncontrolled PTE of PM10/PM2.5 (tons/yr)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening</td>
<td>0.025</td>
<td>0.0087</td>
<td>41.61</td>
<td>14.48</td>
</tr>
<tr>
<td>Conveying</td>
<td>0.003</td>
<td>0.0011</td>
<td>4.99</td>
<td>1.83</td>
</tr>
<tr>
<td>Total (tons/yr)</td>
<td>46.58</td>
<td>16.31</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Methodology

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

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

Raw materials may include stone, gravel, slag, and recycled asphalt pavement (RAP).

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

*Uncontrolled emissions factors for PM/PM10 represent tertiary crushing of stone with moisture content ranging from 0.21 to 1.3 percent by weight (Table 11.19.2-2). The bulk moisture content of aggregate in the storage piles at a hot mix asphalt production plant typically stabilizes between 3 to 5 percent by weight (Source: AP-42 Section 11.1.1.1).

**Assumes PM10 = PM2.5

Abbreviations

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

*Worst case annual mean wind speed (Indianapolis, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2006
Appendix A.1: Unlimited Emissions Calculations
Fugitive Dust from Concrete Crushing Operations
Material Processing and Handling

Company Name: Brooks Construction Company Inc.
Source Address: 5536 Hoagland Rd., Poe, Indiana 46745
Permit Number: 777-41245-05190
Reviewer: Brian Wright

Batch or Continuous Drop Operations (AP-42 Section 13.2.4)
To estimate potential fugitive dust emissions from processing and handling of concrete (batch or continuous drop operations), AP-42 emission factors for Aggregate Handling, Section 13.2.4 (fifth edition, updated 11/06) are utilized.

\[ EF = k^* (0.0032) * [U/5^{1.3}] / [M/2^{1.4}] \]

where:
- \[ EF \] = Emission factor (lb/ton)
- \[ k \] = particle size multiplier (0.74 assumed for aerodynamic diameter <=100 um)
- \[ k \] = particle size multiplier (0.35 assumed for aerodynamic diameter <=10 um)
- \[ k \] = particle size multiplier (0.053 assumed for aerodynamic diameter <=2.5 um)
- \[ U \] = worst case annual mean wind speed (Source: NOAA, 2007*)
- \[ M \] = material % moisture content of concrete (Source: AP-42 Section 13.2.4-4)

Maximum Material Handling Throughput = 1,314,000 tons/yr

<table>
<thead>
<tr>
<th>Type of Activity</th>
<th>Unlimited/Uncontrolled PTE of PM (tons/yr)</th>
<th>Unlimited/Uncontrolled PTE of PM10 (tons/yr)</th>
<th>Unlimited/Uncontrolled PTE of PM2.5 (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck unloading of materials into storage piles</td>
<td>2.84</td>
<td>1.35</td>
<td>0.20</td>
</tr>
<tr>
<td>Front-end loader dumping of materials into feeder bins</td>
<td>2.84</td>
<td>1.35</td>
<td>0.20</td>
</tr>
<tr>
<td>Conveyor dropping material into crusher</td>
<td>2.84</td>
<td>1.35</td>
<td>0.20</td>
</tr>
<tr>
<td><strong>Total (tons/yr)</strong></td>
<td>8.53</td>
<td>4.04</td>
<td>0.61</td>
</tr>
</tbody>
</table>

Material Screening and Conveying (AP-42 Section 11.19.2)
To estimate potential fugitive dust emissions from concrete crushing, screening, and conveying, AP-42 emission factors for Crushed Stone Processing Operations, Section 11.19.2 (dated 8/04) are utilized.

<table>
<thead>
<tr>
<th>Operation</th>
<th>Uncontrolled Emission Factor for PM (lbs/ton)*</th>
<th>Uncontrolled Emission Factor for PM10 (lbs/ton)*</th>
<th>Unlimited/Uncontrolled PTE of PM (tons/yr)</th>
<th>Unlimited/Uncontrolled PTE of PM10/PM2.5 (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crushing</td>
<td>0.0054</td>
<td>0.0024</td>
<td>3.55</td>
<td>1.58</td>
</tr>
<tr>
<td>Screening</td>
<td>0.025</td>
<td>0.0087</td>
<td>16.43</td>
<td>5.72</td>
</tr>
<tr>
<td>Conveying</td>
<td>0.003</td>
<td>0.0011</td>
<td>1.97</td>
<td>0.72</td>
</tr>
</tbody>
</table>

**Limited Potential to Emit (tons/yr) = 21.94**

**Notes**
- Uncontrolled emissions factors for PM/PM10 represent tertiary crushing of stone with moisture content ranging from 0.21 to 1.3 percent by weight (AP-42 Table 11.19.2-2).
### 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

- $4,032,000$ tons/yr

#### Percent Asphalt Cement/Binder (weight %)

- $80\%$

#### Maximum Material Handling Throughput

- $13,788,839$ tons/yr

#### Maximum Asphalt Cement/Binder Throughput

- $17,107,532$ tons/yr

#### Maximum No. 2 Fuel Oil Usage

- $8,760$ gallons/yr

#### Maximum one-way Distance (feet/trip)

- $1,500$ feet

#### Average Vehicle Weight per Trip (ton/trip)

- $36.5$ tons

#### Maximum one-way miles (miles/yr)

- $6,098$ miles

#### Process

- **Asphalt Concrete Truck Enter Empty**
  - **Process Vehicle Type**
  - **Unmitigated PTE of PM**
    - **PM**
    - **PM2.5**
  - **Controlled PTE of PM**
    - **PM**
    - **PM2.5**
  - **Unmitigated PTE of PM**
    - **PM**
    - **PM2.5**
  - **Controlled PTE of PM**
    - **PM**
    - **PM2.5**

- **Asphalt Concrete Truck Load Full**
  - **Process Vehicle Type**
  - **Unmitigated PTE of PM**
    - **PM**
    - **PM2.5**
  - **Controlled PTE of PM**
    - **PM**
    - **PM2.5**
  - **Unmitigated PTE of PM**
    - **PM**
    - **PM2.5**
  - **Controlled PTE of PM**
    - **PM**
    - **PM2.5**

#### Maximum one-way Distance (feet/trip)

- $2,000$ feet

#### Average Vehicle Weight Per Trip = $36.0$ tons

#### Maximum one-way Distance (miles/yr) = $6,098$ miles

#### Maximum one-way miles (miles/yr) = $6,098$ miles

#### 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

- $36.5$ tons

#### Average Vehicle Weight = $36.0$ tons

#### Maximum one-way Distance

- $2,000$ feet

#### Maximum one-way Distance (miles/yr)

- $6,098$ miles

#### Maximum one-way Distance (miles/yr) = $6,098$ miles

#### Maximum one-way Distance (feet/trip)

- $1,500$ feet

#### Maximum one-way Distance (miles/yr) = $6,098$ miles

#### Average Vehicle Weight Per Trip = $36.0$ tons

#### Maximum one-way Distance (miles/yr) = $6,098$ miles

#### Average Vehicle Weight Per Trip = $36.0$ tons

#### Maximum one-way Distance (miles/yr) = $6,098$ miles

#### Average Vehicle Weight Per Trip = $36.0$ tons

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#### Average Vehicle Weight Per Trip = $36.0$ tons

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#### Average Vehicle Weight Per Trip = $36.0$ tons

#### Maximum one-way Distance (miles/yr) = $6,098$ miles

#### Average Vehicle Weight Per Trip = $36.0$ tons

#### Maximum one-way Distance (miles/yr) = $6,098$ miles

#### Average Vehicle Weight Per Trip = $36.0$ tons

#### Maximum one-way Distance (miles/yr) = $6,098$ miles

#### Average Vehicle Weight Per Trip = $36.0$ tons
### Table: Emissions Calculations

#### Process

<table>
<thead>
<tr>
<th>Process</th>
<th>Vehicle Type</th>
<th>Maximum Weight of Vehicle and Load (tons)</th>
<th>Average Miles Per Trip (tons/yr)</th>
<th>Maximum Annual Asphalt Production (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate/MP Truck Enter Full</td>
<td>Dumper (16 CY)</td>
<td>2.0</td>
<td>2.0</td>
<td>0.57</td>
</tr>
<tr>
<td>Aggregate/MP Truck Leave Full</td>
<td>Dumper (16 CY)</td>
<td>2.0</td>
<td>2.0</td>
<td>0.57</td>
</tr>
<tr>
<td>Asphalt Cement/Binder Truck Enter Full</td>
<td>Tanker truck (5000 gal)</td>
<td>2.0</td>
<td>2.0</td>
<td>0.57</td>
</tr>
<tr>
<td>Asphalt Cement/Binder Truck Leave Empty</td>
<td>Tanker truck (5000 gal)</td>
<td>2.0</td>
<td>2.0</td>
<td>0.57</td>
</tr>
<tr>
<td>Fuel Oil Truck Enter Full</td>
<td>Tanker truck (5000 gal)</td>
<td>2.0</td>
<td>2.0</td>
<td>0.57</td>
</tr>
<tr>
<td>Fuel Oil Truck Leave Empty</td>
<td>Tanker truck (5000 gal)</td>
<td>2.0</td>
<td>2.0</td>
<td>0.57</td>
</tr>
<tr>
<td>Aggregate/MP Loader Full</td>
<td>Front-end loader (3 CY)</td>
<td>2.0</td>
<td>2.0</td>
<td>0.57</td>
</tr>
<tr>
<td>Aggregate/MP Loader Empty</td>
<td>Front-end loader (3 CY)</td>
<td>2.0</td>
<td>2.0</td>
<td>0.57</td>
</tr>
<tr>
<td>Asphalt Concrete Truck Leave Full</td>
<td>Dumper (16 CY)</td>
<td>2.0</td>
<td>2.0</td>
<td>0.57</td>
</tr>
<tr>
<td>Asphalt Concrete Truck Leave Empty</td>
<td>Dumper (16 CY)</td>
<td>2.0</td>
<td>2.0</td>
<td>0.57</td>
</tr>
</tbody>
</table>

#### Emissions Calculations

### Maximum Asphalt Cement/Binder Throughput

\[
\text{Maximum Asphalt Cement/Binder Throughput} = \frac{\text{Maximum Weight of Vehicle and Load (tons)}}{\text{Average Miles Per Trip (tons/yr)}} \times \text{Maximum Annual Asphalt Production (tons/yr)}
\]

### Maximum Material Handling Throughput

\[
\text{Maximum Material Handling Throughput} = \frac{\text{Maximum Weight of Vehicle and Load (tons)}}{\text{Average Miles Per Trip (tons/yr)}} \times \text{Maximum Material Handling Throughput (tons/yr)}
\]

### Maximum No. 2 Fuel Oil Usage

\[
\text{Maximum No. 2 Fuel Oil Usage} = \frac{\text{Maximum Weight of Vehicle and Load (tons)}}{\text{Average Miles Per Trip (tons/yr)}} \times \text{Maximum No. 2 Fuel Oil Usage (tons/yr)}
\]

### Maximum one-way distance

\[
\text{Maximum one-way distance} = \text{Average Miles Per Trip (tons/yr)} \times \text{Average Miles Per Trip (tons/yr)}
\]

### Maximum one-way miles

\[
\text{Maximum one-way miles} = \frac{\text{Maximum one-way distance}}{5280 \text{ ft/mile}}
\]

### Average Vehicle Weight Per Trip

\[
\text{Average Vehicle Weight Per Trip} = \frac{\text{Maximum Weight of Vehicle and Load (tons)}}{\text{Maximum Miles Per Year (tons/yr)}}
\]

### Mitigated Emission Factor

\[
\text{Mitigated Emission Factor} = \text{Unmitigated Emission Factor} \times (1 - \text{Dust Control Efficiency})
\]

### Emissions Calculations

\[
\begin{align*}
\text{PTE of PM10} & = \text{Maximum Averaged Weight (tons)} \times \text{Mitigated Emission Factor (lb/mile)} \\
\text{PTE of PM2.5} & = \text{Maximum Averaged Weight (tons)} \times \text{Mitigated Emission Factor (lb/mile)}
\end{align*}
\]

### Control Measures

- **PM10 = Particulate Matter**
- **PM2.5 = Particulate Matter**
- **PM = Particulate Matter**

### Approximation Errors

- **PM10 = Particulate Matter (± 10%)**
- **PM2.5 = Particulate Matter (± 25%)**
- **PTE = Potential to Emit**
Appendix A.2: Limited Emissions Summary

Company Name: Brooks Construction Company Inc.
Source Address: 5536 Hoagland Rd., Poe, Indiana 46745
Permit Number: 777-41254-05190
Reviewer: Brian Wright

Entire Source - Drum Mix

### Asphalt Plant Limitations - Drum Mix

<p>| | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Hourly Asphalt Production</td>
<td>400 ton/hr</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual Asphalt Production Limitation</td>
<td>1,475,000 ton/yr</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blast Furnace Slag Usage Limitation</td>
<td>132,750 ton/yr</td>
<td>1.50 % sulfur</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steel Slag Usage Limitation</td>
<td>132,750 ton/yr</td>
<td>0.66 % sulfur</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Dryer Fuel Input Rate</td>
<td>134 MMBtu/hr</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Gas Limitation</td>
<td>0.00 MMCF/yr</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. 2 Fuel Oil Limitation</td>
<td>0.00 gal/yr, and</td>
<td>1.00 % sulfur</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propane Limitation</td>
<td>0.00 gal/yr, and</td>
<td>0.22 gr/100 ft3 sulfur</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butane Limitation</td>
<td>0.00 gal/yr, and</td>
<td>0.20 gr/100 ft3 sulfur</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used/Waste Oil Limitation</td>
<td>657,518 gal/yr, and</td>
<td>0.65 % ash</td>
<td>0.40 % chlorine,</td>
<td>0.040 % lead</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Limited/Controlled Emissions

<table>
<thead>
<tr>
<th>Process Description</th>
<th>Criteria Pollutants</th>
<th>Limited/Controlled Potential Emissions (tons/year)</th>
<th>Hazardous Air Pollutants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ducted Emissions</td>
<td></td>
<td>PM</td>
<td>PM10</td>
</tr>
<tr>
<td>Dryer Fuel Combustion (worst case)</td>
<td></td>
<td>13.68</td>
<td>10.90</td>
</tr>
<tr>
<td>Dryer/Mixer (Process)</td>
<td></td>
<td>0.116</td>
<td>0.099</td>
</tr>
<tr>
<td>Dryer/Mixer Slag Processing</td>
<td></td>
<td>0.021</td>
<td>0.014</td>
</tr>
<tr>
<td>Hot Oil Heater Fuel Combustion/Process (worst case)</td>
<td></td>
<td>0.04</td>
<td>0.07</td>
</tr>
<tr>
<td>Worst Case Emissions*</td>
<td>158.91</td>
<td>70.87</td>
<td>85.93</td>
</tr>
<tr>
<td>Fugitive Emissions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asphalt Load-Out, Silo Filling, On-Site Yard</td>
<td></td>
<td>0.82</td>
<td>0.82</td>
</tr>
<tr>
<td>Material Storage Piles</td>
<td></td>
<td>0.38</td>
<td>0.38</td>
</tr>
<tr>
<td>Material Processing and Handling</td>
<td></td>
<td>0.75</td>
<td>0.75</td>
</tr>
<tr>
<td>Material Crushing, Screening, and Conveying</td>
<td></td>
<td>26.93</td>
<td>9.54</td>
</tr>
<tr>
<td>Unpaved and Paved Roads (worst case)</td>
<td></td>
<td>52.35</td>
<td>13.34</td>
</tr>
<tr>
<td>Total Fugitive Emissions</td>
<td>90.09</td>
<td>28.13</td>
<td>13.07</td>
</tr>
</tbody>
</table>

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

Fuel component percentages provided by the source.

negl = negligible
Worst Case Fuel Combustion is based on the fuel with the highest emissions for each specific pollutant.
### Fuel Limitations

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

#### Limited Emissions

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Natural Gas (lb/MMCF)</th>
<th>Fuel Oil (lb/gal)</th>
<th>Propane (lb/MMCF)</th>
<th>Butane (lb/MMCF)</th>
<th>Waste Oil (lb/MMCF)</th>
<th>Limited Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM/PM2.5</td>
<td>7.6</td>
<td>3.3</td>
<td>8.3</td>
<td>9.315</td>
<td>0.6</td>
<td>0.8 - 33.15</td>
</tr>
<tr>
<td>SO2</td>
<td>0.6</td>
<td>71.0</td>
<td>150.0</td>
<td>76.5</td>
<td>0.020</td>
<td>0.00 - 17.0</td>
</tr>
<tr>
<td>NOx</td>
<td>190</td>
<td>34.0</td>
<td>41.0</td>
<td>45.1</td>
<td>5.3</td>
<td>0.00 - 11.3</td>
</tr>
<tr>
<td>VOC</td>
<td>5.5</td>
<td>0.20</td>
<td>0.20</td>
<td>0.28</td>
<td>0.00</td>
<td>0.00 - 1.0</td>
</tr>
</tbody>
</table>

**Hazardous Air Pollutant**

<table>
<thead>
<tr>
<th>Chemicals</th>
<th>No. 2 Fuel Oil Limitation</th>
<th>No. 4 Fuel Oil Limitation</th>
<th>Residual (No. 5 or No. 6) Fuel Oil Limitation</th>
<th>Used/Waste Oil Limitation</th>
<th>Limited Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAP</td>
<td>1.28E-04</td>
<td>1.13E-03</td>
<td>1.13E-04</td>
<td>1.13E-03</td>
<td>9.56E-06</td>
</tr>
<tr>
<td><strong>Total PAH Haps</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.56E-06</td>
</tr>
<tr>
<td><strong>Total VOC</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.56E-06</td>
</tr>
</tbody>
</table>

#### Methodology

- **Natural Gas**: Limited Potential to Emit (tons/yr) = (Natural Gas Limitation (MMC/Fy)) * (Emission Factor (lb/MMCF))
- **Fuel Oil**: Limited Potential to Emit (tons/yr) = (Fuel Limitation (gals/yr)) * (Emission Factor (lb/kgal)) * (kgal/1000 gal) * (ton/2000 lbs)

#### Abbreviations

- PM = Particulate Matter
- HAP = Hazardous Air Pollutant
- PM2.5 = Particulate Matter (<10 um)
- NOx = Nitrous Oxides
- SO2 = Sulfur Dioxide
- VOC = Volatile Organic Compounds
- PAH = Polycylic Aromatic Hydrocarbon
### Appendix A.2: Limited Emissions Summary

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

**Company Name:** Brooks Construction Company Inc.

**Source Address:** 5536 Hoagland Rd., Poe, Indiana 46745

**Permit Number:** 777-4124-05190

**Reviewer:** Brian Wright

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

#### Fuel Limitations

<table>
<thead>
<tr>
<th>Fuel</th>
<th>Limitation Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas</td>
<td>0 MMCF/yr</td>
</tr>
<tr>
<td>No. 2 Fuel Oil</td>
<td>1,361.34 gal/yr, 0.50% sulfur</td>
</tr>
<tr>
<td>No. 4 Fuel Oil</td>
<td>644.36 gal/yr, 1.00% sulfur</td>
</tr>
<tr>
<td>Propane</td>
<td>0 gal/yr, 0.25% sulfur</td>
</tr>
<tr>
<td>Butane</td>
<td>0 gal/yr, 0.25% sulfur</td>
</tr>
<tr>
<td>Used/Waste Oil</td>
<td>657,516 gal/yr, 0.65% ash, 0.400% chlorine, 0.040% lead</td>
</tr>
</tbody>
</table>

#### Limited Emissions

<table>
<thead>
<tr>
<th>CO2e Fraction</th>
<th>Emission Factor (units)</th>
<th>Global Warming Potentials (GWP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas</td>
<td>(lb/MMCF)</td>
<td></td>
</tr>
<tr>
<td>No. 2 Fuel Oil</td>
<td>(lb/kgal)</td>
<td></td>
</tr>
<tr>
<td>No. 4 Fuel Oil</td>
<td>(lb/kgal)</td>
<td></td>
</tr>
<tr>
<td>Residual (No. 5 or No. 6) Fuel Oil</td>
<td>(lb/kgal)</td>
<td></td>
</tr>
<tr>
<td>Propane</td>
<td>(lb/kgal)</td>
<td></td>
</tr>
<tr>
<td>Butane</td>
<td>(lb/kgal)</td>
<td></td>
</tr>
<tr>
<td>Used/Waste Oil</td>
<td>(lb/kgal)</td>
<td></td>
</tr>
<tr>
<td><strong>CO2</strong></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>CH4</strong></td>
<td>25</td>
<td></td>
</tr>
<tr>
<td><strong>N2O</strong></td>
<td>298</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CO2e Equivalent Emissions (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO2</td>
</tr>
<tr>
<td>CH4</td>
</tr>
<tr>
<td>N2O</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

**Methodology**

Fuel Limitations from TSD Appendix A.2, page 1 of 15.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Sources of Emission Factors for fuel combustion: Note: To form a conservative estimate, the "worst case" emission factors have been used.

Natural Gas: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for NO2 from AP-42 Chapter 1.3 Oil (dated 5/10), Table 1.3-8.

Propane and Butane: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for NO2 from AP-42 Chapter 1.5 Oil (dated 7/08), Table 1.5-1.

Waste Oil: Emission Factors for CO2, CH4, and NO2 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal.

\[
\text{Emission Factor (EF) Conversions} = \left( \frac{\text{Emission Factor (EF)}}{\text{Conversion Factor}} \right)
\]

Natural Gas: EF (lb/MMCF) = [EF (kg/mmBtu)] * Conversion Factor (2.20462 lb/kg) * Heating Value of Natural Gas (MMBtu/scf) * Conversion Factor (1,000,000 scf/MMCF)

Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu)] * Conversion Factor (2.20462 lb/kg) * Heating Value of the Fuel Oil (MMBtu/gal) * Conversion Factor (1,000 gal/MMCF)

All Other Fuels: EF (lb/kgal) = [EF (kg/MMBtu)] * Conversion Factor (1,000,000 scf/MMCF) * Conversion Factor (100 gal/MMCF) * Conversion Factor (1000 lbs)

Limited CO2e Emissions (tons/yr) = CO2 Potential Emission of "worst case" fuel (tons/yr) x CO2 GWP (25) + CH4 Potential Emission of "worst case" fuel (tons/yr) x CH4 GWP (25) + NO2 Potential Emission of "worst case" fuel (tons/yr) x NO2 GWP (259).

**Abbreviations**

CH4 = Methane  
CO2 = Carbon Dioxide  
N2O = Nitrogen Dioxide  
PTE = Potential to Emit
Appendix A.2: Limited Emissions Summary

Dryer/Mixer - Process Emissions

Company Name: Brooks Construction Company Inc.
Source Address: 5536 Hoagland Rd., Poe, Indiana 46745
Permit Number: 777-41254-05190
Reviewer: Brian Wright

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

- Maximum Hourly Asphalt Production = 400 ton/hr
- Annual Asphalt Production Limitation = 1,475,000 ton/yr

Limited Emissions Summary:

**PM Dryer/Mixer Limitation** = 0.215 lb/ton asphalt production
**PM10 Dryer/Mixer Limitation** = 0.096 lb/ton asphalt production
**PM2.5 Dryer/Mixer Limitation** = 0.116 lb/ton asphalt production
**CO Dryer/Mixer Limitation** = 0.130 lb/ton asphalt production
**VOC Dryer/Mixer Limitation** = 0.032 lb/ton asphalt production

Emission Factor or Limitation (lb/ton): Limited/Controlled Potential to Emit (tons/yr)

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Natural Gas</th>
<th>No. 2 Fuel Oil</th>
<th>Waste Oil</th>
<th>Natural Gas</th>
<th>No. 2 Fuel Oil</th>
<th>Waste Oil</th>
<th>Worse Case PTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM*</td>
<td>0.215</td>
<td>0.215</td>
<td>0.215</td>
<td>158.9</td>
<td>158.9</td>
<td>158.9</td>
<td>158.9</td>
</tr>
<tr>
<td>PM10**</td>
<td>0.096</td>
<td>0.096</td>
<td>0.096</td>
<td>70.8</td>
<td>70.8</td>
<td>70.8</td>
<td>70.8</td>
</tr>
<tr>
<td>PM2.5**</td>
<td>0.116</td>
<td>0.116</td>
<td>0.116</td>
<td>85.9</td>
<td>85.9</td>
<td>85.9</td>
<td>85.9</td>
</tr>
<tr>
<td>SO2**</td>
<td>0.003</td>
<td>0.011</td>
<td>0.058</td>
<td>2.5</td>
<td>8.1</td>
<td>42.8</td>
<td>42.8</td>
</tr>
<tr>
<td>NOx**</td>
<td>0.026</td>
<td>0.055</td>
<td>0.055</td>
<td>19.2</td>
<td>40.6</td>
<td>40.6</td>
<td>40.6</td>
</tr>
<tr>
<td>VOC**</td>
<td>0.032</td>
<td>0.032</td>
<td>0.032</td>
<td>23.6</td>
<td>23.6</td>
<td>23.6</td>
<td>23.6</td>
</tr>
<tr>
<td>CO***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>95.9</td>
</tr>
</tbody>
</table>

Hazardous Air Pollutants:

- HCl: 2.18E-04, 0.15, 0.15
- Benzene: 3.90E-04, 3.90E-04, 3.90E-04, 0.29, 0.29, 0.29
- Toluene: 1.50E-04, 2.90E-03, 2.90E-03, 0.11, 2.14, 2.14

Total HAPs: 7.56

Methodology:

- **Worst Single HAP**: 2.28E25 (formaldehyde)
- **Emission Factors from AP-42**:
- PM, PM10, and PM2.5: AP-42 emission factors based on drum mix dryer fired with natural gas, propane, fuel oil, and waste oil. According to AP-42, fuel type does not significantly affect PM, PM10, and PM2.5 emissions.
- SO2, NOx, and VOC AP-42 emission factors are for natural gas, No. 2 fuel oil, and waste oil only.
- CO AP-42 emission factor determined by combining data from drum mix dryer fired with natural gas, No. 6 fuel oil, and No. 2 fuel oil to develop single CD emission factor.

Abbreviations:

- PM = Particulate Matter
- SO2 = Sulfur Dioxide
- CO = Carbon Monoxide
- PAH = Polyaromatic Hydrocarbon
- NOx = Nitric Oxides
- HAP = Hazardous Air Pollutant
- VOC = Volatile Organic Compounds
- HCl = Hydrogen Chloride
Appendix A.2: Limited Emissions Summary
Greenhouse Gas (CO2e) Emissions from the Drum-Mix Plant (Dryer/Mixer) Process Emissions

Company Name: Brooks Construction Company Inc.
Source Address: 5536 Hoagland Rd., Poe, Indiana 46745
Permit Number: 777-41254-05190
Reviewer: Brian Wright

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

Maximum Hourly Asphalt Production = 400 ton/hr
Annual Asphalt Production Limitation = 1,475,000 ton/yr

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Natural Gas</th>
<th>No. 2 Fuel Oil</th>
<th>Waste Oil</th>
<th>Natural</th>
<th>No. 2</th>
<th>Waste Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO2</td>
<td>33</td>
<td>33</td>
<td>33</td>
<td>1</td>
<td>24,337.50</td>
<td>24,337.50</td>
</tr>
<tr>
<td>CH4</td>
<td>0.0120</td>
<td>0.0120</td>
<td>0.0120</td>
<td>25</td>
<td>8.85</td>
<td>8.85</td>
</tr>
<tr>
<td>N2O</td>
<td>298</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Total CO2e for Worst Case Fuel (tons/yr) = 24,346.35

CO2e Equivalent Emissions (tons/yr) = 24,558.75

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

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

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

Limited CO2e Emissions (tons/yr) = CO2 Potential Emission of "worst case" fuel (ton/yr) x CO2 GWP (1) + CH4 Potential Emission of "worst case" fuel (ton/yr) x CH4 GWP (25) + N2O Potential Emission of "worst case" fuel (ton/yr) x N2O GWP (298).

Abbreviations
CO2 = Carbon Dioxide    CH4 = Methane    N2O = Nitrogen Dioxide    PTE = Potential to Emit
Appendix A.2: Limited Emissions Summary
Dryer/Mixer Slag Processing

Company Name: Brooks Construction Company Inc.
Source Address: 5536 Hoagland Rd., Poe, Indiana 46745
Permit Number: 777-41254-05190
Reviewer: Brian Wright

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

<table>
<thead>
<tr>
<th>Type of Slag</th>
<th>SO2 Emission Factor (lb/ton)</th>
<th>Limited Potential to Emit SO2 (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blast Furnace Slag*</td>
<td>0.7400</td>
<td>49.1</td>
</tr>
<tr>
<td>Steel Slag**</td>
<td>0.0014</td>
<td>0.09</td>
</tr>
</tbody>
</table>

Methodology

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

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

Abbreviations
SO2 = Sulfur Dioxide

Limited Blast Furnace Slag Usage = 132,750 ton/yr 1.50% sulfur
Limited Annual Steel Slag Usage = 132,750 ton/yr 0.66% sulfur
Appendix A.2: Limited Emissions Summary

Hot Oil Heater

Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Brooks Construction Company Inc.
Source Location: 5536 Hoagland Rd., Poe, Indiana 46745
Permit Number: 777-41254-05190
Reviewer: Brian Wright

Maximum Hot Oil Heater Fuel Input Rate = 0.70 MMBtu/hr
No. 2 Fuel Oil Usage = 43,800 gal/yr, and 0.50% sulfur

<table>
<thead>
<tr>
<th>Natural Gas</th>
<th>No. 2 Fuel Oil</th>
<th>No. 2 Fuel Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>(lb/MMCF)</td>
<td>(tons/yr)</td>
<td>(tons/yr)</td>
</tr>
<tr>
<td>PM</td>
<td>7.8</td>
<td>3.3</td>
</tr>
<tr>
<td>SO2</td>
<td>0.6</td>
<td>7.10</td>
</tr>
<tr>
<td>NOx</td>
<td>100</td>
<td>20.0</td>
</tr>
<tr>
<td>VOC</td>
<td>5.5</td>
<td>0.20</td>
</tr>
<tr>
<td>CO</td>
<td>84</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Hazardous Air Pollutant

<table>
<thead>
<tr>
<th>Concentration (lb/kgal)</th>
<th>Emission Factor (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>2.0E-04</td>
</tr>
<tr>
<td>Beryllium</td>
<td>1.2E-05</td>
</tr>
<tr>
<td>Cadmium</td>
<td>1.1E-03</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.4E-03</td>
</tr>
<tr>
<td>Cobalt</td>
<td>8.4E-06</td>
</tr>
<tr>
<td>Lead</td>
<td>5.0E-04</td>
</tr>
<tr>
<td>Mercury</td>
<td>2.6E-04</td>
</tr>
<tr>
<td>Nickel</td>
<td>2.1E-03</td>
</tr>
<tr>
<td>Selenium</td>
<td>2.4E-05</td>
</tr>
<tr>
<td>Benzene</td>
<td>2.1E-03</td>
</tr>
<tr>
<td>Dichlorobenzene</td>
<td>1.2E-03</td>
</tr>
<tr>
<td>Ethylene</td>
<td>0</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>7.5E-02</td>
</tr>
<tr>
<td>Hexane</td>
<td>1.8E+00</td>
</tr>
<tr>
<td>Phenol</td>
<td>0</td>
</tr>
<tr>
<td>Toluene</td>
<td>3.4E-03</td>
</tr>
</tbody>
</table>

Total PAH Haps = negl

Total HAPs = 0.6E+00

Polycyclic Organic Matter

<table>
<thead>
<tr>
<th>Concentration (lb/kgal)</th>
<th>Emission Factor (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM2.5</td>
<td>3.3E-03</td>
</tr>
</tbody>
</table>

Methodology

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

Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gallon/140 MMBtu]

Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]

All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gal/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]

Sources of AP-42 Emission Factors for fuel combustion:

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

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

Abbreviations

PM = Particulate Matter
PM10 = Particulate Matter (>10 um)
PM2.5 = Particulate Matter (>2.5 um)
SO2 = Sulfur Dioxide
NOx = Nitrous Oxides
CO = Carbon Monoxide
HAP = Hazardous Air Pollutant
HCl = Hydrogen Chloride
PAH = Polyaromatic Hydrocarbon
VOC = Volatile Organic Compounds
Appendix A.2: Limited Emissions Summary

Greenhouse Gas (CO2e) Emissions from
Hot Oil Heater Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Brooks Construction Company Inc.
Source Address: 5536 Hoagland Rd., Poe, Indiana 46745
Permit Number: 777-41254-05190
Reviewer: Brian Wright

Maximum Hot Oil Heater Fuel Input Rate = 0.70 MMBtu/hr
Natural Gas Usage = 0.00 MMCF/yr
No. 2 Fuel Oil Usage = 43,800.00 gal/yr, 0.50 % sulfur

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Natural Gas (lb/MMCF)</th>
<th>No. 2 Fuel Oil (lb/kgal)</th>
<th>Global Warming (GWP)</th>
<th>Unlimited/Uncontrolled Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO2</td>
<td>120.161.84</td>
<td>22.901.44</td>
<td>1</td>
<td>0.00</td>
</tr>
<tr>
<td>CH4</td>
<td>2.49</td>
<td>0.91</td>
<td>25</td>
<td>0.000</td>
</tr>
<tr>
<td>N2O</td>
<td>2.20</td>
<td>0.26</td>
<td>298</td>
<td>0.000</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>0.00</td>
</tr>
</tbody>
</table>

CO2e Equivalent Emissions (tons/yr) = 0.00

Methodology

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)

Natural Gas: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from No. 2 Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from Emission Factor (EF) Conversions

Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg)] * Heating Value of Natural Gas (MMBtu/scf) * Conversion Factor (1,000,000 scf/MMCF)]
Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg)] * Heating Value of the Fuel Oil (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]

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

Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (25) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (298).

Abbreviations
CH4 = Methane   N2O = Nitrogen Dioxide
CO2 = Carbon Dioxide   PTE = Potential to Emit
Appendix A.2: Limited Emissions Summary

Hot Oil Heating System - Process Emissions

Company Name: Brooks Construction Company Inc.
Source Address: 5536 Hoagland Rd., Poe, Indiana 46745
Permit Number: 777-41254-05190
Reviewer: Brian Wright

The following calculations determine the unlimited/uncontrolled emissions from the combustion of natural gas and No. 2 fuel oil in the hot oil heating system, which is used to heat a specially designed transfer oil. The hot transfer oil is then pumped through a piping system that passes through the asphalt cement storage tanks, in order to keep the asphalt cement at the correct temperature.

Maximum Fuel Input Rate To Hot Oil Heater = 0.70 MMBtu/hr
Natural Gas Usage = 0.00 MMCF/yr, and
No. 2 Fuel Oil Usage = 43,800.00 gal/yr

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Natural Gas (lb/ft³)</th>
<th>No. 2 Fuel Oil (lb/gal)</th>
<th>Unlimited/Uncontrolled Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC</td>
<td>2.60E-08</td>
<td>2.65E-05</td>
<td>0.00E+00</td>
</tr>
<tr>
<td>CO</td>
<td>8.90E-06</td>
<td>0.0012</td>
<td>0.001</td>
</tr>
<tr>
<td>Greenhouse Gas as CO2e*</td>
<td>0.20</td>
<td>28.00</td>
<td>0.00</td>
</tr>
<tr>
<td>CO2</td>
<td>0.00</td>
<td>613.20</td>
<td>613.20</td>
</tr>
<tr>
<td>Hazardous Air Pollutant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>2.66E-08</td>
<td>3.50E-06</td>
<td>0.00E+00</td>
</tr>
<tr>
<td>Acenaphthene</td>
<td>5.30E-07</td>
<td>1.16E-05</td>
<td>1.16E-05</td>
</tr>
<tr>
<td>Acenaphthylene</td>
<td>2.00E-07</td>
<td>4.38E-06</td>
<td>4.38E-06</td>
</tr>
<tr>
<td>Anthracene</td>
<td>1.80E-07</td>
<td>3.94E-06</td>
<td>3.94E-06</td>
</tr>
<tr>
<td>Benzo(b)fluoranthene</td>
<td>1.00E-07</td>
<td>2.19E-06</td>
<td>2.19E-06</td>
</tr>
<tr>
<td>Fluoranthene</td>
<td>4.40E-08</td>
<td>9.64E-07</td>
<td>9.64E-07</td>
</tr>
<tr>
<td>Fluorene</td>
<td>3.20E-08</td>
<td>7.01E-07</td>
<td>7.01E-07</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>1.70E-05</td>
<td>3.72E-04</td>
<td>3.72E-04</td>
</tr>
<tr>
<td>Phenanthrene</td>
<td>4.90E-06</td>
<td>1.07E-04</td>
<td>1.07E-04</td>
</tr>
<tr>
<td>Pyrene</td>
<td>3.20E-08</td>
<td>7.01E-07</td>
<td>7.01E-07</td>
</tr>
<tr>
<td>Total HAPs</td>
<td>5.81E-04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worst Single HAP</td>
<td>3.72E-04</td>
<td></td>
<td>(Naphthalene)</td>
</tr>
</tbody>
</table>

Methodology

Natural Gas Usage (MMCF/yr) = (Maximum Fuel Input Rate (MMBtu/hr)) * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
No. 2 Fuel Oil Usage (gal/yr) = (Maximum Fuel Input Rate (MMBtu/hr)) * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Natural Gas: Potential to Emit (tons/yr) = (Natural Gas Usage (MMCF/yr)) * (Emission Factor (lb/MMCF)) * (1 ton/2000 lbs)
No. 2 Fuel Oil: Potential to Emit (tons/yr) = (No. 2 Fuel Oil Usage (gal/yr)) * (Emission Factor (lb/gal)) * (1 ton/2000 lbs)
Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 (tons/yr) * CO2 GWP (1)

Note: There are no emission factors for CH4 and N2O available in either 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no CH4 and N2O emission anticipated from this process.

Abbreviations

CO = Carbon Monoxide  VOC = Volatile Organic Compound  CO2 = Carbon Dioxide
Appendix A.2: Limited Emissions Summary
Asphalt Load-Out, Silo Filling, and Yard Emissions

Company Name: Brooks Construction Company Inc.
Source Address: 5536 Hoagland Rd., Poe, Indiana 46745
Permit Number: 777-41254-05190
Reviewer: Brian Wright

Asphalt Temperature, T = 325°F
Asphalt Volatility Factor, V = -0.5
Annual Asphalt Production Limitation = 1,475,000 tons/yr

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Load-Out</th>
<th>Silo Filling</th>
<th>On-Site Yard</th>
<th>Load-Out</th>
<th>Silo Filling</th>
<th>On-Site Yard</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PM*</td>
<td>5.2E-04</td>
<td>5.9E-04</td>
<td>NA</td>
<td>0.38</td>
<td>0.43</td>
<td>NA</td>
<td>0.82</td>
</tr>
<tr>
<td>Organic PM</td>
<td>3.4E-04</td>
<td>2.5E-04</td>
<td>NA</td>
<td>0.29</td>
<td>0.187</td>
<td>NA</td>
<td>0.44</td>
</tr>
<tr>
<td>TOC</td>
<td>0.004</td>
<td>0.012</td>
<td>0.001</td>
<td>3.07</td>
<td>8.99</td>
<td>0.811</td>
<td>12.9</td>
</tr>
<tr>
<td>CO</td>
<td>0.001</td>
<td>0.001</td>
<td>3.5E-04</td>
<td>1.00</td>
<td>0.870</td>
<td>0.260</td>
<td>2.12</td>
</tr>
</tbody>
</table>

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

Methodology
The asphalt temperature and volatility factor were provided by the source.
Limited Potential to Emit (tons/yr) = (Annual Asphalt Production Limitation (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)

Plant Load-Out Emission Factor Equations (AP-42 Table 11.1-14):
Total PM/PM10 EF = 0.000181 + 0.00141(-V)e^((0.0251)(T+460)-20.43)
Organic PM EF = 0.00141(-V)e^((0.0251)(T+460)-20.43)
TOC EF = 0.0172(-V)e^((0.0251)(T+460)-20.43)
CO EF = 0.00558(-V)e^((0.0251)(T+460)-20.43)

Silo Filling Emission Factor Equations (AP-42 Table 11.1-14):
PM/PM10 EF = 0.000332 + 0.00105(-V)e^((0.0251)(T+460)-20.43)
Organic PM EF = 0.00105(-V)e^((0.0251)(T+460)-20.43)
TOC EF = 0.0504(-V)e^((0.0251)(T+460)-20.43)
CO EF = 0.0048(-V)e^((0.0251)(T+460)-20.43)

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

Abbreviations
TOC = Total Organic Compounds
CO = Carbon Monoxide
PM = Particulate Matter
VOC = Volatile Organic Compounds
HAP = Hazardous Air Pollutant
### Organic Particulate-Based Compounds (Table 11.1-15)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CASRN</th>
<th>Category</th>
<th>HAP Type</th>
<th>Source</th>
<th>Speciation Profile</th>
<th>Limited Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Load-out and Onsite Yard (% by weight of Total Organic PM)</td>
<td>Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)</td>
<td>Load-out</td>
</tr>
<tr>
<td>PAH HAPs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acenaphthene</td>
<td>83-32-9</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.26%</td>
<td>0.47%</td>
</tr>
<tr>
<td>Acenaphthylene</td>
<td>208-96-8</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.028%</td>
<td>0.014%</td>
</tr>
<tr>
<td>Anthracene</td>
<td>120-12-7</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.07%</td>
<td>0.13%</td>
</tr>
<tr>
<td>Benzo(a)anthracene</td>
<td>56-55-3</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.019%</td>
<td>0.056%</td>
</tr>
<tr>
<td>Benzo(b)fluoranthene</td>
<td>205-99-2</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0076%</td>
<td>0</td>
</tr>
<tr>
<td>Benzo(k)fluoranthene</td>
<td>207-08-9</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0022%</td>
<td>0</td>
</tr>
<tr>
<td>Benzo(a)pyrene</td>
<td>191-24-2</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0019%</td>
<td>0</td>
</tr>
<tr>
<td>Benzo(e)pyrene</td>
<td>192-97-2</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0078%</td>
<td>0.0095%</td>
</tr>
<tr>
<td>Chrysene</td>
<td>218-01-9</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.103%</td>
<td>0.21%</td>
</tr>
<tr>
<td>Dibenzo(a,h)anthracene</td>
<td>53-70-3</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.00037%</td>
<td>0</td>
</tr>
<tr>
<td>Fluoranthene</td>
<td>208-44-0</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.05%</td>
<td>0.15%</td>
</tr>
<tr>
<td>Fluorene</td>
<td>86-73-7</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.77%</td>
<td>1.01%</td>
</tr>
<tr>
<td>Indeno(1,2,3-cd)pyrene</td>
<td>193-39-5</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.00047%</td>
<td>0</td>
</tr>
<tr>
<td>2-Methylanthanthrene</td>
<td>91-57-6</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>2.38%</td>
<td>5.27%</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>1.25%</td>
<td>1.82%</td>
</tr>
<tr>
<td>Perylene</td>
<td>198-55-0</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.022%</td>
<td>0.03%</td>
</tr>
<tr>
<td>Phenanthrene</td>
<td>85-01-8</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.81%</td>
<td>1.80%</td>
</tr>
<tr>
<td>Pyrene</td>
<td>129-00-0</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.15%</td>
<td>0.44%</td>
</tr>
<tr>
<td>Total PAH HAPs</td>
<td></td>
<td></td>
<td></td>
<td>0.015</td>
<td>0.021</td>
<td>NA</td>
</tr>
<tr>
<td>Other semi-volatile HAPs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phenol</td>
<td>PM/HAP</td>
<td>---</td>
<td>Organic PM</td>
<td>1.18%</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

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

**Methodology**

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


**Abbreviations**

PM = Particulate Matter  
HAP = Hazardous Air Pollutant  
POM = Polycyclic Organic Matter
### Organic Volatile-Based Compounds (Table 11.1-16)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CASRN</th>
<th>Category</th>
<th>HAP Type</th>
<th>Load-out and Onsite Yard (% by weight of TOC)</th>
<th>Silo Filling and Asphalt Storage Tank (% by weight of TOC)</th>
<th>Limited Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC</td>
<td>VOC</td>
<td>---</td>
<td>TOC</td>
<td>94%</td>
<td>100%</td>
<td>2.88 8.99 0.76 12.63</td>
</tr>
<tr>
<td>Methane</td>
<td>74-82-8</td>
<td>non-VOC/non-HAP</td>
<td>---</td>
<td>TOC</td>
<td>6.50%</td>
<td>0.26% 2.0E-01 2.3E-02 5.3E-02 0.275</td>
</tr>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>non-VOC/non-HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.046%</td>
<td>0.055% 1.4E-03 4.9E-03 3.7E-04 3.0E-07</td>
</tr>
<tr>
<td>Ethylene</td>
<td>74-85-1</td>
<td>non-VOC/non-HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.71%</td>
<td>1.10% 2.2E-02 9.9E-02 5.8E-03 0.126</td>
</tr>
<tr>
<td>Total non-VOC/non-HAPS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.30% 1.40% 0.224 0.126 0.059 0.41</td>
</tr>
<tr>
<td>Acetone</td>
<td>76-50-3</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.049%</td>
<td>0.039% 1.5E-03 3.5E-03 4.0E-04 5.4E-03</td>
</tr>
<tr>
<td>Carbon Disulfide</td>
<td>75-15-0</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.013%</td>
<td>0.016% 4.0E-04 1.4E-03 1.1E-04 1.9E-03</td>
</tr>
<tr>
<td>Chloroethane</td>
<td>75-00-3</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.00021%</td>
<td>0.004% 6.4E-06 3.8E-04 1.7E-06 3.7E-04</td>
</tr>
<tr>
<td>Chloromethane</td>
<td>74-87-3</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.015%</td>
<td>0.023% 4.6E-04 2.1E-03 1.2E-04 2.6E-03</td>
</tr>
<tr>
<td>Cumene</td>
<td>92-82-8</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.11%</td>
<td>0.19% 3.4E-03 0 8.9E-04 4.3E-03</td>
</tr>
<tr>
<td>Ethylene</td>
<td>100-14-4</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.28%</td>
<td>0.38% 8.6E-03 3.4E-03 2.3E-03 0.014</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.088%</td>
<td>0.69% 2.7E-03 6.2E-02 7.1E-04 0.065</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>100-54-3</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.15%</td>
<td>0.10% 4.6E-03 9.0E-03 1.2E-03 0.015</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>540-94-1</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.0018%</td>
<td>0.0031% 5.6E-05 2.8E-05 1.5E-05 9.8E-05</td>
</tr>
<tr>
<td>Methylen Chloride</td>
<td>75-09-2</td>
<td>non-VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.00027%</td>
<td>0 2.4E-05 0 2.4E-05</td>
</tr>
<tr>
<td>MTBE</td>
<td>1634-04-4</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0</td>
<td>0 0 0 0 0</td>
</tr>
<tr>
<td>Styrene</td>
<td>100-42-5</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.0073%</td>
<td>0.0054% 2.2E-04 4.9E-04 5.9E-05 7.7E-04</td>
</tr>
<tr>
<td>Tetrachloroethene</td>
<td>127-18-4</td>
<td>non-VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.0077%</td>
<td>0 2.4E-04 0 6.4E-05 3.0E-04</td>
</tr>
<tr>
<td>Toluene</td>
<td>100-88-3</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.21%</td>
<td>0.062% 6.4E-03 5.9E-03 1.7E-03 0.014</td>
</tr>
<tr>
<td>1,1,1-Trichloroethene</td>
<td>71-55-6</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0</td>
<td>0 0 0 0 0</td>
</tr>
<tr>
<td>Trichloroethene</td>
<td>79-01-6</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0</td>
<td>0 0 0 0 0</td>
</tr>
<tr>
<td>Trichlorofluoromethane</td>
<td>75-69-4</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.0013%</td>
<td>0 4.0E-05 0 1.1E-05 5.0E-05</td>
</tr>
<tr>
<td>m,p-Xylene</td>
<td>1330-20-7</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.41%</td>
<td>0.20% 1.3E-02 1.8E-02 3.3E-03 0.034</td>
</tr>
<tr>
<td>o-Xylene</td>
<td>95-47-6</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.08%</td>
<td>0.057% 2.5E-03 5.1E-03 6.8E-04 8.2E-03</td>
</tr>
<tr>
<td>Total volatile organic HAPs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.50% 1.30% 0.046 0.117 0.012 0.175</td>
</tr>
</tbody>
</table>

### Methodology

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


### Abbreviations

- **TOC** = Total Organic Compounds
- **HAP** = Hazardous Air Pollutant
- **VOC** = Volatile Organic Compound
- **MTBE** = Methyl tert butyl ether
Appendix A.2: Limited Emissions Summary
Material Storage Piles

Company Name: Brooks Construction Company Inc.
Source Address: 5536 Hoagland Rd., Poe, Indiana 46745
Permit Number: 777-41254-05190
Reviewer: Brian Wright

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

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

\[
Ef = 1.7^* (s/1.5)^*(365-p)/(235)^*(f/15)
\]
where
\[
Ef = \text{emission factor (lb/acre/day)}
\]
\[
s = \text{silt content (wt %)}
\]
\[
p = 125 \text{ days of rain greater than or equal to 0.01 inches}
\]
\[
f = 15 \% \text{ of wind greater than or equal to 12 mph}
\]

<table>
<thead>
<tr>
<th>Material</th>
<th>Silt Content (wt %)*</th>
<th>Emission Factor (lb/acre/day)</th>
<th>Maximum Anticipated Pile Size (acres)**</th>
<th>PTE of PM (tons/yr)</th>
<th>PTE of PM10/PM2.5 (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand</td>
<td>2.6</td>
<td>3.01</td>
<td>0.80</td>
<td>0.439</td>
<td>0.154</td>
</tr>
<tr>
<td>Limestone</td>
<td>1.6</td>
<td>1.85</td>
<td>1.30</td>
<td>0.439</td>
<td>0.154</td>
</tr>
<tr>
<td>RAP</td>
<td>0.5</td>
<td>0.58</td>
<td>1.40</td>
<td>0.148</td>
<td>0.052</td>
</tr>
<tr>
<td>Gravel</td>
<td>1.6</td>
<td>1.85</td>
<td>1.20</td>
<td>0.406</td>
<td>0.142</td>
</tr>
<tr>
<td>Shingles</td>
<td>0.5</td>
<td>0.58</td>
<td>1.40</td>
<td>0.148</td>
<td>0.052</td>
</tr>
<tr>
<td>Slag</td>
<td>3.8</td>
<td>4.40</td>
<td>1.00</td>
<td>0.803</td>
<td>0.281</td>
</tr>
</tbody>
</table>

| Totals    | 2.38                  | 0.83                          |                                        |                    |                            |

Methodology
PTE of PM (tons/yr) = (Emission Factor (lb/acre/day)) * (Maximum Pile Size (acres)) * (ton/2000 lbs) * (8760 hours/yr)
PTE of PM10/PM2.5 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%

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

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

PM2.5 = PM10

Abbreviations
RAP = recycled asphalt pavement
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)

PTE = Potential to Emit
Appendix A.2: Limited Emissions Summary

Material Processing, Handling, Crushing, Screening, and Conveying

Company Name: Brooks Construction Company Inc.
Source Address: 5536 Hoagland Rd., Poe, Indiana 46745
Permit Number: 777-41254-05190
Reviewer: Brian Wright

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

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

\[
Ef = k*(0.0032)*(U/5)^{1.3} / (M/2)^{1.4}
\]

where:

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

Annual Asphalt Production Limitation = 1,475,000 tons/yr
Percent Asphalt Cement/Binder (weight %) = 5.0%
Maximum Material Handling Throughput = 1,401,250 tons/yr

<table>
<thead>
<tr>
<th>Type of Activity</th>
<th>Limited PTE of PM (tons/yr)</th>
<th>Limited PTE of PM10 (tons/yr)</th>
<th>Limited PTE of PM2.5 (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck unloading of materials into storage piles</td>
<td>1.59</td>
<td>0.76</td>
<td>0.11</td>
</tr>
<tr>
<td>Front-end loader dumping of materials into feeder bins</td>
<td>1.59</td>
<td>0.76</td>
<td>0.11</td>
</tr>
<tr>
<td>Conveyor dropping material into dryer/mixer or batch tower</td>
<td>1.59</td>
<td>0.76</td>
<td>0.11</td>
</tr>
<tr>
<td><strong>Total ( tons/yr )</strong></td>
<td><strong>4.77</strong></td>
<td><strong>2.25</strong></td>
<td><strong>0.34</strong></td>
</tr>
</tbody>
</table>

Methodology

The percent asphalt cement/binder provided by the source.

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

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

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

*Worst case annual mean wind speed (Indianapolis, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2006

Material Screening and Conveying (AP-42 Section 19.2.2)

To estimate potential fugitive dust emissions from raw material crushing, screening, and conveying, AP-42 emission factors for Crushed Stone Processing Operations, Section 19.2.2 (dated 8/04) are utilized.

<table>
<thead>
<tr>
<th>Operation</th>
<th>Uncontrolled Emission Factor for PM (lbs/ton)*</th>
<th>Uncontrolled Emission Factor for PM10 (lbs/ton)*</th>
<th>Limited PTE of PM (tons/yr)</th>
<th>Limited PTE of PM10/PM2.5 (tons/yr)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening</td>
<td>0.025</td>
<td>0.0087</td>
<td>17.52</td>
<td>6.10</td>
</tr>
<tr>
<td>Conveying</td>
<td>0.003</td>
<td>0.0011</td>
<td>2.10</td>
<td>0.77</td>
</tr>
<tr>
<td><strong>Limited Potential to Emit (tons/yr)</strong></td>
<td><strong>19.62</strong></td>
<td></td>
<td><strong>6.87</strong></td>
<td></td>
</tr>
</tbody>
</table>

Methodology

Limited Potential to Emit (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]

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

Raw materials may include stone/gravel, slag, and recycled asphalt pavement (RAP)

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

*Uncontrolled emissions factors for PM/PM10 represent tertiary crushing of stone with moisture content ranging from 0.21 to 1.3 percent by weight (Table 11.19.2-2). The bulk moisture content of aggregate in the storage piles at a hot mix asphalt production plant typically stabilizes between 3 to 5 percent by weight (Source: AP-42 Section 11.1.1.1).

**Assumes PM10 = PM2.5

Abbreviations

PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PTE = Potential to Emit
Batch or Continuous Drop Operations (AP-42 Section 13.2.4)

To estimate potential fugitive dust emissions from processing and handling of concrete (batch or continuous drop operations), AP-42 emission factors for Aggregate Handling, Section 13.2.4 (fifth edition, updated 11/06) are utilized.

\[
Ef = k \cdot \frac{(0.0032 \cdot U)^{1.3}}{(M/2)^{1.4}}
\]

where:
- \( k \) = particle size multiplier (0.74 assumed for aerodynamic diameter <=100 um)
- \( k \) = particle size multiplier (0.35 assumed for aerodynamic diameter <=10 um)
- \( k \) = particle size multiplier (0.053 assumed for aerodynamic diameter <=2.5 um)
- \( U \) = worst case annual mean wind speed (Source: NOAA, 2007*)
- \( M \) = material % moisture content of concrete (Source: AP-42 Section 13.2.4-4)

\[
Ef (PM) = 4.33E-03 \quad \text{lb PM/ton of material handled}
\]
\[
Ef (PM10) = 2.05E-03 \quad \text{lb PM10/ton of material handled}
\]
\[
Ef (PM2.5) = 3.10E-04 \quad \text{lb PM2.5/ton of material handled}
\]

Maximum Material Handling Throughput = 438,000 tons/yr

### Material Processing and Handling

<table>
<thead>
<tr>
<th>Type of Activity</th>
<th>Unlimited/Uncontrolled PTE of PM (tons/yr)</th>
<th>Unlimited/Uncontrolled PTE of PM10 (tons/yr)</th>
<th>Unlimited/Uncontrolled PTE of PM2.5 (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck unloading of materials into storage piles</td>
<td>0.95</td>
<td>0.45</td>
<td>0.07</td>
</tr>
<tr>
<td>Front-end loader dumping of materials into feeder bins</td>
<td>0.95</td>
<td>0.45</td>
<td>0.07</td>
</tr>
<tr>
<td>Conveyor dropping material into crusher</td>
<td>0.95</td>
<td>0.45</td>
<td>0.07</td>
</tr>
<tr>
<td>Total (tons/yr)</td>
<td>2.84</td>
<td>1.35</td>
<td>0.20</td>
</tr>
</tbody>
</table>

**Methodology**

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

*Worst case annual mean wind speed (South Bend, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2007*

**Material Screening and Conveying (AP-42 Section 11.19.2)**

To estimate potential fugitive dust emissions from concrete crushing, screening, and conveying, AP-42 emission factors for Crushed Stone Processing Operations, Section 11.19.2 (dated 8/04) are utilized.

<table>
<thead>
<tr>
<th>Operation</th>
<th>Uncontrolled Emission Factor for PM (lbs/ton)*</th>
<th>Uncontrolled Emission Factor for PM10 (lbs/ton)*</th>
<th>Unlimited/Uncontrolled PTE of PM (tons/yr)</th>
<th>Unlimited/Uncontrolled PTE of PM10 (tons/yr)</th>
<th>Unlimited/Uncontrolled PTE of PM2.5 (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crushing</td>
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<td>0.0011</td>
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<tr>
<td>Total (tons/yr)</td>
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<td></td>
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</table>

**Methodology**

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

*Uncontrolled emissions factors for PM/PM10 represent tertiary crushing of stone with moisture content ranging from 0.21 to 1.3 percent by weight (AP-42 Table 11.19.2-2).*

**Notes**

PM = Particulate Matter  PM10 = Particulate Matter (<10 um)  PTE = Potential to Emit
### 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 Asphalt Cement/Binder Throughput

\[
\text{Maximum Asphalt Cement/Binder Throughput} = \frac{\text{Annual Asphalt Production Limitation} \times (1 - \text{Percent Asphalt Cement/Binder (weight %))}}{\text{Maximum Weight of Load (tons/trip)}}
\]

#### Average Vehicle Weight Per Trip

\[
\text{Average Vehicle Weight Per Trip} = \frac{\text{Total Weight driven per year (ton/yr)}}{\text{Maximum trips per year (trip/yr)}}
\]

#### Maximum one-way distance (miles/yr)

\[
\text{Maximum one-way distance (miles/yr)} = \frac{\text{Maximum trips per year (trip/yr)} \times \text{Maximum one-way distance (mi/trip)}}{\text{Average Vehicle Weight Per Trip (ton/trip)}}
\]

#### Average  Miles Per Trip  (miles/trip)

\[
\text{Average  Miles Per Trip} = \frac{\text{Maximum one-way miles (miles/yr)}}{\text{Maximum trips per year (trip/yr)}}
\]

#### Unmitigated Emission Factor, \( E_{\text{PM}} \)

\[
\text{Unmitigated Emission Factor, } E_{\text{PM}} = \frac{\text{Maximum Material Handling Throughput} \times \text{W}^{\alpha} \times \text{b}}{\text{a}^{\alpha} \times \text{b}^{\beta}}
\]

\[\text{a, b = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)}\]

#### Mitigated Emission Factor, \( E_{\text{ext}} \)

\[
\text{Mitigated Emission Factor, } E_{\text{ext}} = E_{\text{PM}} \times (1 - \text{Dust Control Efficiency})
\]

\[\text{Dust Control Efficiency = } \frac{\text{Total rainfall (inches) during construction period}}{\text{Average rainfall (inches) during construction period}}\]

#### Controlled PTE of PM

\[
\text{Controlled PTE of PM} = \frac{\text{Unmitigated PTE of PM}}{\text{Mitigated Emission Factor, } E_{\text{ext}}}
\]

### Table: Limited Emissions Summary

<table>
<thead>
<tr>
<th>Process</th>
<th>Vehicle Type</th>
<th>Maximum Weight of Vehicle (tons)</th>
<th>Maximum Weight of Vehicle and Load (tons)</th>
<th>Maximum one-way distance (miles/yr)</th>
<th>Maximum trips per year (trip/yr)</th>
<th>Maximum Weight of Load (tons/trip)</th>
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<td>17.0</td>
<td>20.3</td>
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<td>Dump truck (18 CY)</td>
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<tr>
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<tr>
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<td>10.76</td>
<td>1.28</td>
<td>1.28</td>
<td>1.19</td>
<td>1.19</td>
</tr>
</tbody>
</table>

#### Methodology

- Maximum Material Handling Throughput = \(\text{Annual Asphalt Production Limitation} \times (1 - \text{Percent Asphalt Cement/Binder (weight %)})\)
- Maximum Asphalt Cement/Binder Throughput = \(\text{Maximum Material Handling Throughput} \times (1 - \text{Percent Asphalt Cement/Binder (weight %)})\)
- Maximum Weight of Vehicle and Load (tons) = \(\text{Maximum Weight of Vehicle (tons)} + \text{Maximum Weight of Load (tons/trip)}\)
- Maximum weight driven per year (ton/yr) = \(\text{Maximum Weight of Vehicle and Load (tons)} \times \text{Maximum trips per year (trip/yr)}\)
- Maximum one-way distance (miles/yr) = \(\text{Maximum Weight of Vehicle and Load (tons)} \times \text{Maximum trips per year (trip/yr)} \times \text{Maximum one-way distance (mi/trip)}\)
- Average Vehicle Weight Per Trip (ton/trip) = \(\frac{\text{Maximum Weight driven per year (ton/yr)}}{\text{Maximum trips per year (trip/yr)}}\)
- Average  Miles Per Trip  (miles/trip) = \(\frac{\text{Maximum one-way miles (miles/yr)}}{\text{Maximum trips per year (trip/yr)}}\)

#### Abbreviations

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

### Notes

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

---

Appendix A.2: Limited Emissions Summary
## 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

- **Unmitigated PTE (tons/yr)**
- **Mitigated PTE (tons/yr)**

### Maximum Material Handling Throughput

- **Maximum Weight of Load (tons/trip)**
- **Maximum Weight of Vehicle and Load (tons/trip)**
- **Maximum one-way distance (miles/yr)**
- **Maximum one-way miles (miles/yr)**

### Average Miles Per Trip

- **Average Vehicle Weight Per Trip (ton/trip)**

### Maximum one-way miles (miles/yr)

- **Maximum trips per year (trip/yr)**
- **Average Vehicle Weight Per Trip (ton/trip)**

### Maximum Weight of Vehicle and Load (tons/trip)

- **Average Vehicle Weight Per Trip (ton/trip)**
- **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 Weight of Load (tons/trip)

- **Maximum Weight of Vehicle and Load (tons/trip)**
- **Maximum Weight of Load (tons/trip)**

### Maximum one-way distance (miles/yr)

- **Maximum one-way distance (miles/yr)**
- **Maximum one-way miles (miles/yr)**

### Dust Control Efficiency

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

### Methodology

- **Unmitigated PTE of PM**
- **Mitigated PTE of PM**

### Abreviations

- **PM = Particulate Matter**
- **PM10 = Particulate Matter (>10 um)**
- **PM2.5 = Particulate Matter (<2.5 um)**
- **PTE = Potential to Emit**
June 6, 2019

John Brooks
Brooks Construction Company Inc.
6525 Ardmore Ave
Fort Wayne, IN 46809

Re: Public Notice
Brooks Construction Company Inc.
Permit Level: FESOP Sig Permit Rev Minor PSD
Permit Number: 777-41254-05190

Dear Mr. Brooks:

Enclosed is a copy of your draft FESOP Significant Permit Revision Minor PSD, Technical Support Document, emission calculations, and the Public Notice.

The Public Notice period will begin the date the Notice is published on the IDEM Official Public Notice website. Publication has been requested and is expected within 2-3 business days. You may check the exact Public Notice begins and ends date here: https://www.in.gov/idem/5474.htm

Please note that as of April 17, 2019, IDEM is no longer required to publish the notice in a newspaper.

OAQ has submitted the draft permit package to the Allen County Public Library, 900 Library Plaza in Fort Wayne, IN. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Brian Wright, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 4-6544 or dial (317) 234-6544.

Sincerely,

Theresa Weaver
Theresa Weaver
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover Letter 4/12/19
June 6, 2019

To: Allen County Public Library

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

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

Applicant Name: Brooks Construction Company Inc.
Permit Number: 777-41254-05190

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

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

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

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

If you have any questions concerning this public review process, please contact Joanne Smiddle-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185. Questions pertaining to the permit itself should be directed to the contact listed on the notice.

Enclosures
PN Library updated 4/2019
Notice of Public Comment

June 6, 2019
Brooks Construction Company Inc.
777-41254-05190

Dear Concerned Citizen(s):

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

Enclosed is a Notice of Public Comment, which has posted on IDEM’s Public Notice website at https://www.in.gov/idem/5474.htm.

The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

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

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

Enclosure
PN AAA Cover Letter 4/12/2019
AFFECTED STATE NOTIFICATION OF PUBLIC COMMENT PERIOD
DRAFT INDIANA AIR PERMIT

June 6, 2019

A 30-day public comment period has been initiated for:

**Permit Number:** 777-41254-05190  
**Applicant Name:** Brooks Construction Company Inc.  
**Location:** Poe, Allen County, Indiana

The public notice, draft permit and technical support documents can be accessed via the [IDEM Air Permits Online](http://www.in.gov/ai/appfiles/idem-caats/) site at:

Questions or comments on this draft permit should be directed to the person identified in the public notice by telephone or in writing to:

Indiana Department of Environmental Management  
Office of Air Quality, Permits Branch  
100 North Senate Avenue  
Indianapolis, IN 46204

Questions or comments regarding this email notification or access to this information from the EPA Internet site can be directed to Chris Hammack at [chammack@idem.IN.gov](mailto:chammack@idem.IN.gov) or (317) 233-2414.
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<td>Daniel &amp; Sandy Trimmer 15021 Yellow River Road Columbia City IN 46725 (Affected Party)</td>
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Total number of pieces Listed by Sender | Total number of Pieces Received at Post Office | Postmaster, Per (Name of Receiving employee) | The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50,000 per occurrence. The maximum indemnity payable on Express Mail 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 insured and COD mail. See *International Mail Manual* for limitations of coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels. |