NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

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

for Walsh & Kelly, Inc. in Lake County

Significant Permit Revision No.: 089-41969-05255

The Indiana Department of Environmental Management (IDEM) has received an application from Walsh & Kelly, Inc., located at 21201 Wicker Avenue, Lowell, IN, for a significant revision of its FESOP issued on May 1, 2019. If approved by IDEM’s Office of Air Quality (OAQ), this proposed revision would allow Walsh & Kelly, Inc. to make certain changes at its existing source. Walsh & Kelly, Inc. has applied to adjust the NOx and VOC emission limits due to the redesignation of Lake County to serious nonattainment for ozone.

This draft permit does not contain any new equipment that would emit air pollutants; however, some conditions from previously issued permits/approvals have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes (e.g., changes that add or modify synthetic minor emission limits). This notice fulfills the public notice procedures to which those conditions are subject. IDEM has reviewed this application and has developed preliminary findings, consisting of a draft permit and several supporting documents, which would allow for these changes.

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

Lowell Public Library, Schneider Branch,
24002 Parish Avenue,
Schneider, IN 46376-0019

and

IDEM Northwest Regional Office
330 W. US Highway 30, Suites E & F
Valparaiso, IN 46385

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 089-41969-05255 in all correspondence.

Comments should be sent to:

Daniel W. Pell  
IDEM, Office of Air Quality  
100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
(800) 451-6027, ask for Daniel W. Pell or (317) 234-8532  
Or dial directly: (317) 234-8532  
Fax: (317) 232-6749 attn: Daniel W. Pell  
E-mail: dpell@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, at the IDEM Regional Office 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 Daniel W. Pell of my staff at the above address.

Heath Hartley, Section Chief  
Permits Branch  
Office of Air Quality
Mr. John M. Peisker  
Walsh & Kelly, Inc.  
24358 State Road 23  
South Bend, IN 46614

Re: 089-41969-05255  
Significant Revision to  
F089-40557-05255

Dear Mr. Peisker:

Walsh & Kelly, Inc. was issued a Federally Enforceable State Operating Permit (FESOP) Renewal No. F089-40557-05255, on May 1, 2019, for a stationary drum hot mix and cold mix asphalt plant located at 21201 Wicker Avenue, Lowell, Indiana. On September 24, 2019, the Office of Air Quality (OAQ) received an application from the source requesting to adjust the NOx and VOC emission limits due to the redesignation of Lake County to serious nonattainment for ozone. 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).

No new emission units are being constructed at this source for this Significant Permit Revision.

The following conditions are applicable to the proposed project:

**Effective Date of the Permit**

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

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: Federal Dust Control Plan  
Attachment B: 40 CFR 60, Subpart I, Hot Mix Asphalt Facilities NSPS  
Attachment C: 40 CFR 60, Subpart OOO, Nonmetallic Mineral Processing Plants NSPS

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

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

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

If you have any questions regarding this matter, please contact Daniel W. Pell, 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) 234-8532 or (800) 451-6027, and ask for Daniel W. Pell or (317) 234-8532.

Sincerely,

Heath Hartley, Section Chief
Permits Branch
Office of Air Quality


cc: File - Lake County
Lake County Health Department
U.S. EPA, Region 5
Compliance and Enforcement Branch
IDEM Northwest Regional Office
Federally Enforceable State Operating Permit Renewal
OFFICE OF AIR QUALITY

Walsh & Kelly, Inc.
21201 Wicker Avenue
Lowell, Indiana 46356

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

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

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

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

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<tr>
<td>Master Agency Interest ID: 37684</td>
</tr>
<tr>
<td>Signed by/Issued by:</td>
</tr>
<tr>
<td>Heath Hartley, Section Chief</td>
</tr>
<tr>
<td>Permits Branch</td>
</tr>
<tr>
<td>Office of Air Quality</td>
</tr>
<tr>
<td>Issuance Date: May 1, 2019</td>
</tr>
<tr>
<td>Expiration Date: May 1, 2029</td>
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Attachment A: Federal Dust Control Plan
Attachment B: 40 CFR 60, Subpart I, Hot Mix Asphalt Facilities NSPS
Attachment C: 40 CFR 60, Subpart OOO, Nonmetallic Mineral Processing Plants NSPS
SECTION A  SOURCE SUMMARY

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

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

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

<table>
<thead>
<tr>
<th>Source Address:</th>
<th>21201 Wicker Avenue, Lowell, Indiana 46356</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Source Phone Number:</td>
<td>(574) 288-4811</td>
</tr>
<tr>
<td>SIC Code:</td>
<td>2951 (Asphalt Paving Mixtures and Blocks)</td>
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<tr>
<td>County Location:</td>
<td>Lake</td>
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<tr>
<td>Source Location Status:</td>
<td>Nonattainment for 8-hour ozone standard</td>
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<td></td>
<td>Attainment for all other criteria pollutants</td>
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<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 stationary source consists of the following emission units and pollution control devices:

(a) One (1) drum dryer/mixer, processing blast furnace slag and steel slag in the aggregate mix, installed in 2004, with a maximum rated throughput capacity of 400 tons per hour, equipped with a 120 million British thermal units per hour (MMBtu/hr) used or waste oil fuel fired burner, using natural gas and No. 2 distillate fuel oil as backup fuels, using a jetpulse baghouse as control and exhausting to stack S1.

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

(b) Cold-mix (stockpile mix) asphalt storage piles.

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

(c) One (1) aggregate cold feed system consisting of:

(1) Two (2) aggregate conveyors;

(2) One (1) 5’ X 12’ aggregate screen; and

(3) Seven (7) cold feed bins.

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

(d) Three (3) HMA silos, each with a capacity of 200 tons, constructed in 2007.

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

(e) One (1) dust silo.
[Under 40 CFR 60, Subpart I, this is considered an affected hot-mix asphalt facility].

(f) One (1) Reclaimed Asphalt Pavement (RAP) feed system consisting of:
   (1) Two (2) RAP feeder bins;
   (2) One (1) RAP screen; and
   (3) One (1) RAP conveyor.

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

(g) One (1) 1,000 gallon heat transfer oil tank.

(h) One (1) diesel fuel-fired portable tertiary crusher, permitted in 2016, with a maximum throughput rate of 400 tons per hour, using water spray for fugitive particulate emissions control.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

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

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

This stationary source also includes the following insignificant activities:

(a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million BTU per hour:
   (1) One (1) natural gas hot oil heater, using No. 2 fuel as back-up, with a maximum rated heat input capacity of 1.2 MMBtu/hr, and exhausting to stack S2.

(b) Combustion source flame safety purging on startup.

(c) Paved and unpaved roads and parking lots with public access.

(d) One (1) 2,000 gallon No.2 fuel storage tank for equipment fueling.

(e) Three (3) 30,000 gallon liquid asphalt storage tank, installed in 2004.

(f) One (1) 21,800 gallon used or waste oil storage tank, installed in 2004.

(g) One (1) 12,500 gallon No. 2 fuel oil storage tank, approved for installation in 2009.

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

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) to renew a Federally Enforceable State Operating Permit (FESOP).
SECTION B  GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

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, F089-40557-05255, 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:
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 April 15 of each year to:

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

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

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

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

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

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

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

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

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

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
(d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation except as provided in 326 IAC 2-8-12.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

1. An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

2. The permitted facility was at the time being properly operated;

3. During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

4. For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ or Northwest Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

   Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
   Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
   Facsimile Number: 317-233-6865
   Northwest Regional Office phone: (219) 464-0233; fax: (219) 464-0553.

5. For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

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

   within two (2) working days of the time when emission limitations were exceeded due to the emergency.

   The notice fulfills the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

   (A) A description of the emergency;

   (B) Any steps taken to mitigate the emissions; and
(C) Corrective actions taken.

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

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

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

(a) All terms and conditions of permits established prior to F089-40557-05255 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 2-8-3(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:
A timely renewal application is one that is:

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

2. If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source’s failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-6-3(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 5
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)]**

<table>
<thead>
<tr>
<th>C.1 Overall Source Limit [326 IAC 2-8]</th>
</tr>
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<tbody>
<tr>
<td>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.</td>
</tr>
<tr>
<td>(a) Pursuant to 326 IAC 2-8:</td>
</tr>
<tr>
<td>(1) The potential to emit volatile organic compounds (VOCs) from the entire source shall be limited to less than fifty (50) tons per twelve (12) consecutive month period;</td>
</tr>
<tr>
<td>(2) The potential to emit nitrogen oxides (NOx) from the entire source shall be limited to less than fifty (50) tons per twelve (12) consecutive month period;</td>
</tr>
<tr>
<td>(3) The potential to emit any regulated pollutant, except particulate matter (PM), volatile organic compounds (VOCs), and nitrogen oxides (NOx), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period;</td>
</tr>
<tr>
<td>(4) 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</td>
</tr>
<tr>
<td>(5) 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.</td>
</tr>
<tr>
<td>(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.</td>
</tr>
<tr>
<td>(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.</td>
</tr>
<tr>
<td>(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.</td>
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</table>

<table>
<thead>
<tr>
<th>C.2 Opacity [326 IAC 5-1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>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:</td>
</tr>
<tr>
<td>(a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.</td>
</tr>
<tr>
<td>(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A,</td>
</tr>
</tbody>
</table>
Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

C.3 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.4 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.5 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.6 Fugitive Particulate Matter Emissions [326 IAC 6.8-10-3]
Pursuant to 326 IAC 6.8-10-3 (formerly 326 IAC 6-1-11.1) (Lake County Fugitive Particulate Matter Control Requirements), the particulate matter emissions from source wide activities shall meet the following requirements:

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

(b) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).

(c) The opacity of fugitive particulate emissions from exposed areas shall not exceed ten percent (10%) on a six (6) minute average.

(d) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.

(e) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.

(f) There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.

(g) The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).

(h) Material processing facilities shall include the following:
(1) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.

(2) The PM<sub>10</sub> emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
(3) The PM10 stack emissions from a material processing facility shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.

(4) The opacity of fugitive particulate emissions from the material processing facilities, except a crusher at which a capture system is not used, shall not exceed ten percent (10%) opacity.

(5) The opacity of fugitive particulate emissions from a crusher at which a capture system is not used shall not exceed fifteen percent (15%).

(i) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).

(j) Material transfer limits shall be as follows:

(1) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).

(2) Where adequate wetting of the material for fugitive particulate emissions control is prohibitive to further processing or reuse of the material, the opacity shall not exceed ten percent (10%), three (3) minute average.

(3) Slag and kish handling activities at integrated iron and steel plants shall comply with the following particulate emissions limits:

   (A) The opacity of fugitive particulate emissions from transfer from pots and trucks into pits shall not exceed twenty percent (20%) on a six (6) minute average.

   (B) The opacity of fugitive particulate emissions from transfer from pits into front end loaders and from transfer from front end loaders into trucks shall comply with the fugitive particulate emission limits in 326 IAC 6.8-10-3(9).

(k) Any facility or operation not specified in 326 IAC 6.8-10-3 shall meet a twenty percent (20%), three (3) minute average opacity standard.

The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the attached Fugitive Dust Control Plan.

C.7 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.8 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.9 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(1)] [326 IAC 2-8-5(a)(1)]

C.10 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.11 Continuous Compliance Plan [326 IAC 6.8-8-1] [326 IAC 6.8-8-8]

(a) Pursuant to 326 IAC 6.8-8-1, the Permittee shall submit to IDEM and maintain at source a copy of the Continuous Compliance Plan (CCP). The Permittee shall perform the inspections, monitoring and record keeping in accordance with the information in 326 IAC 6.8-8-5 through 326 IAC 6.8-8-7 or applicable procedures in the CCP.

(b) Pursuant to 326 IAC 6.8-8-8, the Permittee shall update the CCP, as needed, retain a copy of any changes and updates to the CCP at the source and make the updated CCP available for inspection by the department. The Permittee shall submit the updated CCP, if required to IDEM, OAQ within thirty (30) days of the update.

(c) Pursuant to 326 IAC 6.8-8, failure to submit a CCP, maintain all information required by the CCP at the source, or submit update to a CCP is a violation of 326 IAC 6.8-8.

C.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.

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 Emission Statement [326 IAC 2-6]

Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit an emission statement by July 1 following a calendar year when the source emits oxides of nitrogen or volatile organic compounds into the ambient air equal to or greater than twenty-five (25) tons. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

The statement must be submitted to:

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

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

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

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

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

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

(b) The address for report submittal is:

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

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

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

**Stratospheric Ozone Protection**

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

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

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

D.1.1 PSD Minor Limits [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 asphalt processed shall not exceed 1,000,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The PM emissions from the dryer/mixer shall not exceed 0.371 pounds of PM per ton of asphalt 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 two-hundred fifty (250) tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.1.2 FESOP, EO, and PSD Minor Limits [326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-3][326 IAC 8-1-6]
Pursuant to 326 IAC 2-8-4 (FESOP) and in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-3 (Emission Offset) not applicable, the Permittee shall comply with the following:

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

(b) The PM10 emissions from the dryer/mixer shall not exceed 0.158 pounds per ton of asphalt processed.

(c) The PM2.5 emissions from the dryer/mixer shall not exceed 0.181 pounds per ton of asphalt processed.

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

(e) The VOC emissions from the dryer/mixer shall not exceed 0.032 pounds per ton of asphalt processed.
Compliance with these limits, combined with the potential to emit PM10, PM2.5, and CO, from all other emission units at this source, shall limit the source-wide total potential to emit of PM10, PM2.5, and CO, to less than one-hundred (100) tons per twelve (12) consecutive month period, each, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), 326 IAC 2-3 (Emission Offset) not applicable.

Compliance with these limits, combined with the potential to emit VOC from all other emission units at this source, shall limit the source-wide total potential to emit VOC, to less than fifty (50) tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits), and 326 IAC 2-3 (Emission Offset) not applicable.

Additionally, compliance with the limit in condition D.1.2(d) 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 (New Facilities; General Reduction Requirements) not applicable.

D.1.3 FESOP Limits: SO2, NOx, 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 the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration PSD), 326 IAC 2-7 (Part 70 Permits), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable, the Permittee shall comply with the following:

(a) Fuel and Slag Specifications

(1) The sulfur content of the blast furnace slag shall not exceed 1.5% by weight.

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

(3) The sulfur content of the No. 2 fuel oil shall not exceed 0.5% by weight.

(4) The sulfur content of the used or waste oil shall be limited to 0.66% by weight.

(5) HCl emissions shall not exceed 13.2 pounds of HCl per 1,000 gallons of used or waste oil burned.

(6) The used or waste oil combusted shall not contain more than 1% ash, 0.20% chlorine, and 0.01% lead.

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

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

(b) Single Fuel and Slag Usage Limitations:

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

(1) The total amount of natural gas burned shall not exceed 498 million cubic feet (MMcf) per twelve (12) consecutive month period, with compliance determined at the end of each month;

(2) No. 2 fuel oil usage shall not exceed 1,671,393 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;
(3) Waste oil usage shall not exceed 1,223,139 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(4) The blast furnace slag usage shall not exceed 100,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(5) The steel slag usage shall not exceed 1,471,680 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

(1) SO2 emissions from the aggregate mixer/dryer burner shall not exceed 59.33 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) NOx emissions from the aggregate mixer/dryer burner shall not exceed 47.31 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits, combined with the potential to emit SO2 from all other emission units at this source, shall limit the source-wide total potential to emit of SO2 to less than one-hundred (100) tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), not applicable.

Compliance with these limits, combined with the potential to emit NOx from all other emission units at this source, shall limit the source-wide total potential to emit of NOx to less than fifty (50) tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-3 (Emission Offset), not applicable.

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

D.1.4 Particulate Emissions [326 IAC 6.8]

Pursuant to 6.8-1-2(a), PM emissions from the dryer/mixer, the crusher, and material handling, shall each 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)).

D.1.5 Sulfur Dioxide Emission Limitations [326 IAC 7-1.1]

(a) Pursuant to 326 IAC 7-1.2(a)(2) and (a)(3), the sulfur dioxide emissions from the dryer/burner shall be limited to the following:

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

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

Note: No. 2 fuel oil is considered distillate oils and waste oil is considered residual oil.
(b) Pursuant to 326 IAC 7-2-1(c), the source shall submit reports of calendar month average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate (pounds SO2 per MMBtu), to IDEM OAQ upon request.

D.1.6 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 [326 IAC 2-8-4(1)]

D.1.7 Testing Requirements [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition D.1.2, D.1.3, and D.1.4, the Permittee shall perform PM, PM10, and PM2.5 testing of the dryer/mixer (Baghouse CD-1) utilizing methods as approved by the Commissioner at least once every 5 years from the date of the most recent 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 PM.

D.1.8 Particulate Control

In order to assure compliance with Condition D.1.2, D.1.3, and D.1.4, the baghouse for particulate control shall be in operation and control emissions from the dryer/mixer facility at all times the dryer/mixer facility is in operation.

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

D.1.9 Multiple Fuel and Slag Usage

In order to comply with the Condition D.1.3(b) and (c), 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 limit fuel usage according to the following formulas:

(a) Sulfur Dioxide (SO2) Emission Calculation

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

where:

- \( S \) = tons of sulfur dioxide emissions for a 12-month consecutive period
- \( G \) = million cubic feet of natural gas used in the last 12 months
- \( O \) = kilogallons of No. 2 fuel oil used in the last 12 months
- \( W \) = kilogallons of Waste oil used in the last 12 months
- \( B \) = tons of Blast Furnace slag used in the last 12 months
- \( T \) = tons of Steel slag used in the last 12 months
- \( E_G \) = 0.60 lb/million cubic feet of natural gas
- \( E_O \) = 71.0 lb/1000 gallons of No. 2 fuel oil
- \( E_W \) = 97 lb/1000 gallons 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) Nitrogen Oxides (NOx) Emission Calculation

\[ N = G(EG) + O(EO) + W(EW) \]
\[ 2,000 \text{ lbs/ton} \]

*where:* 
\( N \) = tons of nitrogen oxide emissions for a 12-month consecutive period; 
\( G \) = million cubic feet of natural gas used in the last 12 months; 
\( O \) = kilogallons of No. 2 fuel oil used in the last 12 months; 
\( W \) = kilogallons of reclaimed/waste oil used in the last 12 months. 
\( EG = 190 \text{ lb/million cubic feet of natural gas; } \)
\( EO = 24.0 \text{ lb/1000 gallons of No. 2 fuel oil; } \)
\( EW = 19.0 \text{ lb/1000 gallons of reclaimed/waste oil. } \)

D.1.10 Sulfur Dioxide (SO2) Emissions and Sulfur Content [326 IAC 2-8-5(a)(1), (4)]

In order to comply with Condition D.1.5 the Permittee shall comply with the following:

**Fuel Oil**

(a) Pursuant to 326 IAC 2-8-4 and 326 IAC 3-7-4, compliance with the fuel limitations established in Conditions D.1.3(a)(1), D.1.3(a)(3), D.1.3(a)(4), D.1.3(a)(6), and D.1.5, shall be determined utilizing one of the following options. Pursuant to 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements), compliance shall be demonstrated on a thirty (30) day calendar-month average.

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

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

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

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

(3) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 120 MMBtu/hr burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

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

**Blast Furnace Slag**

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

(1) Maintaining all records of vendor analyses, if accompanied by a vendor certification, or certifications of Blast Furnace slag delivered; or

(2) Analyzing a sample of each Blast Furnace slag delivery, if no vendor analyses or certifications are available, to determine the sulfur content of the Blast Furnace slag, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures.
approved by IDEM, OAQ.

(3) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 120 MMBtu/hr burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, or other procedures approved by IDEM, OAQ.

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

Use of blast furnace slag with a sulfur content of less than or equal to 1.5% demonstrates compliance with the dryer/mixer limit in D.1.3(a)(1).

**Steel Slag**

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

1. Maintaining all records of vendor analyses, if accompanied by a vendor certification, or certifications of slag delivered; or

2. Analyzing a sample of the Steel slag delivery if no vendor analyses or certifications are available, at least once per quarter, to determine the sulfur content of the Steel slag, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

(3) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 120 MMBtu/hr burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, or other procedures approved by IDEM, OAQ.

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

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

**D.1.11 Ash Content, Lead Content, Chlorine Content**

The Permittee shall demonstrate compliance with the waste oil ash, chlorine, and lead content limits established in Condition D.1.3(a)(6), by providing a vendor analysis of each fuel delivery accompanied by a vendor certification.

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

**D.1.12 Visible Emission Notations**

(a) Visible emission notations from the conveyors, screens, material transfer points, crusher, and the dryer/mixer baghouse stack exhausts 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 a reasonable response. Section C – Response to Excursions and Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.13 Broken or Failed Bag Detection

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

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. 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.1.14 Record Keeping Requirement

(a) To document the compliance status with the asphalt production limit contained in Conditions D.1.1(a) and D.1.2(a), the Permittee shall maintain monthly records of the amount of asphalt processed.

(b) To document the compliance status with Conditions D.1.3, D.1.5, D.1.9, D.1.10, and D.1.11, the Permittee shall maintain records in accordance with (1) through (8) below. Records maintained for (1) through (8) shall be taken monthly and shall be complete and sufficient to establish compliance with the SO2 and HCl emission limits established in Condition D.1.3, D.1.5, D.1.9, D.1.10, and D.1.11. For the annual fuel limits, the compliance determination period is the most recent twelve (12) consecutive month period. For the HCl and sulfur content limits, the compliance determination period is each calendar month.

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

(2) Actual fuel usage, sulfur content, heat content and equivalent sulfur dioxide emission rates for each fuel used at the source per month and each compliance period;

(3) Actual re-refined waste oil usage, chlorine content in weight percent (wt%), ash content in weight percent (wt%), lead content in weight percent (wt%), and equivalent hydrogen chloride (HCl) emission rate per month;
(4) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

(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 fuel oil.

(6) Actual blast furnace and steel slag usage, sulfur content and equivalent sulfur dioxide emission rates for all blast furnace and steel slag used at the source per month;

(7) A certification, signed by the owner or operator, that the records of the blast furnace and steel slag supplier certifications represent all of the blast furnace and steel slag used during the period, and;

(8) If the blast furnace and steel slag supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(i) Blast furnace and steel slag supplier certifications;
(ii) The name of the blast furnace and steel slag supplier; and
(iii) A statement from the blast furnace and steel slag supplier that certifies the sulfur content of the blast furnace and steel slag.

(d) To document the compliance status with Condition D.1.12, the Permittee shall maintain records of daily visible emission notations of the baghouse(s) stack exhausts. 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).

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

D.1.14 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.1.1(a), D.1.2(a), and D.1.3 shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition.

The report 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).
SECTION D.2  EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(b) Cold-mix (stockpile mix) asphalt storage piles.

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

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

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

D.2.1 FESOP and PSD Minor Limits [326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-3][326 IAC 2-4.1]

Pursuant to 326 IAC 2-8-4 (FESOP) and 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 VOC solvent used as diluent in the liquid binder used in the cold mix asphalt production from the plant shall not exceed 24.0 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Liquid binders used in the production of cold mix asphalt shall be defined as follows

(1) Cut back asphalt rapid cure, containing a maximum of 25.3% of the liquid binder by weight of VOC solvent and 95% by weight of VOC solvent evaporating.

(2) Cut back asphalt medium cure, containing a maximum of 28.6% of the liquid binder by weight of VOC solvent and 70% by weight of VOC solvent evaporating.

(3) Cut back asphalt slow cure, containing a maximum of 20% of the liquid binder by weight of VOC solvent and 25% by weight of VOC solvent evaporating.

(4) Emulsified asphalt with solvent, containing a maximum of 15% of liquid binder by weight of VOC solvent and 46.4% by weight of the VOC solvent in the liquid blend evaporating. The percent oil distillate in emulsified asphalt with solvent liquid, as determined by ASTM, must be 7% or less of the total emulsion by volume.

(5) Other asphalt with solvent binder, containing a maximum 25.9% of the liquid binder of VOC solvent and 2.5% by weight of the VOC solvent evaporating.

(b) When using only one type of liquid binder (asphalt emulsion) per twelve (12) consecutive month period, the usage of liquid binder shall be limited as follows:

(1) Cutback asphalt rapid cure liquid binder usage shall not exceed 25.3 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) Cut back asphalt medium cure liquid binder usage shall not exceed 34.3 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.

(3) Cutback asphalt slow cure liquid binder usage shall not exceed 96.0 tons of VOC
solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.

(4) Emulsified asphalt with solvent liquid binder usage shall not exceed 51.7 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.

(5) Other asphalt with solvent liquid binder shall not exceed 960.0 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.

(c) When using more than one liquid binder per twelve (12) consecutive month period, VOC emissions shall be limited as follows:

The VOC solvent allotments in (1) through (5) above shall be adjusted when more than one type of binder is used per twelve (12) consecutive month period, with compliance determined at the end of each month. In order to determine the tons of VOC emitted per each type of binder, use the following formula and divide the tons of VOC solvent used for each type of binder by the corresponding adjustment factor listed in the table that follows:

\[
\text{VOC Emitted (tons/day)} = \frac{\text{VOC solvent used for each binder (tons/day)}}{\text{Adjustment Factor}}
\]

<table>
<thead>
<tr>
<th>Type of Binder</th>
<th>Adjustment Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cutback Asphalt Rapid Cure</td>
<td>1.053</td>
</tr>
<tr>
<td>Cutback Asphalt Medium Cure</td>
<td>1.429</td>
</tr>
<tr>
<td>Cutback Asphalt Slow Cure</td>
<td>4.0</td>
</tr>
<tr>
<td>Emulsified Asphalt</td>
<td>2.155</td>
</tr>
<tr>
<td>Other Asphalt</td>
<td>40.0</td>
</tr>
</tbody>
</table>

Compliance with these limits, combined with the potential to emit PM10, PM2.5, and CO, from all other emission units at this source, shall limit the source-wide total potential to emit of PM10, PM2.5, and CO, to less than one-hundred (100) tons per twelve (12) consecutive month period, each, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable.

Compliance with these limits, combined with the potential to emit VOC from all other emission units at this source, shall limit the source-wide potential to emit of VOC to less than fifty (50) tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits), and 326 IAC 2-3 (Emission Offset) not applicable.

D.2.2 VOC Rules: Asphalt Paving [326 IAC 8-5-2]

Pursuant to 326 IAC 8-5-2, the owner or operator shall not cause or allow the use of asphalt emulsion containing more than seven percent (7%) oil distillate by volume of emulsion for any paving application except the following purposes:

(a) Penetrating prime coating;

(b) Stockpile storage;

(c) Application during the months of November, December, January, February, and March.
D.2.3 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.

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

D.2.4 Record Keeping Requirement

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

(1) Calendar dates covered in the compliance determination period;
(2) Cutback asphalt slow cure liquid binder usage in the production of cold mix asphalt each month and each compliance period;
(3) VOC solvent by weight of the cutback asphalt slow cure liquid binder used in the production of cold mix asphalt each month and each compliance period; and
(4) Amount of VOC solvent used in the production of cold mix asphalt and the amount of VOC emitted each month and each compliance period.

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

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

D.2.5 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.2.1 shall be submitted no later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee’s obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).
SECTION D.3  EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(d) One (1) 2,000 gallon No.2 fuel storage tank for equipment fueling.
(e) Three (3) 30,000 gallon liquid asphalt storage tank, installed in 2004.
(f) One (1) 21,800 gallon used or waste oil storage tank, installed in 2004.
(g) One (1) 12,500 gallon No. 2 fuel oil storage tank, approved for installation in 2009.

(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.3.1 Volatile Organic Liquid Storage Vessels [326 IAC 8-9]
Pursuant to 326 IAC 8-9-1(b), the Permittee shall maintain a record and submit to the department a report containing the following information for each vessel:

(a) The vessel identification number.
(b) The vessel dimensions.
(c) The vessel capacity.

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

D.3.2 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.
SECTION D.4  EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million BTU per hour:

(1) One (1) natural gas hot oil heater, using No. 2 fuel as back-up, with a maximum rated heat input capacity of 1.2 MMBtu/hr, and exhausting to stack S2.

(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.4.1 Particulate Emissions [326 IAC 6.8-1-2(a)]
Pursuant to 6.8-1-2(a), the particulate emissions from the hot oil heater shall not exceed three-hundredths (0.03) grain per dry standard cubic foot (dscf).

D.4.2 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.
SECTION E.1 NSPS

Emissions Unit Description:

(a) One (1) drum dryer/mixer, processing blast furnace slag and steel slag in the aggregate mix, installed in 2004, with a maximum rated throughput capacity of 400 tons per hour, equipped with a 120 million British thermal units per hour (MMBtu/hr) used or waste oil fuel fired burner, using natural gas and No. 2 distillate fuel oil as backup fuels, using a jetpulse baghouse as control and exhausting to stack S1.

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

(b) Cold-mix (stockpile mix) asphalt storage piles.

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

(c) One (1) aggregate cold feed system consisting of:

(1) Two (2) aggregate conveyors;

(2) One (1) 5’ X 12’ aggregate screen; and

(3) Seven (7) cold feed bins.

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

(d) Three (3) HMA silos, each with a capacity of 200 tons, constructed in 2007.

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

(e) One (1) dust silo.

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

(f) One (1) Reclaimed Asphalt Pavement (RAP) feed system consisting of:

(1) Two (2) RAP feeder bins;

(2) One (1) RAP screen; and

(3) One (1) RAP conveyor.

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

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

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

E.1.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1] [40 CFR Part 60, Subpart A]

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

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

E.1.2 Hot Mix Asphalt Facilities NSPS [326 IAC 12] [40 CFR Part 60, Subpart I]
The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart I (included as Attachment B to the operating permit), which are incorporated by reference as 326 IAC 12, for the emission unit(s) listed above:

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

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

E.1.3 Testing Requirements [326 IAC 2-1.1-11]
In order to document the compliance status with Condition E.1.2. The Permittee shall perform the testing required under 40 CFR 60, Subpart I, utilizing methods as approved by the Commissioner. 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 Section C - Performance Testing.
SECTION E.2

NSPS

Emissions Unit Description:

(h) One (1) diesel fuel-fired portable tertiary crusher, permitted in 2016, with a maximum throughput rate of 400 tons per hour, using water spray for fugitive particulate emissions control.

Under 40 CFR 60, Subpart OOO, this is considered an affected facility.

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

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

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

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

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

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

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

E.2.2 Nonmetallic Mineral Processing Plants NSPS [326 IAC 12] [40 CFR Part 60, Subpart OOO]

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

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

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

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

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

Note: Pursuant to §60.674(b)(1), affected facilities controlled by water carryover from upstream water sprays that are inspected according to the requirements in §60.674(b) and §60.676(b) are exempt from this 5-year repeat testing requirement.
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION

Source Name: Walsh & Kelly, Inc.
Source Address: 21201 Wicker Avenue, Lowell, Indiana 46356
FESOP Permit No.: F089-40557-05255

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: Walsh & Kelly, Inc.
Source Address: 21201 Wicker Avenue, Lowell, Indiana 46356
FESOP Permit No.: F089-40557-05255

This form consists of 2 pages

☐ 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) daytime 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 2-8-12

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

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency:

Describe the cause of the Emergency:
If any of the following are not applicable, mark N/A

| Date/Time Emergency started: | |
| Date/Time Emergency was corrected: | |
| Was the facility being properly operated at the time of the emergency? | Y | N |
| Describe: | |
| Type of Pollutants Emitted: TSP, PM-10, SO₂, VOC, NOₓ, CO, Pb, other: | |
| Estimated amount of pollutant(s) emitted during emergency: | |
| Describe the steps taken to mitigate the problem: | |
| Describe the corrective actions/response steps taken: | |
| Describe the measures taken to minimize emissions: | |
| If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value: | |

Form Completed by:__________________________________________
Title / Position:__________________________________________
Date:__________________________________________
Phone:__________________________________________
Source Name: Walsh & Kelly, Inc.
Source Address: 21201 Wicker Avenue, Lowell, Indiana 46356
FESOP Permit No.: F089-40557-05255
Facility: 120 MMBtu per hour aggregate dryer burner
Parameter: Fuel & Slag Usage / SO2 emissions

Emission Limits: Sulfur dioxide (SO2) emissions shall not exceed 59.33 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.9(a).

Nitrogen Oxides (NOx) emissions shall not exceed 47.31 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.9(b).

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

<table>
<thead>
<tr>
<th>Fuel Type (Units)</th>
<th>Fuel Usage Limit (per 12 consecutive month period)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas (million cubic feet (MMcf))</td>
<td>498</td>
</tr>
<tr>
<td>No. 2 Distillate Fuel Oil (gallons)</td>
<td>1,671,393</td>
</tr>
<tr>
<td>Waste Oil (gallons)</td>
<td>1,223,139</td>
</tr>
<tr>
<td>Blast Furnace Slag (tons)</td>
<td>100,000</td>
</tr>
<tr>
<td>Steel Slag (tons)</td>
<td>1,471,680</td>
</tr>
</tbody>
</table>

Facility: Cold-mix Asphalt Production
Parameter: Binder Usage / VOC Emissions

Emission Limits: Volatile Organic Compound (VOC) emissions from the sum of the binders shall not exceed 24.0 tons per twelve (12) consecutive month period with compliance determined at the end of each month, using the equation found in Condition D.2.1(a)(6).

Binder Limits: When using only one type of liquid binder (asphalt emulsion) per twelve (12) consecutive month period in the production of cold-mix asphalt, liquid binder (asphalt emulsion) usage shall not exceed the following:

<table>
<thead>
<tr>
<th>Type of Binder</th>
<th>Binder Usage Limit (tons per 12 consecutive month period)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cutback Asphalt Rapid Cure</td>
<td>25.3</td>
</tr>
<tr>
<td>Cutback Asphalt Medium Cure</td>
<td>34.3</td>
</tr>
<tr>
<td>Cutback Asphalt Slow Cure</td>
<td>96.0</td>
</tr>
<tr>
<td>Emulsified Asphalt</td>
<td>51.7</td>
</tr>
<tr>
<td>Other Asphalt</td>
<td>960.0</td>
</tr>
</tbody>
</table>
# FESOP Quarterly Report - Fuel & Slag Usage / SO2 emissions

**QUARTER:** ___________ **YEAR:** ___________

<table>
<thead>
<tr>
<th>Month</th>
<th>Fuel Types / Slag (units)</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 1 + Column 2</th>
<th>Equation Results</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Usage This Month</td>
<td>Usage Previous 11 Months</td>
<td>Usage 12 Month Total</td>
<td>Sulfur Dioxide (SO2) Emissions (tons per 12 months)</td>
</tr>
<tr>
<td></td>
<td>Natural Gas (MMcf)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No. 2 Fuel Oil (gallons)</td>
<td></td>
<td></td>
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<td></td>
<td>Waste Fuel Oil (gallons)</td>
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<td>Blast Furnace Slag (tons)</td>
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<td>Steel Slag Usage (tons)</td>
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<td></td>
<td>Natural Gas (MMcf)</td>
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<td>No. 2 Fuel Oil (gallons)</td>
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<td>Waste Fuel Oil (gallons)</td>
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<td></td>
<td>Steel Slag Usage (tons)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

☐ No deviation occurred in this reporting period.

☐ Deviation/s occurred in this reporting period.

Submitted by: ___________________________ Date: ___________________

Title / Position: ___________________________ Phone: ___________________

Deviation has been reported on: ___________________________

Signature: ___________________________
### FESOP Quarterly Report - Liquid Binder (Asphalt Emulsion) Usage / VOC Emissions

**QUARTER:** ____________  **YEAR:** ______________

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

- No deviation occurred in this reporting period.
- Deviation/s occurred in this reporting period.

<table>
<thead>
<tr>
<th>Deviation has been reported on:</th>
<th>Submitted by:</th>
<th>Title/Position:</th>
<th>Phone:</th>
</tr>
</thead>
<tbody>
<tr>
<td>________________</td>
<td>__________________</td>
<td>__________________</td>
<td>____________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Binder</th>
<th>Adjustment Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cutback Asphalt Rapid Cure</td>
<td>1.053</td>
</tr>
<tr>
<td>Cutback Asphalt Medium Cure</td>
<td>1.429</td>
</tr>
<tr>
<td>Cutback Asphalt Slow Cure</td>
<td>4.0</td>
</tr>
<tr>
<td>Emulsified Asphalt</td>
<td>2.155</td>
</tr>
<tr>
<td>Other Asphalt</td>
<td>40.0</td>
</tr>
</tbody>
</table>
### FESOP Quarterly Report

**Source Name:** Walsh & Kelly, Inc.  
**Source Address:** 21201 Wicker Avenue, Lowell, Indiana 46356  
**FESOP Permit No.:** F089-40557-05255  
**Facility:** Dryer/Burner  
**Parameter:** Hot Mix Asphalt Production  
**Limit:** The amount of hot mix asphalt processed in the dryer/burner shall not exceed 1,000,000 tons per twelve (12) consecutive month period.

#### QUARTER: ___________ YEAR: ___________

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 1 + Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Month</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous 11 Months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Month Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</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
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Walsh & Kelly, Inc.
Source Address: 21201 Wicker Avenue, Lowell, Indiana 46356
FESOP Permit No.: F089-40557-05255

| Months: ___________ to ____________ Year: ______________ |

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

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

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

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

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

Form Completed by: ________________________________

Title / Position: ________________________________

Date: ________________________________

Phone: ________________________________
Indiana Department of Environmental Management  
Office of Air Quality  

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

Source Description and Location

Source Name: Walsh & Kelly, Inc.  
Source Location: 21201 Wicker Avenue, Lowell, IN 46356  
County: Lake  
SIC Code: 2951 (Asphalt Paving Mixtures and Blocks)  
Operation Permit No.: F089-40557-05255  
Operation Permit Issuance Date: May 1, 2019  
Significant Permit Revision No.: 089-41969-05255  
Permit Reviewer: Daniel W. Pell

Existing Approvals

The source was issued FESOP Renewal No. F089-40557-05255 on May 1, 2019. There have been no subsequent approvals issued.

County Attainment Status

The source is located in Lake 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>Attainment effective February 18, 2000, for the part of the city of East Chicago bounded by Columbus Drive on the north; the Indiana Harbor Canal on the west; 148th Street, if extended, on the south; and Euclid Avenue on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of East Chicago and Lake County.</td>
</tr>
<tr>
<td>O₃</td>
<td>Serious nonattainment effective September 23, 2019, for the 2008 8-hour ozone standard.¹</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Unclassifiable effective April 15, 2015, for the 2012 annual PM₂.₅ standard.</td>
</tr>
<tr>
<td>PM₂.₅</td>
<td>Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour PM₂.₅ standard.</td>
</tr>
<tr>
<td>PM₁₀</td>
<td>Attainment effective March 11, 2003, for the cities of East Chicago, Hammond, Whiting, and Gary. Unclassifiable effective November 15, 1990, for the remainder of Lake County.</td>
</tr>
<tr>
<td>NO₂</td>
<td>Unclassifiable or attainment effective January 29, 2012, for the 2010 NO₂ standard.</td>
</tr>
<tr>
<td>Pb</td>
<td>Unclassifiable or attainment effective December 31, 2011, for the 2008 lead standard.</td>
</tr>
</tbody>
</table>

¹Nonattainment Severe 17 effective November 15, 1990, for the Chicago-Gary-Lake County area for the 1-hour ozone standard, which was revoked effective June 15, 2005. The U. S. EPA has acknowledged in both the proposed and final rulemaking for this redesignation that the anti-backsliding provisions for the 1-hour ozone standard no longer apply as a result of the redesignation under the 8-hour ozone standard. Therefore, permits in Lake County are no longer subject to review pursuant to Emission Offset, 326 IAC 2-3 for the 1-hour standard.

(a) Ozone Standards  
U.S. EPA, in the Federal Register Notice 84 FR 44238 dated August 23, 2019, designated Lake County as serious nonattainment for the 2008 8-hour ozone standard effective September 23, 2019. An emergency rulemaking for 326 IAC 1-4 is in process to adopt the U.S. EPA’s serious
nonattainment designation for Lake and Porter County. The OAQ will rely on the serious nonattainment designation under 40 CFR 81.315 until the emergency rulemaking for 326 IAC 1-4 is effective. 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. Therefore, VOC and NOx emissions were evaluated pursuant to the requirements of Emission Offset, 326 IAC 2-3.

(b) PM$_{2.5}$

Lake 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

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

Fugitive Emissions

This type of operation is not one (1) of the twenty-eight (28) listed source categories under 326 IAC 2-2-1(ff)(1), 326 IAC 2-3-2(g), or 326 IAC 2-7-1(22)(B). However, there is an applicable New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants that was in effect on August 7, 1980 (40 CFR 60, Subpart I New Source Performance Standards for Hot Mix Asphalt Facilities); therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

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.

### Source-Wide Emissions Prior to Revision (ton/year)

<table>
<thead>
<tr>
<th></th>
<th>PM$^1$</th>
<th>PM$_{10}$$^1$</th>
<th>PM$_{2.5}$</th>
<th>SO$_2$</th>
<th>NO$_X$</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP$^3$</th>
<th>Total HAP$^3$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PTE of Entire Source Excluding Fugitives*</td>
<td>185.43</td>
<td>79.22</td>
<td>90.47</td>
<td>99.0</td>
<td>99.0</td>
<td>16.03</td>
<td>65.44</td>
<td>8.07 (HCl)</td>
<td>9.57</td>
</tr>
<tr>
<td>Total PTE of Entire Source</td>
<td>249.0</td>
<td>99.0</td>
<td>99.0</td>
<td>99.0</td>
<td>99.0</td>
<td>79.77</td>
<td>99.0</td>
<td>8.07 (Xylenes)</td>
<td>24.9</td>
</tr>
<tr>
<td>Title V Major Source Thresholds</td>
<td>NA</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>50</td>
<td>50</td>
<td>100</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>PSD Major Source Thresholds</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>Emission Offset Major Source Thresholds</td>
<td>---</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>50</td>
<td>50</td>
<td>NA</td>
<td>--</td>
<td>--</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 stationary source under Emission Offset (326 IAC 2-3) because NO$_x$ and VOC, each a nonattainment regulated pollutant, is not emitted at a rate of 50 tons per year or more.

(c) 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.

(d) These emissions are based on the TSD of FESOP Renewal No. 089-40557-05255, issued on May 1, 2019.

### Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by Walsh & Kelly, Inc. on September 24, 2019, relating to the adjustments of NO$_x$ and VOC emission limits due to the redesignation of Lake County to serious nonattainment for ozone.

### Enforcement Issues

There are no pending enforcement actions related to this revision.

### Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.
### Permit Level Determination – FESOP Significant Permit Revision

There are no new emission units or modifications to existing emission units (i.e., no physical change or change in the method of operation occurring at the source) as a result of this revision. See the "Description of Proposed Revision" section above for more detail.

Pursuant to 326 IAC 2-8-11.1(f), 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 adjusting FESOP and NOx and VOC Emission Offset limits.

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

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.

<table>
<thead>
<tr>
<th>Source-Wide Emissions After Issuance (ton/year)</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>Total PTE of Entire Source Excluding Fugitives*</td>
<td>185.43</td>
<td>79.22</td>
<td>90.47</td>
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<td>48.06</td>
<td>16.03</td>
<td>65.44</td>
<td>8.07 (Xylenes)</td>
<td>15.49</td>
</tr>
<tr>
<td>Fugitives from NSPS/NESHAP Source Category</td>
<td>63.57</td>
<td>19.78</td>
<td>8.53</td>
<td>-</td>
<td>-</td>
<td>32.57</td>
<td>1.44</td>
<td>2.16 (Xylenes)</td>
<td>6.40</td>
</tr>
<tr>
<td>Total PTE of Entire Source</td>
<td>249.0</td>
<td>99.0</td>
<td>99.0</td>
<td>99.0</td>
<td>48.06</td>
<td>48.59</td>
<td>66.88</td>
<td>8.07 (Xylenes)</td>
<td>15.49</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.

The source opted to take NOx and VOC limits in order to render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-3 (Emission Offset) not applicable to this source. See Technical Support Document (TSD) State Rule Applicability - Entire Source section, 326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset), 326 IAC 2-8 (FESOP), for more information regarding the limits.

(a) This existing Title V minor stationary source will continue to be minor under 326 IAC 2-7 because the potential to emit criteria pollutants and HAPs from the entire source will continue to be less than or limited to less than the Title V major source threshold levels. Therefore, the source is subject to the provisions of 326 IAC 2-8 (FESOP) and is an area source under Section 112 of the Clean Air Act (CAA).
(b) This existing minor PSD stationary source will continue to be minor under 326 IAC 2-2 because the potential to emit of all PSD regulated pollutants from the entire source will continue to be less than the PSD major source thresholds. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

(c) This existing minor Emission Offset stationary source will continue to be minor under 326 IAC 2-3 because the potential to emit of all nonattainment regulated pollutants, NOx and VOC, from the entire source will continue to be limited to less than the Emission Offset major source threshold levels. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

**Federal Rule Applicability Determination**

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

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

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

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

(a) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (40 CFR Part 63, 326 IAC 14, and 326 IAC 20) included in the permit 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.

**State Rule Applicability - Entire Source**

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

**326 IAC 2-2 (PSD) and 326 IAC 2-3 (Emission Offset)**

PSD and Emission Offset applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP Revision section of this document.

**PSD Minor Source Limit(s)**

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 asphalt processed shall not exceed 1,000,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The PM emissions from the dryer/mixer shall not exceed 0.371 pounds of PM per ton of asphalt 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 two-hundred fifty (250) tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

**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.
FESOP SO2, NOx, and HAP Limit(s)

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

(a) Fuel and Slag Specifications

(1) The sulfur content of the blast furnace slag shall not exceed 1.5% by weight.

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

(3) The sulfur content of the No. 2 fuel oil shall not exceed 0.5% by weight.

(4) The sulfur content of the used or waste oil shall be limited to 0.66% by weight.

(5) HCl emissions shall not exceed 13.2 pounds of HCl per 1,000 gallons of used or waste oil burned.

(6) The used or waste oil combusted shall not contain more than 1% ash, 0.20% chlorine, and 0.01% lead.

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

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

(b) Single Fuel and Slag Usage Limitations:

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

(1) The total amount of natural gas burned shall not exceed 498 million cubic feet (MMcf) per twelve (12) consecutive month period, with compliance determined at the end of each month;

(2) No. 2 fuel oil usage shall not exceed 1,671,393 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(3) Waste oil usage shall not exceed 1,223,139 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(4) The blast furnace slag usage shall not exceed 100,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(5) The steel slag usage shall not exceed 1,471,680 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(c) Multiple Fuel and Slag Usage Limitation:

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

(1) SO2 emissions from the aggregate mixer/dryer burner shall not exceed 59.33 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) NOx emissions from the aggregate mixer/dryer burner shall not exceed 47.31
Compliance with these limits, combined with the potential to emit SO2 from all other emission units at this source, shall limit the source-wide total potential to emit of SO2 to less than 100 tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits) not applicable.

Compliance with these limits, combined with the potential to emit NOx from all other emission units at this source, shall limit the source-wide total potential to emit of NOx to less than 50 tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits) not applicable.

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 twenty percent (20%) 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 (Particulate Matter Limitations Except Lake County)
Pursuant to 326 IAC 6.5-1-1(a), this source (located in Lake County) is not subject to the requirements of 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

326 IAC 6.8 (Particulate Matter Limitations for Lake County)
This source (located in Lake County) is not one of the sources specifically listed in 326 IAC 6.8-4, 326 IAC 6.8-5, or 326 IAC 6.8-8 through 326 IAC 6.8-11. The source-wide PTE of PM is 10 tons per year or more. Therefore, this source is subject to the requirements of 326 IAC 6.8-1-2 because the source-wide actual emissions of PM can be 10 tons per year or more.

326 IAC 6.8 (Lake County: Fugitive Particulate Matter)
This source (located in Lake County) is not one of the sources specifically listed in 326 IAC 6.8-10-1(2)(A) through (V). The source-wide unlimited PTE of fugitive PM and/or PM10 is 5 tons per year or more. Therefore, this source is subject to the requirements of 326 IAC 6.8-10.

(a) Pursuant to 326 IAC 6.8-10-3, the particulate matter emissions from source wide activities shall meet the following requirements:

(1) The average instantaneous opacity of fugitive particulate emissions from a paved road shall not exceed ten percent (10%).
(2) The average instantaneous opacity of fugitive particulate emissions from an unpaved road shall not exceed ten percent (10%).

(3) The opacity of fugitive particulate emissions from exposed areas shall not exceed ten percent (10%) on a six (6) minute average.

(4) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.

(5) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.

(6) There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.

(7) The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).

(8) Material processing facilities shall include the following:

   (A) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.

   (B) The PM10 emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.

   (C) The PM10 stack emissions from a material processing facility shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.

   (D) The opacity of fugitive particulate emissions from the material processing facilities, except a crusher at which a capture system is not used, shall not exceed ten percent (10%) opacity.

   (E) The opacity of fugitive particulate emissions from a crusher at which a capture system is not used shall not exceed fifteen percent (15%).

(9) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).

(10) Material transfer limits shall be as follows:

   (A) The average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).

   (B) Where adequate wetting of the material for fugitive particulate emissions control is prohibitive to further processing or reuse of the material, the opacity shall not exceed ten percent (10%), three (3) minute average.

   (C) Slag and kish handling activities at integrated iron and steel plants shall comply with the following particulate emissions limits:
(i) The opacity of fugitive particulate emissions from transfer from pots and trucks into pits shall not exceed twenty percent (20%) on a six (6) minute average.

(ii) The opacity of fugitive particulate emissions from transfer from pits into front end loaders and from transfer from front end loaders into trucks shall comply with the fugitive particulate emission limits in 326 IAC 6.8-10-3(9).

(11) Any facility or operation not specified in 326 IAC 6.8-10-3 shall meet a twenty percent (20%), three (3) minute average opacity standard.

The Permittee shall achieve these limits by controlling fugitive particulate matter emissions according to the Fugitive Dust Control Plan, which is included as Attachment A to the permit.

State Rule Applicability – Individual Facilities

There are no new or modified individual state rule applicability limitations included with this revision.

Compliance Determination and Monitoring Requirements

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) Based on the reclassification of Lake and Porter Counties to serious nonattainment for the 2008 ozone standard, changes to the language in Section C - Overall Source Limit of the permit are required pursuant to 326 IAC 2-8-4 (FESOP) and in order to render the requirements of 326 IAC 2-7 (Part 70 Permits) not applicable.

(2) IDEM, OAQ updated the title language in Condition D.1.2 for clarification.

(3) Based on the reclassification of Lake County to serious nonattainment for the 2008 ozone standard, changes to the language and limitations in Section D.1 - Emissions Unit Operation Conditions of the permit are necessary to keep the source minor under Emission Offset for ozone. The following limitations were modified:

(A) D.1.3(b)(1), FESOP Limits: SO2, NOx, and HAPs

(B) D.1.3(c)(2), FESOP Limits: SO2, NOx, and HAPs

(4) Based on the reclassification of Lake County to serious nonattainment for the 2008 ozone standard, changes to the language and limitations in Section D.2 - Emissions Unit Operation Conditions of the permit are necessary to keep the source minor under Emission Offset for ozone. IDEM, OAQ modified the VOC limitations for the Cold-mix under Section D.3.2.

(C) D.2.1(a), FESOP and Minor PSD Limits

(D) D.2.1(b)(1-5), FESOP and Minor PSD Limits

(5) IDEM, OAQ updated the corresponding report forms due to the change in emission limitations.

*****
C.1 Overall Source Limit [326 IAC 2-8]

*****

(a) *****

(1) The potential to emit volatile organic compounds (VOCs) from the entire source shall be limited to less than fifty (50) tons per twelve (12) consecutive month period;

(2) The potential to emit nitrogen oxides (NOx) from the entire source shall be limited to less than fifty (50) tons per twelve (12) consecutive month period;

(3) The potential to emit any regulated pollutant, except particulate matter (PM), volatile organic compounds (VOCs), and nitrogen oxides (NOx), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period;

(4) 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

(5) 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.

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

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

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

(4) The potential to emit volatile organic compounds (VOCs) from the entire source shall be limited to less than fifty (50) tons per twelve (12) consecutive month period.

(5) The potential to emit nitrogen oxides (NOx) from the entire source shall be limited to less than fifty (50) tons per twelve (12) consecutive month period.

(6) The potential to emit any regulated pollutant, except particulate matter (PM), volatile organic compounds (VOCs), and nitrogen oxides (NOx), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

*****

D.1.2 FESOP, EO, and PSD Minor Limits [326 IAC 2-8-4][326 IAC 2-2] [326 IAC 2-3][326 IAC 8-1-6]

*****

Compliance with these limits, combined with the potential to emit PM10, PM2.5, and CO, and VOC from all other emission units at this source, shall limit the source-wide total potential to emit of PM10, PM2.5, and CO and VOC, to less than one-hundred (100) tons per twelve (12) consecutive month period, each, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), 326 IAC 2-3 (Emission...
Compliance with these limits, combined with the potential to emit VOC from all other emission units at this source, shall limit the source-wide total potential to emit VOC, to less than fifty (50) tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-3 (Emission Offset) not applicable.

D.1.3 FESOP Limits: SO2, NOx, and HAPs [326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-4.1]

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

(1) The total amount of natural gas burned shall not exceed 4981.034.20 million cubic feet (MMcf) per twelve (12) consecutive month period, with compliance determined at the end of each month.

(c) Multiple Fuel and Slag Usage Limitation:

(2) NOx emissions from the aggregate mixer/dryer burner shall not exceed 47.31 28.25 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits, combined with the potential to emit SO2 and NOx from all other emission units at this source, shall limit the source-wide total potential to emit of SO2 and NOx to less than one-hundred (100) tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), not applicable.

D.2.1 FESOP and PSD Minor Limits [326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-3][326 IAC 2-4.1]

(a) The VOC solvent used as diluent in the liquid binder used in the cold mix asphalt production from the plant shall not exceed 24.0 667.7 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. This shall be achieved by limited the total VOC solvent of any one of the selected binders as follows:

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

When more than one binder is used, the formula in (6) must be applied so that the total VOC emitted is less than 10.8 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
(b) When using only one type of liquid binder (asphalt emulsion) per twelve (12) consecutive month period, the usage of liquid binder shall be limited as follows:

(1) Cutback asphalt rapid cure liquid binder usage shall not exceed 25.3 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) Cut back asphalt medium cure liquid binder usage shall not exceed 34.3 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.

(3) Cutback asphalt slow cure liquid binder usage shall not exceed 96.0 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.

(4) Emulsified asphalt with solvent liquid binder usage shall not exceed 51.7 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.

(5) Other asphalt with solvent liquid binder shall not exceed 960.0 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.

(6) The VOC solvent allotments in (1) through (5) above shall be adjusted when more than one type of binder is used per twelve (12) consecutive month period, with compliance determined at the end of each month. In order to determine the tons of VOC emitted per each type of binder, use the following formula and divide the tons of VOC solvent used for each type of binder by the corresponding adjustment factor listed in the table that follows:

(c) When using more than one liquid binder per twelve (12) consecutive month period, VOC emissions shall be limited as follows:

The VOC solvent allotments in (1) through (5) above shall be adjusted when more than one type of binder is used per twelve (12) consecutive month period, with compliance determined at the end of each month. In order to determine the tons of VOC emitted per each type of binder, use the following formula and divide the tons of VOC solvent used for each type of binder by the corresponding adjustment factor listed in the table that follows:

*****

(b) When using only one type of liquid binder (asphalt emulsion) per twelve (12) consecutive month period, the usage of liquid binder shall be limited as follows:

(1) Cutback asphalt rapid cure liquid binder usage shall not exceed 25.3 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) Cut back asphalt medium cure liquid binder usage shall not exceed 34.3 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.

(3) Cutback asphalt slow cure liquid binder usage shall not exceed 96.0 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.
(4) Emulsified asphalt with solvent liquid binder usage shall not exceed 51.7 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.

(5) Other asphalt with solvent liquid binder shall not exceed 960.0 tons of VOC solvent per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits, combined with the potential to emit PM10, PM2.5, and CO, and VOC from all other emission units at this source, shall limit the source-wide total potential to emit of PM10, PM2.5, and CO, to less than one-hundred (100) tons per twelve (12) consecutive month period, each, and shall limit the source-wide potential to emit of VOC 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.

Compliance with these limits, combined with the potential to emit VOC from all other emission units at this source, shall limit the source-wide potential to emit of VOC to less than fifty (50) 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.

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

FESOP Quarterly Report

Source Name: Walsh & Kelly, Inc.
Source Address: 21201 Wicker Avenue, Lowell, Indiana 46356
FESOP Permit No.: F089-40557-05255
Facility: 120 MMBtu per hour aggregate dryer burner
Parameter: Fuel & Slag Usage / SO2 emissions

Emission Limits: Sulfur dioxide (SO2) emissions shall not exceed 59.33 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.9(a).

Nitrogen Oxides (NOx) emissions shall not exceed 47.31 98.25 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.9(b).

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

<table>
<thead>
<tr>
<th>Fuel Type (Units)</th>
<th>Fuel Usage Limit (per 12 consecutive month period)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas (million cubic feet (MMcf))</td>
<td>498 1,034.29</td>
</tr>
<tr>
<td>No. 2 Distillate Fuel Oil (gallons)</td>
<td>1,671,393</td>
</tr>
<tr>
<td>Waste Oil (gallons)</td>
<td>1,223,139</td>
</tr>
<tr>
<td>Blast Furnace Slag (tons)</td>
<td>100,000</td>
</tr>
<tr>
<td>Steel Slag (tons)</td>
<td>1,471,680</td>
</tr>
</tbody>
</table>
Facility: Cold-mix Asphalt Production  
Parameter: Binder Usage / VOC Emissions  
Emission Limits: Volatile Organic Compound (VOC) emissions from the sum of the binders shall not exceed 24.0 × 66.7 tons per twelve (12) consecutive month period with compliance determined at the end of each month, using the equation found in Condition D.2.1(a)(6).

Binder Limits: When using only one type of liquid binder (asphalt emulsion) per twelve (12) consecutive month period in the production of cold-mix asphalt, liquid binder (asphalt emulsion) usage shall not exceed the following:

<table>
<thead>
<tr>
<th>Type of Binder</th>
<th>Binder Usage Limit (tons per 12 consecutive month period)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cutback Asphalt Rapid Cure</td>
<td>25.3 × 643</td>
</tr>
<tr>
<td>Cutback Asphalt Medium Cure</td>
<td>34.3 × 83.2</td>
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<tr>
<td>Cutback Asphalt Slow Cure</td>
<td>96.0 × 232.9</td>
</tr>
<tr>
<td>Emulsified Asphalt</td>
<td>51.7 × 425.5</td>
</tr>
<tr>
<td>Other Asphalt</td>
<td>960.0 × 2328.6</td>
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</tbody>
</table>

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on September 24, 2019.

The operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Significant Permit Revision No. 089-41969-05255. 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 Daniel W. Pell, 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) 234-8532 or (800) 451-6027, and ask for Daniel W. Pell or (317) 234-8532.

(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:** Walsh & Kelly, Inc.  
**Source Address:** 21201 Wicker Avenue, Lowell, Indiana  
**Permit Number:** 089-41969-05255  
**Reviewer:** Daniel W. Pell

### Calculations

#### Asphalt Plant Maximum Capacity - Drum Mix

- **Maximum Hourly Asphalt Production:** 400 ton/hr
- **Maximum Annual Asphalt Production:** 3,504,000 ton/yr
- **Maximum Annual Blast Furnace Slag Usage:** 1,471,680 ton/yr with 1.5% sulfur
- **Maximum Annual Steel Slag Usage:** 1,471,680 ton/yr with 0.66% sulfur
- **Maximum Dryer Fuel Input Rate:** 120.0 MMBtu/hr
- **Natural Gas Usage:** 1,051 MMCF/yr
- **No. 2 Fuel Oil Usage:** 7,508,571 gal/yr, with 0.50% sulfur
- **No. 4 Fuel Oil Usage:** 0 gal/yr, with 0.50% sulfur
- **Residual (No. 5 or No. 6) Fuel Oil Usage:** 0 gal/yr, with 0.50% sulfur
- **Propane Usage:** 0 gal/yr, with 0.20 gr/100 ft³ sulfur
- **Butane Usage:** 0 gal/yr, with 0.22 gr/100 ft³ sulfur
- **Used/Waste Oil Usage:** 7,508,571 gal/yr, with 0.66% sulfur, 1.00% ash, 0.20% chlorine, 0.010% lead

#### 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

### Greenhouse Gas Pollutants

<table>
<thead>
<tr>
<th>Process Description</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>CO2e</th>
<th>Total HAP</th>
<th>Hazardous Air Pollutants</th>
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<tr>
<td><strong>Unlimited/Uncontrolled Potential to Emit (tons/year)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Total Fugitive Emissions
- 41,972.76 tons/yr

### Totals Unlimited/Uncontrolled PTE
- 40,272.86 tons/yr

---

**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>125 MMBtu/hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas Usage</td>
<td>70.9 MCF/yr</td>
</tr>
<tr>
<td>No. 2 Fuel Oil Usage</td>
<td>7,926.57 gal/yr</td>
</tr>
<tr>
<td>Residual (No. 5 or No. 6) Fuel Oil Usage</td>
<td>0 gal/yr</td>
</tr>
<tr>
<td>Propane Usage</td>
<td>0 gal/yr</td>
</tr>
<tr>
<td>Butane Usage</td>
<td>0 gal/yr</td>
</tr>
<tr>
<td>Used/Waste Oil Usage</td>
<td>7,926.57 gal/yr</td>
</tr>
</tbody>
</table>

### Unlimited/Uncontrolled Emissions

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Natural Gas (MMCF/yr)</th>
<th>No. 2 Fuel Oil (gal/yr)</th>
<th>Residual (No. 5 or No. 6) Fuel Oil (gal/yr)</th>
<th>Propane (gal/yr)</th>
<th>Butane (gal/yr)</th>
<th>Used/Waste Oil (gal/yr)</th>
<th>Emission Factor (tons/yr)</th>
<th>Worse Case Fuel (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>1.0</td>
<td>2.0</td>
<td>7.5</td>
<td>7.5</td>
<td>0.5</td>
<td>0.6</td>
<td>6.00E-03</td>
<td>5.0E-04</td>
</tr>
<tr>
<td>SO2</td>
<td>2.0</td>
<td>7.10</td>
<td>78.0</td>
<td>78.0</td>
<td>6.00E-03</td>
<td>0.00E+00</td>
<td>9.00E-04</td>
<td>0.00E+00</td>
</tr>
<tr>
<td>NOx</td>
<td>1.0</td>
<td>24.0</td>
<td>47.0</td>
<td>47.0</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>9.99E-04</td>
<td>9.99E-04</td>
</tr>
<tr>
<td>VOC</td>
<td>0.5</td>
<td>3.30E-02</td>
<td>9.00E-04</td>
<td>9.00E-04</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>9.99E-04</td>
<td>9.99E-04</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)
- **Propane Usage (gal/yr)** = [Maximum Fuel Input Rate (MMBtu/hr)] / [26.760 hrs/yr] (1 gal/140 MMBtu)
- **Butane Usage (gal/yr)** = [Maximum Fuel Input Rate (MMBtu/hr)] / [7,508,571 gal/yr] (1 gal/0.0905 MMBtu)
- **Natural Gas Usage (MCF/yr)** = [Maximum Fuel Input Rate (MMBtu/hr)] / [8.760 hrs/yr] (1 MCF/1,000 MMBtu)
- **Used/Waste Oil Usage (gal/yr)** = [Maximum Fuel Input Rate (MMBtu/hr)] / [8,760 hrs/yr] (1 gal/0.140 MMBtu)

### Notes

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

---

*Sources of AP-42 Emission Factors for fuel combustion:*

- Natural Gas: AP-42 Chapter 1.4 (dated 7/96), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
- Propane and Butane: AP-42 Chapter 1.5 (dated 7/00), Tables 1.5-1 (assuming PM + PAH)
- Waste Oil: AP-42 Chapter 1.11 (dated 10/96), Tables 1.11-1, 1.11-2, 1.11-3, 1.11-4, and 1.11-5

---

*Note: The table above includes a list of criteria pollutants and their emission factors. The values are calculated based on the maximum fuel input rate and the emission factors provided in AP-42.*
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 (MMBtu/hr)</th>
<th>Natural Gas Usage (MMCF/yr)</th>
<th>No. 2 Fuel Oil Usage (gals/yr)</th>
<th>No. 4 Fuel Oil Usage (gals/yr)</th>
<th>Residual (No. 5 or No. 6) Fuel Oil Usage (gals/yr)</th>
<th>Propane Usage (gals/yr)</th>
<th>Butane Usage (gals/yr)</th>
<th>Used/Waste Oil Usage (gals/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>7,508,571</td>
<td>1,097</td>
<td>0.200</td>
<td>1.00</td>
<td>2.2</td>
<td>0.66</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>0.200 % sulfur</td>
<td>0.53</td>
<td>0.55</td>
<td>0.53</td>
<td>0.20</td>
<td>0.20</td>
<td>0.66</td>
</tr>
<tr>
<td></td>
<td>0.66 % sulfur</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>0.00 % sulfur</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>84,476.72</td>
<td>84,481.13</td>
<td>0.18</td>
<td>84,488.99</td>
<td>2,263.00</td>
<td>22,024.15</td>
<td></td>
</tr>
</tbody>
</table>

### Unlimited/Uncontrolled Emissions

#### Natural Gas

- **CO2**: 63,534.41 tons/yr
- **CH4**: 2,490 gal/yr
- **N2O**: 22,501.41 gal/yr

#### Fuel Oils

- **No. 2 Fuel Oil**: 7,508,571 gal/yr
- **No. 4 Fuel Oil**: 1,097 MMCF/yr
- **Residual Fuel Oil**: 22,501.41 gal/yr
- **Propane**: 1,000 tons/yr
- **Butane**: 2,000 tons/yr
- **Used/Waste Oil**: 22,024.15 tons/yr

### Abbreviations

- **PTE**: Potential to Emit
- **GWP**: Global Warming Potential

### Global Warming Potentials (GWP)

- **CO2**: 1
- **CH4**: 25
- **N2O**: 298

### Methodology

- **Carbon dioxide (CO2)**: Emission Factors for CO2 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/MMBtu to lb/MMCF.
- **Methane (CH4)**: Emission Factors for CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/MMBtu to lb/MMCF.
- **Nitrous oxide (N2O)**: Emission Factors for N2O from AP-42 Chapter 1.5 (dated 7/08), Table 1.5-1.

### Calculations

- **Total CO2e Emissions**: 63,534.41 tons/yr
- **Total CH4**: 2,490 gal/yr
- **Total N2O**: 22,501.41 gal/yr

### Emission Factors

- **Fuel Usage**: From TSD Appendix A.1, page 1 of 14.
- **Propane**: 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)]
- **Butane**: 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)]
- **Used/Waste Oil**: 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)]

### Emission Factors (EF) Conversions:

- **No. 2 Fuel Oil**: EF (lb/MMCF) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Natural Gas (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]
- **No. 4 Fuel Oil**: EF (lb/MMCF) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Natural Gas (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]
- **Residual Fuel Oil**: EF (lb/MMCF) = [EF (kg/MMBtu) * Conversion Factor (2.20462 lbs/kg) * Heating Value of Natural Gas (MMBtu/gal) * Conversion Factor (1000 gal/kgal)]

### Conversion Factors

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

### Sources of Emission Factors for fuel combustion:

- **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.
- **Fuel Oil**: Emission Factors for CO2, CH4 and N2O from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF.
- **Used/Waste Oil**: Emission Factors for CO2, CH4 and N2O from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF.
### Appendix A.1: Unlimited Emissions Calculations

**Dryer/Mixer - Process Emissions**

**Company Name:** Walsh & Kelly, Inc.  
**Source Address:** 21201 Wicker Avenue, Lowell, Indiana  
**Permit Number:** 089-41969-05255  
**Reviewer:** Daniel W. Pell

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>Worst Case PTE</th>
</tr>
</thead>
<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>2028</td>
<td>2028</td>
<td>2028</td>
<td>2028</td>
</tr>
<tr>
<td>SO2</td>
<td>0.004</td>
<td>0.011</td>
<td>0.06</td>
<td>6.9</td>
<td>19.2</td>
<td>101.8</td>
<td>101.8</td>
</tr>
<tr>
<td>NOx**</td>
<td>0.028</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>0.022</td>
<td>0.032</td>
<td>0.032</td>
<td>46.1</td>
<td>56.1</td>
<td>56.1</td>
<td>56.1</td>
</tr>
<tr>
<td>CO**</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>227.8</td>
<td>227.8</td>
<td>227.8</td>
<td>227.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Air Pollutant</th>
<th>Unlimited/Uncontrolled Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCl</td>
<td>1.06E-04</td>
</tr>
<tr>
<td>Antimony</td>
<td>1.30E-04</td>
</tr>
<tr>
<td>Arsenic</td>
<td>6.30E-07</td>
</tr>
<tr>
<td>Beryllium</td>
<td>neg</td>
</tr>
<tr>
<td>Cadmium</td>
<td>4.10E-07</td>
</tr>
<tr>
<td>Chromium</td>
<td>5.06E-06</td>
</tr>
<tr>
<td>Cobalt</td>
<td>2.06E-07</td>
</tr>
<tr>
<td>Lead</td>
<td>5.30E-07</td>
</tr>
<tr>
<td>Manganese</td>
<td>7.00E-07</td>
</tr>
<tr>
<td>Mercury</td>
<td>2.40E-07</td>
</tr>
<tr>
<td>Nickel</td>
<td>6.30E-05</td>
</tr>
<tr>
<td>Selenium</td>
<td>3.50E-07</td>
</tr>
<tr>
<td>2,3,7,8-Tetrachlorodiane</td>
<td>7.00E-05</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>1.30E-03</td>
</tr>
<tr>
<td>Acrylon</td>
<td>2.28</td>
</tr>
<tr>
<td>Benzene</td>
<td>3.00E-04</td>
</tr>
<tr>
<td>Benzylic Ether</td>
<td>2.40E-04</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>3.10E-03</td>
</tr>
<tr>
<td>Hexane</td>
<td>9.20E-04</td>
</tr>
<tr>
<td>Methyl Chloroform</td>
<td>4.30E-06</td>
</tr>
<tr>
<td>NOX</td>
<td>2.00E-05</td>
</tr>
<tr>
<td>Propionaldehyde</td>
<td>1.30E-04</td>
</tr>
<tr>
<td>Quinone</td>
<td>1.00E-04</td>
</tr>
<tr>
<td>Toluene</td>
<td>1.50E-04</td>
</tr>
<tr>
<td>Total PAH Haps</td>
<td>1.50E-04</td>
</tr>
<tr>
<td>Xylene</td>
<td>2.00E-04</td>
</tr>
</tbody>
</table>


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.

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

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

**Abbreviations:**  
PM = Particulate Matter  
SO2 = Sulfur Dioxide  
CO = Carbon Monoxide  
PAA = Polyaromatic Hydrocarbon  
PM10 = Particulate Matter (<10 um)  
NOx = Nitrous Oxides  
HAP = Hazardous Air Pollutant  
PM2.5 = Particulate Matter (< 2.5 um)  
VOC = Volatile Organic Compounds  
HCl = Hydrogen Chloride

---

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

**Total HAPs:** 18.68

**Worst Single HAP:** 5.43 (formaldehyde)
The following calculations determine the unlimited/uncontrolled emissions from the aggregate drying/mixing process.

### Maximum Hourly Asphalt Production

- **400** ton/hr

### Maximum Annual Asphalt Production

- **3,504,000** ton/yr

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

### Unlimited/Uncontrolled 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>Global Warming Potentials (GWP)</th>
<th>Natural Gas</th>
<th>No. 2 Fuel Oil</th>
<th>Waste Oil</th>
<th>CO2e for Worst Case Fuel (tons/yr)</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>
<td>58,341.60</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>
<td></td>
</tr>
<tr>
<td>N2O</td>
<td>298</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57,837.02</td>
<td>57,837.02</td>
<td>57,837.02</td>
<td>58,341.60</td>
</tr>
</tbody>
</table>

### CO2e Equivalent Emissions (tons/yr)

- 58,341.60

### 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 emissions 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: Walsh & Kelly, Inc.
Source Address: 21201 Wicker Avenue, Lowell, Indiana
Permit Number: 089-41969-05255
Reviewer: Daniel W. Pell

The following calculations determine the unlimited 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>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.

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

Hot Oil Heater

Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Walsh & Kelly, Inc.
Source Location: 21201 Wicker Avenue, Lowell, Indiana
Permit Number: 089-41969-05255
Reviewer: Daniel W. Pell

Maximum Hot Oil Heater Fuel Input Rate = 1.20 MMBtu/hr
Natural Gas Usage = 10.51 MMCF/yr
No. 2 Fuel Oil Usage = 75,086 gal/yr, and 0.50% sulfur

Unlimited/Uncontrolled Emissions

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>PM</th>
<th>PM/3%2.5</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor (lb/MMCF)</td>
<td>1.9</td>
<td>2.0</td>
<td>0.018</td>
<td>0.075</td>
<td>0.08</td>
<td>0.08</td>
</tr>
<tr>
<td>Emission Factor (lb/kgal)</td>
<td>7.9</td>
<td>3.3</td>
<td>0.045</td>
<td>0.124</td>
<td>0.12</td>
<td></td>
</tr>
<tr>
<td>Unlimited/Uncontrolled Potential to Emit (tons/yr)</td>
<td>0.033</td>
<td>0.003</td>
<td>2.666</td>
<td>0.75</td>
<td>0.03</td>
<td></td>
</tr>
</tbody>
</table>

Hazardous Air Pollutant

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor (lb/MMCF)</th>
<th>Emission Factor (lb/kgal)</th>
<th>Unlimited/Uncontrolled Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>2.8E-04</td>
<td>5.6E-04</td>
<td>1.1E-05</td>
</tr>
<tr>
<td>Beryllium</td>
<td>1.2E-04</td>
<td>2.4E-04</td>
<td>6.3E-08</td>
</tr>
<tr>
<td>Cadmium</td>
<td>1.1E-03</td>
<td>2.2E-04</td>
<td>5.6E-06</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.4E-03</td>
<td>2.9E-04</td>
<td>7.4E-06</td>
</tr>
<tr>
<td>Cobalt</td>
<td>8.4E-05</td>
<td>1.6E-04</td>
<td>4.8E-07</td>
</tr>
<tr>
<td>Lead</td>
<td>5.9E-04</td>
<td>1.2E-03</td>
<td>2.9E-06</td>
</tr>
<tr>
<td>Manganese</td>
<td>3.8E-04</td>
<td>7.6E-04</td>
<td>2.0E-06</td>
</tr>
<tr>
<td>Mercury</td>
<td>2.6E-04</td>
<td>5.2E-04</td>
<td>1.6E-06</td>
</tr>
<tr>
<td>Nickel</td>
<td>2.1E-03</td>
<td>4.2E-04</td>
<td>1.1E-05</td>
</tr>
<tr>
<td>Selenium</td>
<td>2.1E-02</td>
<td>4.2E-03</td>
<td>7.8E-06</td>
</tr>
<tr>
<td>Benzene</td>
<td>2.1E-03</td>
<td>4.2E-03</td>
<td>1.1E-05</td>
</tr>
<tr>
<td>Dibenzobenzene</td>
<td>1.2E-03</td>
<td>6.3E-06</td>
<td>4.3E-06</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>5.0E-00</td>
<td>0.0E+00</td>
<td></td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>7.5E-02</td>
<td>1.6E-02</td>
<td>3.9E-04</td>
</tr>
<tr>
<td>Hexane</td>
<td>1.8E+00</td>
<td>3.6E+00</td>
<td>9.6E+00</td>
</tr>
<tr>
<td>Phenol</td>
<td>4.3E-04</td>
<td>8.6E-04</td>
<td>2.0E-04</td>
</tr>
<tr>
<td>Toluene</td>
<td>3.4E-03</td>
<td>7.1E-03</td>
<td>1.8E-05</td>
</tr>
<tr>
<td>Total PAH Haps</td>
<td>neg</td>
<td>neg</td>
<td>0.0E+00</td>
</tr>
<tr>
<td>Polycyclic Organic Matter</td>
<td>4.30E-03</td>
<td>9.0E-03</td>
<td></td>
</tr>
</tbody>
</table>

Total HAPs = 9.3E-03
Worst Single HAP = 2.7E-03

Methodology

Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/140 MMBtu]
Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
Sources of AP-42 Emission Factors for fuel combustion:
Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
No. 2 Fuel Oil: AP-42 Chapter 1.3 (dated 5/10), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
CO = Carbon Monoxide
HAP = Hazardous Air Pollutant
HCl = Hydrogen Chloride
SO2 = Sulfur Dioxide
PAH = Polynuclear Hydrocarbon
NOx = Nitrous Oxides
VOC = Volatile Organic Compounds
### Unlimited Emissions Calculations

**Company Name:** Walsh & Kelly, Inc.  
**Source Address:** 21201 Wicker Avenue, Lowell, Indiana  
**Permit Number:** 089-41969-05255  
**Reviewer:** Daniel W. Pell

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Global Warming Potentials (GWP)</th>
<th>Unlimited/Uncontrolled Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO2 (lb/MMCF)</td>
<td>120,161.84</td>
<td>631.57</td>
</tr>
<tr>
<td>CH4 (lb/kgal)</td>
<td>2.49</td>
<td>0.01</td>
</tr>
<tr>
<td>N2O (lb/kgal)</td>
<td>2.2</td>
<td>0.01</td>
</tr>
</tbody>
</table>

**Natural Gas Emission Factor (units):**

- CO2: 120,161.84 lb/MMCF  
- CH4: 2.49 lb/kgal  
- N2O: 2.2 lb/kgal

**No. 2 Fuel Oil Emission Factor (units):**

- CO2: 22,501.41 lb/MMCF  
- CH4: 0.91 lb/kgal  
- N2O: 0.26 lb/kgal

**CO2e Equivalent Emissions (tons/yr):** 848.53

**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:**

- 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
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 = 1.20 MMBtu/hr

Natural Gas Usage = 10.51 MMCF/yr, and
No. 2 Fuel Oil Usage = 75,085.71 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 (tons/yr)</th>
<th>No. 2 Fuel Oil (tons/yr)</th>
<th>Worse Case PTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC</td>
<td>2.60E-08</td>
<td>2.66E-05</td>
<td>1.37E-04</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>CO</td>
<td>8.90E-06</td>
<td>0.0012</td>
<td>0.047</td>
<td>0.045</td>
<td>0.047</td>
</tr>
<tr>
<td>CO2</td>
<td></td>
<td></td>
<td>0.20</td>
<td>28.00</td>
<td>1051.20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greenhouse Gas as CO2e*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>CO2</td>
<td></td>
<td></td>
<td>0.20</td>
<td>28.00</td>
<td>1051.20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1051.20</td>
<td></td>
<td></td>
</tr>
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<td>Hazardous Air Pollutant</td>
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<td></td>
</tr>
<tr>
<td>Formaldehyde</td>
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<td>1.37E-04</td>
<td>1.37E-04</td>
<td>1.37E-04</td>
</tr>
<tr>
<td>Acenaphthene</td>
<td>5.30E-07</td>
<td>1.99E-05</td>
<td>1.99E-05</td>
<td>1.99E-05</td>
<td>1.99E-05</td>
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<td>Acenaphthylene</td>
<td>2.00E-07</td>
<td>7.51E-06</td>
<td>7.51E-06</td>
<td>7.51E-06</td>
<td>7.51E-06</td>
</tr>
<tr>
<td>Anthracene</td>
<td>1.80E-07</td>
<td>6.76E-06</td>
<td>6.76E-06</td>
<td>6.76E-06</td>
<td>6.76E-06</td>
</tr>
<tr>
<td>Benzo(b)fluoranthene</td>
<td>1.00E-07</td>
<td>3.75E-06</td>
<td>3.75E-06</td>
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<td></td>
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<tr>
<td>Fluoranthen</td>
<td>4.40E-08</td>
<td>1.65E-06</td>
<td>1.65E-06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluorene</td>
<td>3.20E-08</td>
<td>1.20E-06</td>
<td>1.20E-06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naphthalene</td>
<td>1.70E-05</td>
<td>6.38E-04</td>
<td>6.38E-04</td>
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<tr>
<td>Phenanthrene</td>
<td>4.90E-06</td>
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<td></td>
</tr>
<tr>
<td>Pyrene</td>
<td>3.20E-08</td>
<td>1.20E-06</td>
<td>1.20E-06</td>
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<td></td>
</tr>
<tr>
<td>Total HAPs</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worst Single HAP</td>
<td>6.38E-04</td>
<td>(Naphthalene)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Methodology
- Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1000 CF/MMCF]
- No. 2 Fuel Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [0.140 gal/MMBtu]
- Natural Gas Potential to Emit (tons/yr) = (Natural Gas Usage (MMCF/yr)) * (Emission Factor (lb/MMCF)) * (MMCF/1,000 lbs)
- No. 2 Fuel Oil Potential to Emit (tons/yr) = (No. 2 Fuel Oil Usage (gal/yr)) * (Emission Factor (lb/gal)) * (1 gal/0.140 MMBtu)
- Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 (ton/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

Reciprocating Internal Combustion Engines - Diesel Fuel

Output Rating (<600 HP)

<table>
<thead>
<tr>
<th>Output Horsepower Rating (hp)</th>
<th>0.0</th>
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</thead>
<tbody>
<tr>
<td>Maximum Hours Operated per Year</td>
<td>8760</td>
</tr>
<tr>
<td>Potential Throughput (hp-hr/yr)</td>
<td>0</td>
</tr>
<tr>
<td>Maximum Diesel Fuel Usage (gal/yr)</td>
<td>0</td>
</tr>
</tbody>
</table>

**Pollutant**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>PM&lt;sup&gt;2&lt;/sup&gt;</th>
<th>PM&lt;sub&gt;10&lt;/sub&gt;&lt;sup&gt;2&lt;/sup&gt;</th>
<th>direct PM&lt;sub&gt;2.5&lt;/sub&gt;&lt;sup&gt;2&lt;/sup&gt;</th>
<th>SO&lt;sub&gt;2&lt;/sub&gt;</th>
<th>NO&lt;sub&gt;x&lt;/sub&gt;</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/hp-hr</td>
<td>0.0022</td>
<td>0.0022</td>
<td>0.0022</td>
<td>0.0021</td>
<td>0.0310</td>
<td>0.0025</td>
<td>0.0067</td>
</tr>
<tr>
<td>Emission Factor in lb/gal&lt;sup&gt;1&lt;/sup&gt;</td>
<td>43.07</td>
<td>43.07</td>
<td>43.07</td>
<td>40.13</td>
<td>606.85</td>
<td>49.22</td>
<td>130.77</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

<sup>1</sup>The AP-42 Chapter 3.3-1 emission factors in lb/hp-hr were converted to lb/gal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Benzene</th>
<th>Toluene</th>
<th>Xylene</th>
<th>1,3-Butadiene</th>
<th>Formaldehyde</th>
<th>Acetaldehyde</th>
<th>Acrolein</th>
<th>Total PAH HAPs&lt;sup&gt;3&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMBtu&lt;sup&gt;2&lt;/sup&gt;</td>
<td>9.33E-04</td>
<td>4.09E-04</td>
<td>2.85E-04</td>
<td>3.91E-05</td>
<td>1.18E-03</td>
<td>7.67E-04</td>
<td>9.25E-05</td>
<td>1.65E-04</td>
</tr>
<tr>
<td>Emission Factor in lb/gal&lt;sup&gt;4&lt;/sup&gt;</td>
<td>1.28E-01</td>
<td>5.60E-02</td>
<td>3.91E-02</td>
<td>6.36E-03</td>
<td>1.62E-02</td>
<td>1.05E-01</td>
<td>1.27E-02</td>
<td>2.30E-02</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
</tr>
</tbody>
</table>

<sup>2</sup>The AP-42 Chapter 3.3-1 emission factors in lb/MMBtu were converted to lb/gal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CO&lt;sub&gt;2&lt;/sub&gt;</th>
<th>CH&lt;sub&gt;4&lt;/sub&gt;</th>
<th>NO&lt;sub&gt;x&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/hp-hr</td>
<td>1.15</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Emission Factor in kg/MMBtu</td>
<td>NA</td>
<td>0.003</td>
<td>0.0006</td>
</tr>
<tr>
<td>Emission Factor in lb/gal&lt;sup&gt;5&lt;/sup&gt;</td>
<td>22.51E-07</td>
<td>0.91</td>
<td>0.18</td>
</tr>
<tr>
<td>Potential Emission in tons/yr&lt;sup&gt;5&lt;/sup&gt;</td>
<td>0.00</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

<sup>3</sup>The AP-42 Chapter 3.3-1 emission factor in lb/MMBtu was converted to lb/gal emission factor using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CO&lt;sub&gt;2&lt;/sub&gt;</th>
<th>CH&lt;sub&gt;4&lt;/sub&gt;</th>
<th>NO&lt;sub&gt;x&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/hp-hr</td>
<td>1.15</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Emission Factor in kg/MMBtu</td>
<td>NA</td>
<td>0.003</td>
<td>0.0006</td>
</tr>
<tr>
<td>Emission Factor in lb/gal&lt;sup&gt;4&lt;/sup&gt;</td>
<td>22.51E-07</td>
<td>0.91</td>
<td>0.18</td>
</tr>
<tr>
<td>Potential Emission in tons/yr&lt;sup&gt;4&lt;/sup&gt;</td>
<td>0.00</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

*PAH = Polynuclear Hydrocarbons (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Benzene</th>
<th>Toluene</th>
<th>Xylene</th>
<th>1,3-Butadiene</th>
<th>Formaldehyde</th>
<th>Acetaldehyde</th>
<th>Acrolein</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/gal&lt;sup&gt;4&lt;/sup&gt;</td>
<td>1.28E-01</td>
<td>5.60E-02</td>
<td>3.91E-02</td>
<td>6.36E-03</td>
<td>1.62E-02</td>
<td>1.05E-01</td>
<td>1.27E-02</td>
</tr>
<tr>
<td>Potential Emission in tons/yr&lt;sup&gt;4&lt;/sup&gt;</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
</tr>
</tbody>
</table>

<sup>4</sup>The AP-42 Chapter 3.3-1 emission factors in lb/MMBtu were converted to lb/gal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

*Potential Emission of Total HAPs (tons/yr) | 0.00E+00

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

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CO&lt;sub&gt;2&lt;/sub&gt;</th>
<th>CH&lt;sub&gt;4&lt;/sub&gt;</th>
<th>NO&lt;sub&gt;x&lt;/sub&gt;</th>
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</thead>
<tbody>
<tr>
<td>Emission Factor in lb/hp-hr</td>
<td>1.15</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Emission Factor in kg/MMBtu</td>
<td>NA</td>
<td>0.003</td>
<td>0.0006</td>
</tr>
<tr>
<td>Emission Factor in lb/gal&lt;sup&gt;5&lt;/sup&gt;</td>
<td>22.51E-07</td>
<td>0.91</td>
<td>0.18</td>
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<tr>
<td>Potential Emission in tons/yr&lt;sup&gt;5&lt;/sup&gt;</td>
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<td>0.000</td>
<td>0.000</td>
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</tbody>
</table>

<sup>5</sup>The AP-42 Chapter 3.3-1 emission factor in lb/MMBtu was converted to lb/gal emission factor using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.

**Methodology**

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]

Maximum Diesel Fuel Usage (gal/yr) = Potential Throughput (hp-hr/yr) * 7000 (Btu/hp-hr) * 1/7 (1 gal/Btu)

Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3.1 and 3.3.2 and have been converted to lb/gal

CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2 and have been converted to lb/gal

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

Potential Emissions (tons/yr) = [Maximum Diesel Fuel Usage (gal/yr) * Emission Factor (lb/gal)] / (1,000 gal/kgal) / (2,000 lb/ton)

CO2e (tons/yr) = CO2 Potential Emission tons/yr x CO2 GWP (1) + CH4 Potential Emission tons/yr x CH4 GWP (25) + N2O Potential Emission tons/yr x N2O GWP (298).
### Green House Gas Emissions (GHG)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CO2</th>
<th>CH4&lt;sup&gt;1,2&lt;/sup&gt;</th>
<th>N2O&lt;sup&gt;3&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/hp-hr</td>
<td>1.16</td>
<td>8.35E-05</td>
<td>NA</td>
</tr>
<tr>
<td>Emission Factor in kg/MMBtu</td>
<td>NA</td>
<td>NA</td>
<td>0.0006</td>
</tr>
<tr>
<td>Emission Factor in tons/yr</td>
<td>22.7078</td>
<td>1.24</td>
<td>0.18</td>
</tr>
<tr>
<td>Potential Emission in tons/yr</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

1. The AP-42 Chapter 3.4-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4.1) since the source will limit the emissions from this unit by limiting the fuel usage.
2. Emission factor (lb/kgal) = AP-42 EF (lb/hp-hr) * 1/7,000 (hp-hr/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)
3. Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10<sup>6</sup> (MMBtu/ton) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

### Methodology

Potential Emission = Potential Throughput * Emission Factor

Appendix A.1: Unlimited Emissions Calculations

Asphalt Load-Out, Silo Filling, and Yard Emissions

Company Name: Walsh & Kelly, Inc.
Source Address: 21201 Wicker Avenue, Lowell, Indiana
Permit Number: 089-41969-05255
Reviewer: Daniel W. Pell

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

### Emissions Table

<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 NA</td>
<td>0.91</td>
<td>1.03</td>
<td>NA</td>
<td></td>
<td>1.94</td>
</tr>
<tr>
<td>Organic PM</td>
<td>3.4E-04</td>
<td>2.3E-04 NA</td>
<td>0.60</td>
<td>0.445</td>
<td>NA</td>
<td></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>0.817</td>
<td>5.05</td>
</tr>
</tbody>
</table>

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

### Emission Factors

- **Total PM/PM10/PM2.5 Ef**
  \[ \text{Ef} = 0.000181 + 0.00141(-V)e^{(0.0251)(T+460)-20.43} \]
- **Organic PM Ef**
  \[ \text{Ef} = 0.00141(-V)e^{(0.0251)(T+460)-20.43} \]
- **TOC Ef**
  \[ \text{Ef} = 0.0172(-V)e^{(0.0251)(T+460)-20.43} \]
- **CO Ef**
  \[ \text{Ef} = 0.00558(-V)e^{(0.0251)(T+460)-20.43} \]

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

- **PM/PM10 Ef**
  \[ \text{Ef} = 0.000332 + 0.00105(-V)e^{(0.0251)(T+460)-20.43} \]
- **Organic PM Ef**
  \[ \text{Ef} = 0.00105(-V)e^{(0.0251)(T+460)-20.43} \]
- **TOC Ef**
  \[ \text{Ef} = 0.0504(-V)e^{(0.0251)(T+460)-20.43} \]
- **CO Ef**
  \[ \text{Ef} = 0.00488(-V)e^{(0.0251)(T+460)-20.43} \]

### 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)


### 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

### Total VOCs

<table>
<thead>
<tr>
<th></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>PM/HAPs</td>
<td>0.042</td>
<td>0.050</td>
<td>0</td>
<td>0</td>
<td>0.093</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VOC/HAPs</td>
<td>0.108</td>
<td>0.272</td>
<td>0.028</td>
<td>0.408</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>non-VOC/HAPs</td>
<td>5.6E-04</td>
<td>5.8E-05</td>
<td>1.5E-04</td>
<td>7.7E-04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>non-VOC/non-HAPs</td>
<td>0.53</td>
<td>0.30</td>
<td>0.14</td>
<td>0.97</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Worst Single HAP = 0.155 (formaldehyde)

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.

Company Name: Walsh & Kelly, Inc.
Source Address: 21201 Wicker Avenue, Lowell, Indiana
Permit Number: 089-41969-05255
Reviewer: Daniel W. Pell
## 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>Speciation Profile</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>Load-out and Onsite Yard (% by weight of Total Organic PM)</td>
<td>Speciation Profile</td>
<td>Unlimited/Uncontrolled Potential to Emit (tons/yr)</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>1.6E-03</td>
<td>3.6E-03</td>
</tr>
<tr>
<td>Acenaphthylene</td>
<td>208-96-8</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.13%</td>
<td>1.7E-04</td>
<td>2.3E-04</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>4.2E-04</td>
<td>1.0E-03</td>
</tr>
<tr>
<td>Benzo(a)anthracene</td>
<td>54-95-3</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.019%</td>
<td>1.1E-04</td>
<td>3.8E-04</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>4.5E-05</td>
<td>NA</td>
</tr>
<tr>
<td>Benzo(k)fluoranthene</td>
<td>207-09-5</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0022%</td>
<td>1.3E-05</td>
<td>4.5E-05</td>
</tr>
<tr>
<td>Benzo(p)fluorene</td>
<td>191-24-2</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0019%</td>
<td>1.1E-05</td>
<td>NA</td>
</tr>
<tr>
<td>Benzo(e)pyrene</td>
<td>50-32-8</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0023%</td>
<td>1.4E-05</td>
<td>NA</td>
</tr>
<tr>
<td>Benzo(j)fluorene</td>
<td>192-97-2</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0078%</td>
<td>4.7E-05</td>
<td>8.5E-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>6.2E-04</td>
<td>1.5E-03</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>2.2E-06</td>
<td>2.2E-06</td>
</tr>
<tr>
<td>Fluoranthene</td>
<td>205-44-1</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.08%</td>
<td>3.0E-04</td>
<td>NA</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>4.6E-03</td>
<td>1.9E-03</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>0.0047%</td>
<td>2.8E-08</td>
<td>2.8E-06</td>
</tr>
<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>1.4E-02</td>
<td>9.0E-03</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-12-3</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>1.25%</td>
<td>7.5E-03</td>
<td>1.6E-02</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>4.8E-03</td>
<td>1.3E-02</td>
</tr>
<tr>
<td>Pyrene</td>
<td>128-03-0</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.15%</td>
<td>9.0E-04</td>
<td>2.9E-03</td>
</tr>
<tr>
<td><strong>Total PAH HAPs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.086</td>
</tr>
<tr>
<td><strong>Other semi-volatile HAPs</strong></td>
<td></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>POM</td>
<td>Organic PM</td>
<td>1.18%</td>
<td>7.0E-03</td>
<td>NA</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)]

Speciation Profiles from AP-42 Chapter 11 (dated 3/04), Tables 11.1-15 and 11.1-16

### Abbreviations

- **PM** = Particulate Matter
- **HAP** = Hazardous Air Pollutant
- **POM** = Polycyclic Organic Matter
**ATSD Appendix A.1: Unlimited Emissions Calculations**

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

### 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>Speciation Profile</th>
<th>Unlimited/Uncontrolled Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Load-out and Onsite Yard (% by weight of TOC)</td>
<td>Silo Filling and Asphalt Storage Tank (% by weight of TOC)</td>
</tr>
<tr>
<td><strong>VOC</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>94%</td>
<td>100%</td>
</tr>
<tr>
<td><strong>non-VOC/non-HAPS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></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%</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>0.065%</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>
</tr>
<tr>
<td><strong>Total non-VOC/non-HAPS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.30%</td>
<td>1.40%</td>
</tr>
<tr>
<td><strong>Volatile organic HAPs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benzene</td>
<td>71-43-2</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.022%</td>
<td>0.032%</td>
</tr>
<tr>
<td>Bromomethane</td>
<td>74-83-9</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.0096%</td>
<td>0.0049%</td>
</tr>
<tr>
<td>2-Butanone</td>
<td>78-93-3</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.049%</td>
<td>0.039%</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>0.018%</td>
</tr>
<tr>
<td>Chloroethane</td>
<td>75-00-3</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.0021%</td>
<td>0.0044%</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%</td>
</tr>
<tr>
<td>Cumene</td>
<td>62-82-8</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.11%</td>
<td>0</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.28%</td>
<td>0.038%</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.083%</td>
<td>0.69%</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>
</tr>
<tr>
<td>Isocynane</td>
<td>540-84-1</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.0018%</td>
<td>0.00031%</td>
</tr>
<tr>
<td>Methylene Chloride</td>
<td>75-09-2</td>
<td>non-VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0</td>
<td>0.00027%</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>
</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>
</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>
</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>
</tr>
<tr>
<td>1,1,1-Trichloroethene</td>
<td>71-85-6</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Trichloroethene</td>
<td>78-01-6</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.0013%</td>
<td>0</td>
</tr>
<tr>
<td>Trichlorofluoromethane</td>
<td>75-69-4</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.011%</td>
<td>0.020%</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%</td>
</tr>
<tr>
<td><strong>Total volatile organic HAPs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.50%</td>
<td>1.30%</td>
</tr>
</tbody>
</table>

**Methodology**

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


**Abbreviations**

- TOC = Total Organic Compounds
- VOC = Volatile Organic Compound
- MTBE = Methyl tert butyl ether
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.

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

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>0.50</td>
<td>0.275</td>
<td>0.096</td>
</tr>
<tr>
<td>Limestone</td>
<td>1.6</td>
<td>1.85</td>
<td>3.00</td>
<td>1.014</td>
<td>0.355</td>
</tr>
<tr>
<td>RAP*</td>
<td>0.5</td>
<td>0.58</td>
<td>2.00</td>
<td>0.211</td>
<td>0.074</td>
</tr>
<tr>
<td>Gravel</td>
<td>1.6</td>
<td>1.85</td>
<td>0.25</td>
<td>0.084</td>
<td>0.030</td>
</tr>
<tr>
<td>Shingles</td>
<td>0.5</td>
<td>0.58</td>
<td>0.25</td>
<td>0.026</td>
<td>0.009</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>

**Total 2.41 0.84**

Methodology

\[\text{PTE of PM (tons/yr)} = (\text{Emission Factor (lb/acre/day)}) \times (\text{Maximum Pile Size (acres)}) \times (\text{ton/2000 lbs}) \times (365 \text{ days/yr})\]

PTE of PM10/PM2.5 (tons/yr) = (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: Walsh & Kelly, Inc.
Source Address: 21201 Wicker Avenue, Lowell, Indiana
Permit Number: 089-41969-05255
Reviewer: Daniel W. Pell

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.

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

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, 2006*)
- \(M\) = material % moisture content of aggregate (Source: AP-42 Section 11.1.1.1)

\[
Ef(\text{PM}) = 2.27 \times 10^{-3} \text{ lb PM/ton of material handled}
\]

\[
Ef(\text{PM10}) = 1.07 \times 10^{-3} \text{ lb PM10/ton of material handled}
\]

\[
Ef(\text{PM2.5}) = 1.62 \times 10^{-4} \text{ lb PM2.5/ton of material handled}
\]

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 (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>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

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

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

<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>8.99</td>
<td>3.99</td>
</tr>
<tr>
<td>Screening</td>
<td>0.029</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>Unlimited Potential to Emit (tons/yr)</td>
<td>55.59</td>
<td>20.31</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 %)]

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

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

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

**Assumes PM10 = PM2.5

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

#### Unpaved Roads

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).

<table>
<thead>
<tr>
<th>Process</th>
<th>Vehicle Type</th>
<th>Maximum Weight of Vehicle (tons)</th>
<th>Maximum Weight of Load (tons)</th>
<th>Maximum weight of Vehicle and Load (tons)</th>
<th>Maximum trips per day (trip/day)</th>
<th>Maximum one-way distance (miles)</th>
<th>Maximum one-way distance (miles) (After Control)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate/RAP Truck Enter Full</td>
<td>17.0</td>
<td>20.3</td>
<td>37.3</td>
<td>38.6</td>
<td>1.5E+05</td>
<td>4.9E+03</td>
<td>6.0</td>
</tr>
<tr>
<td>Asphalt Cement/Binder Truck Enter Full</td>
<td>12.0</td>
<td>32.0</td>
<td>44.0</td>
<td>4.8E+02</td>
<td>1.25E+04</td>
<td>3.0E+04</td>
<td>7.5E+03</td>
</tr>
<tr>
<td>Aggregate/RAP Truck Leave Empty</td>
<td>10.0</td>
<td>22.0</td>
<td>32.0</td>
<td>1.2E+02</td>
<td>2.5E+04</td>
<td>5.1E+04</td>
<td>2.64 tons/yr</td>
</tr>
<tr>
<td>Fuel Oil Truck Enter Full</td>
<td>12.0</td>
<td>32.0</td>
<td>44.0</td>
<td>4.8E+02</td>
<td>1.25E+04</td>
<td>3.0E+04</td>
<td>7.5E+03</td>
</tr>
<tr>
<td>Asphalt Cement/Binder Truck Leave Empty</td>
<td>0.52</td>
<td>8295.5</td>
<td>300</td>
<td>3.5E+04</td>
<td>7.9E+02</td>
<td>0.057</td>
<td>6.0</td>
</tr>
</tbody>
</table>

#### Methodology

**Emitted PTE of PM** = \( \text{Mitigated PTE of PM} \times \text{Dust Control Efficiency} \)

**Emitted PTE of PM (Before Control)** = \( \text{Mitigated PTE of PM (Before Control)} \times \text{Dust Control Efficiency} \)

**Emitted PTE of PM (After Control)** = \( \text{Mitigated PTE of PM (After Control)} \times \text{Dust Control Efficiency} \)

**Mitigation Emission Factor (tons/yr)** = \( \text{Maximum one-way miles (mi/trip)} \times \text{Average Vehicle Weight Per Trip (ton/trip)} \)

**Average Vehicle Weight Per Trip** = \( \frac{(\text{Maximum Weight of Vehicle and Load (tons/yr)})}{(\text{Maximum trips per year (trip/yr)})} \)

**Maximum Weight of Vehicle and Load (tons)** = \( \text{Maximum Weight of Vehicle (tons/trip)} \times (\text{Maximum trips per year (trip/yr)}) \)

**Average Miles Per Trip** = \( \frac{(\text{Maximum one-way miles (miles/yr)})}{(\text{Maximum trips per year (trip/yr)})} \)

**Maximum one-way distance (miles)** = \( \frac{(\text{Maximum one-way distance (mi/trip)})}{(\text{Average Vehicle Weight Per Trip (ton/trip)})} \)

**Maximum one-way distance (miles) (After Control)** = \( \frac{(\text{Maximum one-way distance (mi/trip)})}{(\text{Mitigated Vehicle Weight Per Trip (ton/trip)})} \)

**Dust Control Efficiency** = \( \frac{(\text{Maximum one-way distance (mi/trip)})}{(\text{Average Vehicle Weight Per Trip (ton/trip)})} \)

**Emitted PTE of PM (Before Control)** = \( \text{Mitigated PTE of PM (Before Control)} \times \text{Dust Control Efficiency} \)

**Emitted PTE of PM (After Control)** = \( \text{Mitigated PTE of PM (After Control)} \times \text{Dust Control Efficiency} \)

**Maximum Weight of Vehicle (tons)** = \( \text{Maximum Weight of Vehicle (tons/trip)} \times (\text{Maximum trips per year (trip/yr)}) \)

**Maximum Weight of Load (tons)** = \( \text{Maximum Weight of Load (tons/trip)} \times (\text{Maximum trips per year (trip/yr)}) \)

**Maximum one-way miles (mi/trip)** = \( \frac{(\text{Average Miles Per Trip (miles/trip)})}{(\text{Average Vehicle Weight Per Trip (ton/trip)})} \)

**Maximum one-way miles (mi/trip) (After Control)** = \( \frac{(\text{Average Miles Per Trip (miles/trip)})}{(\text{Mitigated Vehicle Weight Per Trip (ton/trip)})} \)

**Mitigated PTE of PM (Before Control)** = \( \text{Maximum one-way miles (mi/trip)} \times \text{Maximum Weight of Load (tons)} \times \text{Maximum one-way miles (mi/trip) (After Control)} \times \text{Mitigation Emission Factor (tons/yr)} \)

**Mitigation PTE of PM (tons/yr)** = \( \text{Maximum one-way miles (mi/trip)} \times \text{Maximum Weight of Load (tons)} \times \text{Mitigation Emission Factor (tons/yr)} \)

**Average Vehicle Weight Per Trip (ton/trip)** = \( \frac{(\text{Total Weight driven per year (ton/yr)})}{(\text{Maximum trips per year (trip/yr)})} \)

**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
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).

Paved Roads at Industrial Site

Mitigated PTE (After Control) (tons/yr) = (Mitigated PTE (Before Control) (tons/yr)) * (1 - Dust Control Efficiency)

Mitigated PTE (Before Control) (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)

Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]

Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]

Maximum one-way distance (feet/trip) = Maximum one-way distance (mi/trip) * 5280 ft/mile

Maximum one-way distance (mi/trip) = Maximum trips per year (trip/yr) * Maximum one-way distance (feet/trip) / 5280 ft/mile

Total Weight driven per year (ton/yr) = Maximum Weight of Vehicle and Load (tons/trip) * Maximum trips per year (trip/yr)

Maximum trips per year (trip/yr) = Throughput (tons/yr) / Maximum Weight of Load (tons/trip)

Maximum Weight of Vehicle and Load (tons/trip) = Maximum Weight (tons) + Maximum Material Handling Throughput (tons/yr) / Maximum No. 2 Fuel Oil Usage + Maximum Asphalt Cement/Binder Throughput

Maximum No. 2 Fuel Oil Usage = Maximum Asphalt Production Limitation * Percent Asphalt Cement/Binder (weight %)

Maximum Asphalt Production Limitation = Annual Asphalt Production (tons/yr) * Percent Asphalt Cement/Binder (weight %)

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

Maximum Weight (tons) = Maximum Weight of Load (tons/trip) * Maximum one-way distance (feet/trip) / 5280 ft/mile

Maximum Weight of Load (tons/trip) = PTE of PM / Mitigated Emission Factor, Eext = E * [1 - (p/4N)]

Maximum one-way distance (feet/trip) = Maximum one-way distance (mi/trip) * 5280 ft/mile

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

where p = Average vehicle weight (provided by source) / Typical particle size multiplier (AP-42 Table 13.2.1-1)

W = Typical particle size multiplier (AP-42 Table 13.2.1-1)

S = sL = sL = sL

N = N

Total

PTE of PM

PTE of PM10

PTE of PM2.5

PTE of PM = Particulate Matter

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

Abbreviations

Appendix A.1: Unlimited Emissions Calculations

Page 10 of 20 App A.1

Paved Roads

Company Name: Walsh & Kelly, Inc.
Source Address: 2101 Wicker Avenue, Lowell, Indiana
Permit Number: 089-4198-555
Reviewer: Daniel W. Peck
The following calculations determine the amount of VOC and HAP emissions created from volatilization of solvent used as diluent in the liquid binder for cold mix asphalt production

Maximum Annual Asphalt Production = 3,504,000 tons/yr
Percent Asphalt Cement/Binder (weight %) = 5.0%
Maximum Asphalt Cement/Binder Throughput = 175,200 tons/yr

<table>
<thead>
<tr>
<th>Volatile Organic Compounds</th>
<th>Maximum weight % of VOC solvent in binder*</th>
<th>Weight % VOC solvent in binder that evaporates</th>
<th>Maximum VOC Solvent Usage (tons/yr)</th>
<th>PTE of VOC (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cutback asphalt rapid cure (assuming gasoline or naphtha solvent)</td>
<td>25.3%</td>
<td>95.0%</td>
<td>44,325.6</td>
<td>42,109.3</td>
</tr>
<tr>
<td>Cutback asphalt medium cure (assuming kerosene solvent)</td>
<td>28.6%</td>
<td>70.0%</td>
<td>50,107.2</td>
<td>35,075.0</td>
</tr>
<tr>
<td>Cutback asphalt slow cure (assuming fuel oil solvent)</td>
<td>20.0%</td>
<td>25.0%</td>
<td>35,040.0</td>
<td>8,760.0</td>
</tr>
<tr>
<td>Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)</td>
<td>15.0%</td>
<td>46.4%</td>
<td>26,280.0</td>
<td>12,193.9</td>
</tr>
<tr>
<td>Other asphalt with solvent binder</td>
<td>25.9%</td>
<td>2.5%</td>
<td>45,376.8</td>
<td>1,134.4</td>
</tr>
</tbody>
</table>

Worst Case PTE of VOC = 42,109.3

<table>
<thead>
<tr>
<th>Hazardous Air Pollutants</th>
<th>Worst Case Total HAP Content of VOC solvent (weight %)* = 26.08%</th>
<th>PTE of Total HAPs (tons/yr) = 10,983.67</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylenes</td>
<td>PTE of Single HAP (tons/yr) = 3,789.34 Xylenes</td>
<td></td>
</tr>
</tbody>
</table>

| Hazardous Air Pollutant (HAP) Content (% by weight) For Various Petroleum Solvents* |
|-------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|
| Volatile Organic HAP                    | CAS#                                      | Hazardous Air Pollutant (HAP) Content (% by weight)* | Gasoline | Kerosene | Diesel (RM) | No. 2 Fuel Oil | No. 6 Fuel Oil |
| 1,3-Butadiene                          | 106-89-0                                  | 3.70E-5%                                     |          |          |              |                |                |
| 2,2,4-Trimethylpentane                 | 154-84-1                                  | 2.40%                                        |          |          |              |                |                |
| Acdiophenol                           | 83-32-9                                   | 4.70E-5%                                     | 1.80E-4% |          |              |                |                |
| Acdiophenyl                           | 206-96-8                                  | 4.50E-5%                                     | 6.00E-5% |          |              |                |                |
| Anthracene                            | 120-12-7                                  | 1.20E-6%                                     | 5.80E-5% | 2.80E-5% | 5.00E-5%    |                |                |
| Benzenol/antracene                    | 71-43-2                                   | 1.90%                                        | 2.90E-4% |          |              |                |                |
| Benzol/pyrene                          | 50-32-8                                   | 9.60E-7%                                     | 4.50E-7% | 5.50E-4% |              |                |                |
| Benzol,h,ixylene                      | 191-24-2                                  | 1.20E-7%                                     | 5.70E-8% |          |              |                |                |
| Biphenyl                               | 92-52-4                                   | 6.30E-4%                                     | 7.20E-5% |          |              |                |                |
| Chrysene                               | 218-01-9                                  | 4.50E-7%                                     | 1.40E-6% | 6.90E-4% |              |                |                |
| Ethylibenzene                          | 100-41-4                                  | 1.70%                                        |          | 3.40E-4% |              |                |                |
| Fluoranthenol                          | 206-44-0                                  | 7.10E-4%                                     | 5.90E-5% | 1.40E-5% | 2.40E-4%    |                |                |
| Fluorene                               | 96-73-7                                   | 4.20E-6%                                     | 8.60E-4% | 1.90E-4% |              |                |                |
| Indeno(1,2,3-cd)pyrene                 | 193-39-5                                  | 1.60E-7%                                     |          | 1.00E-4% |              |                |                |
| Methyl-tert-butyl ether                | 1634-04-4                                 | 0.33%                                        |          |          |              |                |                |
| n-Hexene                               | 110-54-3                                  | 2.40%                                        |          | 0.18%    | 6.20E-4%    |                |                |
| Phenanthrene                           | 85-01-8                                   | 8.60E-4%                                     | 8.80E-4% | 7.90E-4% | 2.10E-4%    |                |                |
| Xylene                                | 120-00-0                                  | 2.40E-5%                                     | 4.60E-5% | 2.90E-5% | 2.30E-5%    |                |                |
| Total Xylenes                          | 1330-20-7                                 | 9.00%                                        |          | 0.23%    |              |                |                |
| Total Organic HAPs                     | 25.68%                                    | 0.33%                                        | 1.29%    | 0.64%    | 0.19%       |                |                |
| Worst Single HAP                       | 9.69%                                     | 0.31%                                        | 0.50%    | 0.23%    | 0.07%       |                |                |
| Xylenes                                |                                          |                                              |          |          |              |                |                |
| Naphthalene                            |                                          |                                              |          |          |              |                |                |
| Xylenes                                |                                          |                                              |          |          |              |                |                |
| Xylenes                                |                                          |                                              |          |          |              |                |                |
| Chrysene                               |                                          |                                              |          |          |              |                |                |

Methodology

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

Methodology:

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


Abbreviations

VOC = Volatile Organic Compounds
PTE = Potential to Emit
Appendix A.1: Unlimited Emissions Calculations

Gasoline Fuel Transfer and Dispensing Operation

Company Name: Walsh & Kelly, Inc.
Source Address: 21201 Wicker Avenue, Lowell, Indiana
Permit Number: 089-41969-05255
Reviewer: Daniel W. Pell

To calculate evaporative emissions from the gasoline dispensing fuel transfer and dispensing operation handling emission factors from AP-42 Table 5.2-7 were used. The total potential emission of VOC is as follows:

\[
\text{Gasoline Throughput} = \frac{0 \text{ gallons/day}}{0.0 \text{ kgal/yr}}
\]

Volatile Organic Compounds

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Emission Factor (lb/kgal of throughput)</th>
<th>PTE of VOC (tons/yr)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filling storage tank (balanced submerged filling)</td>
<td>0.3</td>
<td>0.00</td>
</tr>
<tr>
<td>Tank breathing and emptying</td>
<td>1.0</td>
<td>0.00</td>
</tr>
<tr>
<td>Vehicle refueling (displaced losses - controlled)</td>
<td>1.1</td>
<td>0.00</td>
</tr>
<tr>
<td>Spillage</td>
<td>0.7</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>0.00</strong></td>
</tr>
</tbody>
</table>

Hazardous Air Pollutants

<table>
<thead>
<tr>
<th></th>
<th>Worst Case Total HAP Content of VOC solvent (weight %)* = 26.08%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Worst Case Single HAP Content of VOC solvent (weight %)* = 9.0% Xylenes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Limited PTE of Total HAPs (tons/yr) = 0.00</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Limited PTE of Single HAP (tons/yr) = 0.00 Xylenes</td>
</tr>
</tbody>
</table>

Methodology

The gasoline throughput was provided by the source.

\[
\text{Gasoline Throughput (kgal/yr)} = \left(\text{Gasoline Throughput (lbs/day)} \times \frac{365 \text{ days/yr}}{365 \text{ days/yr}} \times \frac{\text{kgal}}{1000 \text{ gal}}\right)
\]

\[
\text{PTE of VOC (tons/yr)} = \left(\text{Gasoline Throughput (kgal/yr)} \times \text{Emission Factor (lb/kgal)} \times \frac{\text{ton}}{2000 \text{ lb}}\right)
\]

\[
\text{PTE of Total HAPs (tons/yr)} = \left(\text{Worst Case Total HAP Content of VOC solvent (weight %)} \times \text{PTE of VOC (tons/yr)}\right)
\]

\[
\text{PTE of Single HAP (tons/yr)} = \left(\text{Worst Case Single HAP Content of VOC solvent (weight %)} \times \text{PTE of VOC (tons/yr)}\right)
\]


Abbreviations

VOC = Volatile Organic Compounds
PTE = Potential to Emit
Company Name: Walsh & Kelly, Inc.  
Source Address: 21201 Wicker Avenue, Lowell, Indiana  
Permit Number: 089-41969-05255  
Reviewer: Daniel W. Pell

### Limited Emissions Summary

**App A.2**

**Entire Source - Drum Mix**

- **Company Name:** Walsh & Kelly, Inc.
- **Source Address:** 21201 Wicker Avenue, Lowell, Indiana
- **Permit Number:** 089-41969-05255
- **Reviewer:** Daniel W. Pell

#### Maximum Hourly Asphalt Production
- 400 ton/hr

#### Annual Asphalt Production Limitation
- 1,000,000 ton/yr

#### Steel Slag Usage Limitation
- 180,000 ton/yr

#### Natural Gas Limitation
- 120 MMBtu/hr

#### Blast Furnace Slag Usage Limitation
- 100,000 ton/yr

#### No. 2 Fuel Oil Limitation
- 1,471,680 gal/yr, 0.66% sulfur

#### No. 4 Fuel Oil Limitation
- 0 gal/yr, 0.50% sulfur

#### Residual (No. 5 or No. 6) Fuel Oil Limitation
- 0 gal/yr, 1.00% ash, 0.200% chlorine, 0.010% lead

#### Diesel Fuel Limitation - Generator < 600 HP
- 0 gal/yr

#### Diesel Fuel Limitation - Generator > 600 HP
- 0 gal/yr

#### Used/Waste Oil Limitation
- 1,223,139 gal/yr, 0.66% sulfur

#### Propane Limitation
- 0 gal/yr, 0.20 gr/100 ft³ sulfur

#### Butane Limitation
- 0 gal/yr, 0.22 gr/100 ft³ sulfur

#### Cold Mix Asphalt VOC Limitation
- 24.0 tons/yr

#### Source Address:
- 21201 Wicker Avenue, Lowell, Indiana

#### Permit Number:
- 089-41969-05255

### Limited/Controlled Emissions

#### Process Description
- **PM:** Particulate Matter
- **PM10:** Particulate Matter 10 microns or less
- **PM2.5:** Particulate Matter 2.5 microns or less
- **SO2:** Sulfur Dioxide
- **NOx:** Nitrogen Oxides
- **VOC:** Volatile Organic Compounds
- **CO:** Carbon Monoxide
- **CO2e:** Carbon Dioxide Equivalent
- **HC:** Hydrocarbons

#### Limited/Controlled Potential Emissions (tons/year)

<table>
<thead>
<tr>
<th>Process Description</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>CO2e</th>
<th>Total HAPs</th>
<th>Worst Case HAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ducted Emissions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dryer Fuel Combustion (worst case)</td>
<td>95.14</td>
<td>31.19</td>
<td>31.19</td>
<td>95.33</td>
<td>47.31</td>
<td>1.37</td>
<td>20.22</td>
<td>30,069.56</td>
<td>9.08</td>
<td>0.07 (hydrogen chloride)</td>
</tr>
<tr>
<td>Dryer/Mixer (Process)</td>
<td>185.96</td>
<td>75.99</td>
<td>30.96</td>
<td>22.90</td>
<td>21.50</td>
<td>15.00</td>
<td>89.00</td>
<td>16,850.00</td>
<td>6.33</td>
<td>0.06 (formaldehyde)</td>
</tr>
<tr>
<td>Dryer/Mixer Slag Processing</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>37.00</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hot Oil Heater Fuel Combustion (Process) (worst case)</td>
<td>0.08</td>
<td>0.12</td>
<td>0.12</td>
<td>2.67</td>
<td>0.75</td>
<td>0.03</td>
<td>0.44</td>
<td>1,051.20</td>
<td>0.01</td>
<td>0.009 (hexane)</td>
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<tr>
<td>Diesel Fired Generator &lt; 600 HP</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.000 (formaldehyde)</td>
</tr>
<tr>
<td>Diesel Fired Generator &lt; 600 HP</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.000 (benzene)</td>
</tr>
<tr>
<td>Diesel Fired Generator &gt; 600 HP</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.000 (benzene)</td>
</tr>
<tr>
<td>Total Fugitive Emissions</td>
<td>185.43</td>
<td>79.22</td>
<td>90.47</td>
<td>99.00</td>
<td>48.06</td>
<td>16.03</td>
<td>65.44</td>
<td>31,150.26</td>
<td>9.09</td>
<td>0.07 (hydrogen chloride)</td>
</tr>
<tr>
<td>Fugitive Emissions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asphalt Load-Out, Silo Filling, On-Site Yard</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0</td>
<td>0</td>
<td>8.07</td>
<td>1.44</td>
<td>0</td>
<td>0.14</td>
<td>0.04 (formaldehyde)</td>
</tr>
<tr>
<td>Material Storage Piles</td>
<td>2.41</td>
<td>0.84</td>
<td>0.84</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Material Processing and Handling</td>
<td>3.33</td>
<td>1.05</td>
<td>1.05</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Material Crushing, Screening, and Conveying</td>
<td>16.94</td>
<td>5.36</td>
<td>0.91</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Unpaved and Paved Roads (worst case)</td>
<td>41.90</td>
<td>11.06</td>
<td>1.11</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cold Mix Asphalt Production</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Gasoline Fuel Transfer and Dispensing</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00</td>
<td>0.00 (xylene)</td>
</tr>
<tr>
<td>Volatile Organic Liquid Storage Vessels</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total Fugitive Emissions</td>
<td>63.67</td>
<td>19.76</td>
<td>8.53</td>
<td>9</td>
<td>0</td>
<td>32.57</td>
<td>1.44</td>
<td>0</td>
<td>6.40</td>
<td>2.16 (xylene)</td>
</tr>
<tr>
<td>Totals Limited/Controlled Emissions</td>
<td>249.00</td>
<td>99.00</td>
<td>99.00</td>
<td>99.00</td>
<td>48.06</td>
<td>48.59</td>
<td>66.88</td>
<td>31,150.26</td>
<td>15.49</td>
<td>8.07 (xylene)</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 + 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.
### Fuel Limitations

<table>
<thead>
<tr>
<th>Fuel Type</th>
<th>Maximum Fuel Input (MMCFyr)</th>
<th>Natural Gas Limitation</th>
<th>Propane Limitation</th>
<th>Butane Limitation</th>
<th>Used/Waste Oil Limitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas</td>
<td>120 MMCFyr</td>
<td>1.9 FL/kgal</td>
<td>2.1 FL/kgal</td>
<td>1.0 FL/kgal</td>
<td>1.23 FL/kgal</td>
</tr>
<tr>
<td>No. 2 Fuel Oil</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
</tr>
<tr>
<td>No. 4 Fuel Oil</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
</tr>
<tr>
<td>Residual (No. 5 or No. 6)</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
</tr>
</tbody>
</table>

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

### Limited Emissions

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Natural Gas (lb/MMCF)</th>
<th>No. 2 (lb/MMCF)</th>
<th>No. 4 (lb/MMCF)</th>
<th>Residual (No. 5 or No. 6) (lb/MMCF)</th>
<th>Propane (lb/MMCF)</th>
<th>Butane (lb/MMCF)</th>
<th>Used/Waste Oil (lb/MMCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
</tr>
<tr>
<td>NOx</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
</tr>
<tr>
<td>VOC</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
</tr>
<tr>
<td>CO</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
</tr>
</tbody>
</table>

**Methodology**

Natural Gas: Limited Potential to Emit (tons/yr) = (Natural Gas Limitation (MMCF/yr) * (Emission Factor (lb/MMCF)) * (ton/MMCF))

All Other Fuels: Limited Potential to Emit (tons/yr) = (Fuel Limitation (gals/yr)) * (Emission Factor (lb/kgal)) * (kgal/1000 gal) * (ton/2000 lbs)

**Sources of AP-42 Emission Factors for fuel combustion:**

- **Natural Gas**: AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
- **No. 2, No. 4, and No. 6 Fuel Oil**: AP-42 Chapter 1.3 (dated 5/92), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-4, 1.3-9, 1.3-10, and 1.3-11
- **Propane and Butane**: AP-42 Chapter 1.5 (dated 7/98), Tables 1.5-1 (assuming Propane) and 1.5-2
- **Waste Oil**: AP-42 Chapter 1.11 (dated 10/96), Tables 1.11-1, 1.11-2, 1.11-3, 1.11-4, and 1.11-5

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

**Company Name**: Walsh & Kelly, Inc.
**Source Address**: 21201 Wabard Avenue, Lowell, Indiana
**permit Number**: 089-41969-0529
**Reviewer**: Daniel W. Pett

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.
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>Maximum Fuel Input Rate</th>
<th>120 MMBtu/hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas Limitation</td>
<td>498 MMCF/yr</td>
</tr>
<tr>
<td>No. 2 Fuel Oil Limitation</td>
<td>1,671,393 gal/yr and 0.50% sulfur</td>
</tr>
<tr>
<td>No. 4 Fuel Oil Limitation</td>
<td>0 gal/yr and 0.50% sulfur</td>
</tr>
<tr>
<td>Residual (No. 5 or No. 6) Fuel Oil Limitation</td>
<td>0 gal/yr and 0.50% sulfur</td>
</tr>
<tr>
<td>Propane Limitation</td>
<td>0 gal/yr and 0.20 gr/100 ft³ sulfur</td>
</tr>
<tr>
<td>Butane Limitation</td>
<td>0 gal/yr and 0.22 gr/100 ft³ sulfur</td>
</tr>
<tr>
<td>Used/Waste Oil Limitation</td>
<td>1,223,139 gal/yr and 0.66% sulfur 1.00% ash 0.200% chlorine, 0.010% lead</td>
</tr>
</tbody>
</table>

### Limited Emissions

#### Emission Factor (units)

<table>
<thead>
<tr>
<th>CO2e Fraction</th>
<th>Natural Gas (lb/MMCF)</th>
<th>Fuel Oil (lb/kgal)</th>
<th>No. 2 Fuel Oil (lb/kgal)</th>
<th>No. 4 Fuel Oil (lb/kgal)</th>
<th>Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)</th>
<th>Propane Butane (lb/kgal)</th>
<th>Used/Waste Oil (lb/kgal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH4</td>
<td>2.09</td>
<td>9.11</td>
<td>0.97</td>
<td>1.00</td>
<td>0.00</td>
<td>0.60</td>
<td>0.55</td>
</tr>
<tr>
<td>N2O</td>
<td>2.20</td>
<td>0.26</td>
<td>0.19</td>
<td>0.53</td>
<td>0.00</td>
<td>0.00</td>
<td>0.18</td>
</tr>
</tbody>
</table>

#### Global Warming Potentials (GWP)

<table>
<thead>
<tr>
<th>Name</th>
<th>Chemical Formula</th>
<th>Global warming potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon dioxide</td>
<td>CO₂</td>
<td>1</td>
</tr>
<tr>
<td>Methane</td>
<td>CH₄</td>
<td>25</td>
</tr>
<tr>
<td>Nitrogen oxide</td>
<td>N₂O</td>
<td>258</td>
</tr>
</tbody>
</table>

#### Limited Potential to Emit (tons/yr)

<table>
<thead>
<tr>
<th>CO₂e Fraction</th>
<th>Natural Gas (tons/yr)</th>
<th>Fuel Oil (tons/yr)</th>
<th>No. 2 Fuel Oil (tons/yr)</th>
<th>No. 4 Fuel Oil (tons/yr)</th>
<th>Residual (No. 5 or No. 6) Fuel Oil (tons/yr)</th>
<th>Propane Butane (tons/yr)</th>
<th>Used/Waste Oil (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO₂</td>
<td>29,920.30</td>
<td>18,804.35</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>14,506.73</td>
<td>22,024.15</td>
</tr>
<tr>
<td>CH₄</td>
<td>0.62</td>
<td>0.76</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.55</td>
<td></td>
</tr>
<tr>
<td>N₂O</td>
<td>0.55</td>
<td>0.22</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.11</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>CO₂e Equivalent Emissions (tons/yr)</th>
<th>30,099.06</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO₂</td>
<td>18,888.17</td>
</tr>
<tr>
<td>CH₄</td>
<td>0.00</td>
</tr>
<tr>
<td>N₂O</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>13,515.75</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.)

No. 2, No. 4, and Residual (No. 5 or No. 6) Fuel Emission Factors for CO₂ and CH₄ from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N₂O from AP-42 Chapter 1.3 (dated 5/10), Table 1.3-8.

Propane and Butane: Emission Factors for CO₂ and CH₄ from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N₂O from AP-42 Chapter 1.5 (dated 7/08), Table 1.5-1.

Waste Oil: Emission Factors for CO₂, CH₄, and N₂O from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor (EF) Conversions:

Natural Gas: EF (lb/MMCF) = [EF (kg/MMBtu) / (kg/MMBtu/scf) * Heating Value of Natural Gas (MMBtu/scf)]

Fuel Oils: EF (lb/kgal) = [EF (kg/MMBtu) * Conversion Factor (2,20462 lb/kgal) / (kg/MMBtu/scf) * Heating Value of the Fuel Oil (MMBtu/gal)]

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

All Other Fuels: Limited Potential to Emit (tons/yr) = (Fuel Limitation (gals/yr) * (Emission Factor (lb/kgal)) / (kgal/1000 gal) * (ton/2000 lbs))

Limited CO₂e Emissions (tons/yr) = CO₂ Potential Emission of "worst case" fuel (ton/yr) x CO₂ GWF (1) + CH₄ Potential Emission of "worst case" fuel (ton/yr) x CH₄ GWF (25) + N₂O Potential Emission of "worst case" fuel (ton/yr) x N₂O GWF (258).

### Approximating Emissions

<table>
<thead>
<tr>
<th>Abbreviations</th>
<th>CO₂ = Carbon Dioxide</th>
<th>N₂O = Nitrogen Dioxide</th>
<th>PTE = Potential to Emit</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH₄ = Methane</td>
<td>0.62</td>
<td>0.22</td>
<td></td>
</tr>
</tbody>
</table>
Appendix A.2: Limited Emissions Summary

**Dryer/Mixer - Process Emissions**

**Company Name:** Walsh & Kelly, Inc.
**Source Address:** 21201 Wicker Avenue, Lowell, Indiana
**Permit Number:** 089-41969-05255
**Reviewer:** Daniel W. Poll

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

Maximum Hourly Asphalt Production = 400 ton/hr
Annual Asphalt Production Limitation = 1,000,000 ton/yr
PM Dryer/Mixer Limitation = 0.271 lb/ton of asphalt production
PM10 Dryer/Mixer Limitation = 0.158 lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation = 0.181 lb/ton of asphalt production
CO Dryer/Mixer Limitation = 0.130 lb/ton of asphalt production
VOC Dryer/Mixer Limitation = 0.032 lb/ton of asphalt production

<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</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PM</strong></td>
<td>0.371</td>
<td>0.371</td>
<td>0.371</td>
<td>185.4</td>
<td>185.4</td>
<td>185.4</td>
<td>185.4</td>
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<tr>
<td><strong>PM10</strong></td>
<td>0.158</td>
<td>0.158</td>
<td>0.158</td>
<td>79.1</td>
<td>79.1</td>
<td>79.1</td>
<td>79.1</td>
</tr>
<tr>
<td><strong>PM2.5</strong></td>
<td>0.161</td>
<td>0.161</td>
<td>0.161</td>
<td>90.3</td>
<td>90.3</td>
<td>90.3</td>
<td>90.3</td>
</tr>
<tr>
<td><strong>SO2</strong></td>
<td>0.003</td>
<td>0.011</td>
<td>0.058</td>
<td>1.7</td>
<td>5.5</td>
<td>28.9</td>
<td>29.0</td>
</tr>
<tr>
<td><strong>NOx</strong></td>
<td>0.022</td>
<td>0.035</td>
<td>0.065</td>
<td>13.0</td>
<td>27.5</td>
<td>27.5</td>
<td>27.5</td>
</tr>
<tr>
<td><strong>VOC</strong></td>
<td>0.032</td>
<td>0.032</td>
<td>0.032</td>
<td>16.0</td>
<td>16.0</td>
<td>16.0</td>
<td>16.0</td>
</tr>
<tr>
<td><strong>CO</strong></td>
<td>0.130</td>
<td>0.130</td>
<td>0.130</td>
<td>65.0</td>
<td>66.0</td>
<td>65.0</td>
<td>65.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Air Pollutant</th>
<th>Natural Gas</th>
<th>No. 2 Fuel Oil</th>
<th>Waste Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HCH</strong></td>
<td>2.10E-04</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Beryllium</strong></td>
<td>neg</td>
<td>neg</td>
<td>neg</td>
</tr>
<tr>
<td><strong>Cadmium</strong></td>
<td>4.10E-07</td>
<td>4.10E-07</td>
<td>4.10E-07</td>
</tr>
<tr>
<td><strong>Cobalt</strong></td>
<td>2.00E-08</td>
<td>2.00E-08</td>
<td>2.00E-08</td>
</tr>
<tr>
<td><strong>Lead</strong></td>
<td>6.20E-07</td>
<td>1.50E-05</td>
<td>1.50E-05</td>
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<tr>
<td><strong>Manganese</strong></td>
<td>7.70E-06</td>
<td>7.70E-06</td>
<td>7.70E-06</td>
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<tr>
<td><strong>Mercury</strong></td>
<td>2.40E-07</td>
<td>2.60E-08</td>
<td>2.60E-08</td>
</tr>
<tr>
<td><strong>Nickel</strong></td>
<td>3.60E-05</td>
<td>6.30E-05</td>
<td>6.30E-05</td>
</tr>
<tr>
<td><strong>Selenium</strong></td>
<td>3.50E-07</td>
<td>3.90E-07</td>
<td>3.90E-07</td>
</tr>
<tr>
<td><strong>2,2,4 Trimethylpentane</strong></td>
<td>4.00E-04</td>
<td>4.00E-05</td>
<td>4.00E-05</td>
</tr>
<tr>
<td><strong>Acrolein</strong></td>
<td>8.50E-02</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Benzene</strong></td>
<td>3.90E-04</td>
<td>3.90E-04</td>
<td>3.90E-04</td>
</tr>
<tr>
<td><strong>Ethylbenzene</strong></td>
<td>2.60E-04</td>
<td>2.60E-04</td>
<td>2.60E-04</td>
</tr>
<tr>
<td><strong>Formaldehyde</strong></td>
<td>3.10E-01</td>
<td>3.10E-01</td>
<td>3.10E-01</td>
</tr>
<tr>
<td><strong>Hexane</strong></td>
<td>9.20E-04</td>
<td>9.20E-04</td>
<td>9.20E-04</td>
</tr>
<tr>
<td><strong>Methyl chloroform</strong></td>
<td>4.80E-05</td>
<td>4.80E-05</td>
<td>4.80E-05</td>
</tr>
<tr>
<td><strong>MEK</strong></td>
<td>2.00E-05</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Propanaldehyde</strong></td>
<td>1.30E-04</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Quinone</strong></td>
<td>1.60E-04</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Toluene</strong></td>
<td>1.50E-06</td>
<td>2.90E-03</td>
<td>2.90E-03</td>
</tr>
<tr>
<td><strong>Total HAPs</strong></td>
<td>1.10E-04</td>
<td>1.80E-04</td>
<td>1.80E-04</td>
</tr>
<tr>
<td><strong>Xylene</strong></td>
<td>2.00E-04</td>
<td>2.00E-04</td>
<td>2.00E-04</td>
</tr>
</tbody>
</table>

Total HAPs = 5.33

Methodology

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 emission scenario. AP-42 did not provide emission factors for any other fuels.

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

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

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

Abbreviations

PM = Particulate Matter
SO2 = Sulfur Dioxide
CO = Carbon Monoxide
PAH = Polynuclear Hydrocarbon
PM10 = Particulate Matter (<10 um)
NOx = Nitrous Oxides
HAP = Hazardous Air Pollutant
PM2.5 = Particulate Matter (< 2.5 um)
VOC= Volatile Organic Compounds
HCl = Hydrogen Chloride
The following calculations determine the limited emissions from the aggregate drying/mixing:

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

<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>Limited Potential to Emit (tons/yr)</th>
<th>CO2e for Worst Case Fuel (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Drum-Mix Plant (dryer/mixer)</td>
<td></td>
<td></td>
<td>Natural Gas</td>
<td>No. 2 Fuel Oil</td>
<td>Waste Oil</td>
</tr>
<tr>
<td>CO2</td>
<td>33</td>
<td>33</td>
<td>33</td>
<td>1</td>
<td>16,500.00</td>
<td>16,500.00</td>
</tr>
<tr>
<td>CH4</td>
<td>0.0120</td>
<td>0.0120</td>
<td>0.0120</td>
<td>25</td>
<td>6.00</td>
<td>6.00</td>
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<tr>
<td>N2O</td>
<td>298</td>
<td></td>
<td></td>
<td></td>
<td>0</td>
<td>0</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16,506.00</td>
<td>16,506.00</td>
</tr>
</tbody>
</table>

CO2e Equivalent Emissions (tons/yr) = 16,650.00

**Methodology**

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-7 and 11.1-8
There are no emission factors for N2O available in either the 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no N2O emissions anticipated from this process.

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

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

Limited CO2e Emissions (tons/yr) = CO2 Potential Emission of "worst case" fuel (ton/yr) x CO2 GWP (1) + CH4 Potential Emission of "worst case" fuel (ton/yr) x CH4 GWP (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
Company Name: Walsh & Kelly, Inc.  
Source Address: 21201 Wicker Avenue, Lowell, Indiana  
Permit Number: 089-41969-05255  
Reviewer: Daniel W. Pell

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

Limited Blast Furnace Slag Usage = 100,000 ton/yr  
Limited Annual Steel Slag Usage = 1,471,680 ton/yr

<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>37.0</td>
</tr>
<tr>
<td>Steel Slag**</td>
<td>0.0014</td>
<td>1.03</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 a sulfur content up to 1.5%.

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

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

Abbreviations

SO2 = Sulfur Dioxide
### Appendix A.2: Limited Emissions Summary

#### Hot Oil Heater

**Fuel Combustion with Maximum Capacity < 100 MMBtu/hr**

**Company Name:** Walsh & Kelly, Inc.

**Source Location:** 21201 Wicker Avenue, Lowell, Indiana

**Permit Number:** 089-41969-05255

**Reviewer:** Daniel W. Pell

Maximum Hot Oil Heater Fuel Input Rate = 1.20 MMBtu/hr

Natural Gas Usage = 11 MMCF/yr

No. 2 Fuel Oil Usage = 75,086 gal/yr, and 0.50 % sulfur

### Unlimited/Uncontrolled Emissions

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Natural Gas</th>
<th>No. 2 Fuel Oil</th>
<th>Natural Gas</th>
<th>No. 2 Fuel Oil</th>
<th>Worse Case Fuel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(lb/MMCF)</td>
<td>(lb/kgal)</td>
<td>(tons/yr)</td>
<td>(tons/yr)</td>
<td>(tons/yr)</td>
</tr>
<tr>
<td>PM</td>
<td>1.9</td>
<td>2.0</td>
<td>0.010</td>
<td>0.075</td>
<td>0.08</td>
</tr>
<tr>
<td>PM10/PM2.5</td>
<td>7.6</td>
<td>3.3</td>
<td>0.040</td>
<td>0.124</td>
<td>0.12</td>
</tr>
<tr>
<td>SO2</td>
<td>0.6</td>
<td>71.0</td>
<td>0.003</td>
<td>2.688</td>
<td>2.67</td>
</tr>
<tr>
<td>NOx</td>
<td>100</td>
<td>20.0</td>
<td>0.526</td>
<td>0.751</td>
<td>0.75</td>
</tr>
<tr>
<td>VOC</td>
<td>5.5</td>
<td>0.20</td>
<td>0.029</td>
<td>0.008</td>
<td>0.03</td>
</tr>
<tr>
<td>CO</td>
<td>84</td>
<td>5.0</td>
<td>0.442</td>
<td>0.188</td>
<td>0.44</td>
</tr>
</tbody>
</table>

#### Hazardous Air Pollutant

<table>
<thead>
<tr>
<th>Hazardous Air Pollutant</th>
<th>Natural Gas</th>
<th>No. 2 Fuel Oil</th>
<th>Natural Gas</th>
<th>No. 2 Fuel Oil</th>
<th>Worse Case Fuel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>2.0E-04</td>
<td>5.6E-04</td>
<td>1.1E-06</td>
<td>2.1E-05</td>
<td>2.1E-05</td>
</tr>
<tr>
<td>Beryllium</td>
<td>1.2E-05</td>
<td>4.2E-04</td>
<td>6.3E-08</td>
<td>1.5E-05</td>
<td>1.6E-05</td>
</tr>
<tr>
<td>Cadmium</td>
<td>1.1E-03</td>
<td>4.2E-04</td>
<td>5.8E-06</td>
<td>1.5E-05</td>
<td>1.6E-05</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.4E-03</td>
<td>4.2E-04</td>
<td>7.4E-06</td>
<td>1.5E-05</td>
<td>1.6E-05</td>
</tr>
<tr>
<td>Cobalt</td>
<td>8.4E-05</td>
<td>4.4E-07</td>
<td>4.4E-07</td>
<td>4.4E-07</td>
<td>4.4E-07</td>
</tr>
<tr>
<td>Lead</td>
<td>5.0E-04</td>
<td>1.8E-03</td>
<td>2.6E-06</td>
<td>4.1E-05</td>
<td>4.7E-05</td>
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<tr>
<td>Manganese</td>
<td>3.8E-04</td>
<td>8.4E-04</td>
<td>2.0E-06</td>
<td>3.1E-05</td>
<td>3.2E-05</td>
</tr>
<tr>
<td>Mercury</td>
<td>2.6E-04</td>
<td>4.2E-04</td>
<td>1.4E-06</td>
<td>1.5E-05</td>
<td>1.6E-05</td>
</tr>
<tr>
<td>Nickel</td>
<td>2.1E-03</td>
<td>4.2E-04</td>
<td>1.1E-05</td>
<td>1.5E-05</td>
<td>1.6E-05</td>
</tr>
<tr>
<td>Selenium</td>
<td>2.4E-05</td>
<td>2.1E-03</td>
<td>1.3E-07</td>
<td>7.8E-05</td>
<td>7.9E-05</td>
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<td>Benzene</td>
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<td>1.1E-05</td>
<td>1.1E-05</td>
<td>1.1E-05</td>
</tr>
<tr>
<td>Dichlorobenzene</td>
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<td>6.3E-06</td>
<td>6.3E-06</td>
<td>6.3E-06</td>
<td>6.3E-06</td>
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<tr>
<td>Ethylbenzene</td>
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<td></td>
<td>0</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Formaldehyde</td>
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<td>6.1E-02</td>
<td>3.9E-02</td>
<td>2.2E-03</td>
<td>0.002</td>
</tr>
<tr>
<td>Hexane</td>
<td>1.8E+00</td>
<td>0.01</td>
<td>0.01</td>
<td>0.009</td>
<td></td>
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<tr>
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<td></td>
<td>0</td>
<td></td>
<td>0</td>
</tr>
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<td>Toluene</td>
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<td>1.8E-05</td>
<td>1.8E-05</td>
<td>1.8E-05</td>
<td>1.8E-05</td>
</tr>
</tbody>
</table>

**Total PAH HAPs** = 0

**Total HAPs** = 9.9E-03

**Worst Single HAP** = 2.7E-03

**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
- CO = Carbon Monoxide
- PM10 = Particulate Matter (<10 um)
- HAP = Hazardous Air Pollutant
- PM2.5 = Particulate Matter (<2.5 um)
- HCl = Hydrogen Chloride
- SO2 = Sulfur Dioxide
- NOx = Nitrous Oxides
- VOC = Volatile Organic Compounds
**Greenhouse Gas (CO2e) Emissions from Hot Oil Heater Fuel Combustion with Maximum Capacity < 100 MMBtu/hr**

**Company Name:** Walsh & Kelly, Inc.  
**Source Address:** 21201 Wicker Avenue, Lowell, Indiana  
**Permit Number:** 089-41969-05255  
**Reviewer:** Daniel W. Pell

Maximum Hot Oil Heater Fuel Input Rate = 1.20 MMBtu/hr  
Natural Gas Usage = 10.51 MMCF/yr  
No. 2 Fuel Oil Usage = 75,085.71 gal/yr, 0.50% sulfur

### Unlimited/Uncontrolled Emissions

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Natural Gas Emission Factor (lb/MMCF)</th>
<th>No. 2 Fuel Oil Emission Factor (lb/kgal)</th>
<th>Global Warming Potentials (GWP)</th>
<th>Unlimited/Uncontrolled Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO2</td>
<td>120,161.84</td>
<td>22,501.41</td>
<td>1</td>
<td>631.57</td>
</tr>
<tr>
<td>CH4</td>
<td>2.49</td>
<td>0.91</td>
<td>25</td>
<td>0.013</td>
</tr>
<tr>
<td>N2O</td>
<td>2.20</td>
<td>0.26</td>
<td>298</td>
<td>0.012</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>631.60</td>
</tr>
</tbody>
</table>

**CO2e Equivalent Emissions (tons/yr)**  
635.34 848.53

### 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 Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
- **CO2e Equivalent Emissions (tons/yr)**  
635.34 848.53

**Worse Case CO2e Emissions (tons/yr)**  
848.53

**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
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 = 1.20 MMBtu/hr  
Natural Gas Usage = 10.51 MMCF/yr, and  
No. 2 Fuel Oil Usage = 75,085.71 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 (tons/yr)</th>
<th>No. 2 Fuel Oil (tons/yr)</th>
<th>WORSE CASE PTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC</td>
<td>2.60E-08</td>
<td>2.60E-05</td>
<td>1.37E-04</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>CO</td>
<td>8.90E-06</td>
<td>0.0012</td>
<td>0.047</td>
<td>0.045</td>
<td>0.047</td>
</tr>
<tr>
<td>Greenhouse Gas as CO2e*</td>
<td>0.20</td>
<td>28.00</td>
<td>1051.20</td>
<td>1051.20</td>
<td>1,051.20</td>
</tr>
<tr>
<td>Hazardous Air Pollutant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>2.60E-08</td>
<td>3.50E-06</td>
<td>1.37E-04</td>
<td>1.31E-04</td>
<td>1.37E-04</td>
</tr>
<tr>
<td>Acenaphthene</td>
<td>5.30E-07</td>
<td>1.99E-05</td>
<td>1.99E-05</td>
<td>1.99E-05</td>
<td>1.99E-05</td>
</tr>
<tr>
<td>Acenaphthylene</td>
<td>2.00E-07</td>
<td>7.51E-06</td>
<td>7.51E-06</td>
<td>7.51E-06</td>
<td>7.51E-06</td>
</tr>
<tr>
<td>Anthracene</td>
<td>1.80E-07</td>
<td>6.76E-06</td>
<td>6.76E-06</td>
<td>6.76E-06</td>
<td>6.76E-06</td>
</tr>
<tr>
<td>Benzo(b)fluoranthene</td>
<td>1.00E-07</td>
<td>3.75E-06</td>
<td>3.75E-06</td>
<td>3.75E-06</td>
<td>3.75E-06</td>
</tr>
<tr>
<td>Fluoranthen</td>
<td>4.40E-08</td>
<td>1.65E-06</td>
<td>1.65E-06</td>
<td>1.65E-06</td>
<td>1.65E-06</td>
</tr>
<tr>
<td>Fluorene</td>
<td>3.20E-08</td>
<td>1.20E-06</td>
<td>1.20E-06</td>
<td>1.20E-06</td>
<td>1.20E-06</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>1.70E-05</td>
<td>6.38E-04</td>
<td>6.38E-04</td>
<td>6.38E-04</td>
<td></td>
</tr>
<tr>
<td>Phenanthrene</td>
<td>4.90E-06</td>
<td>1.84E-04</td>
<td>1.84E-04</td>
<td>1.84E-04</td>
<td></td>
</tr>
<tr>
<td>Pyrene</td>
<td>3.20E-08</td>
<td>1.20E-06</td>
<td>1.20E-06</td>
<td>1.20E-06</td>
<td></td>
</tr>
</tbody>
</table>

Total HAPs 1.00E-03  
Worst Single HAP 6.38E-04  (Naphthalene)

Methodology:
- Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] / [1 MMCF/1,000 MMBtu]
- No. 2 Fuel Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] / [1 gals/0.140 MMBtu]
- Natural Gas: Potential to Emit (tons/yr) = (Natural Gas Usage (MMCF/yr)) x (Emission Factor (lb/MMCF)) x (1000000 CF/MMCF) x (ton/2000 lbs)
- No. 2 Fuel Oil: Potential to Emit (tons/yr) = (No. 2 Fuel Oil Usage (gal/yr)) x (Emission Factor (lb/gal)) x (ton/2000 lbs)
- Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 (ton/yr) x CO2 GWP (1)

Note: There are no emission factors for CH4 and N20 available in either 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no CH4 and N20 emission anticipated from this process.

Abbreviations:
- CO = Carbon Monoxide
- VOC = Volatile Organic Compound
- CO2 = Carbon Dioxide
Reciprocating Internal Combustion Engines - Diesel Fuel

Company Name: Walsh & Kelly, Inc.
Source Address: 21201 Wicker Avenue, Lowell, Indiana
Permit Number: 089-41969-05255
Reviewer: Daniel W. Pell

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor in lb/hp-hr</th>
<th>Limited Emission in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM2</td>
<td>0.0022</td>
<td>0.00</td>
</tr>
<tr>
<td>PM10</td>
<td>0.0022</td>
<td>0.00</td>
</tr>
<tr>
<td>Direct PM2.5</td>
<td>0.0022</td>
<td>0.00</td>
</tr>
<tr>
<td>SO2</td>
<td>0.0018</td>
<td>0.00</td>
</tr>
<tr>
<td>NOx</td>
<td>0.0031</td>
<td>0.00</td>
</tr>
<tr>
<td>VOC</td>
<td>0.0025</td>
<td>0.00</td>
</tr>
<tr>
<td>CO</td>
<td>0.0067</td>
<td>0.00</td>
</tr>
<tr>
<td>Emission Factor in lb/kgal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM2</td>
<td>43.07</td>
<td>0.00</td>
</tr>
<tr>
<td>PM10</td>
<td>43.07</td>
<td>0.00</td>
</tr>
<tr>
<td>Direct PM2.5</td>
<td>43.07</td>
<td>0.00</td>
</tr>
<tr>
<td>Limitado Horas Operado por Año</td>
<td>2,500</td>
<td></td>
</tr>
<tr>
<td>Limitado Flujo (hp-hr/yr)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Limitado Uso de Combustible (gal/yr)</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

1 The AP-42 Chapter 3.3-1 emission factors in lb/hp-hr were converted to lb/kgal emission factors using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4-1) since the source will limit the emissions from this unit by limiting the fuel usage.

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

3 PM and PM2.5 emission factors are assumed to be equivalent to PM10 emission factors. No information was given regarding which method was used to determine the factor or the fraction of PM10 which is condensable.

4 The AP-42 Chapter 3.3-1 emission factors in lb/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4-1) since the source will limit the emissions from this unit by limiting the fuel usage.

5 Emission factor (lb/kgal) = AP-42 EF (lb/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Hazardous Air Pollutants (HAPs)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Benzene</th>
<th>Toluene</th>
<th>Xylene</th>
<th>1,3-Butadiene</th>
<th>Formaldehyde</th>
<th>Acetaldehyde</th>
<th>Acrolein</th>
<th>Total PAH HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/MMBtu</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>emission factor in lb/kgal</td>
<td>1.28E-01</td>
<td>5.06E-02</td>
<td>3.91E-02</td>
<td>5.36E-03</td>
<td>1.62E-01</td>
<td>1.05E-01</td>
<td>1.27E-02</td>
<td>2.30E-02</td>
</tr>
<tr>
<td>Limited Emission in tons/yr</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
<td>0.00E+00</td>
</tr>
</tbody>
</table>

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

5 The 40 CFR 98 Subpart C emission factors in kg/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4-1) since the source will limit the emissions from this unit by limiting the fuel usage.

6 Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

Green House Gas Emissions (GHG)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/hp-hr</td>
<td>1.15</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Emission Factor in kg/MMBtu</td>
<td>0.003</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Limited Emission in tons/yr</td>
<td>22.512</td>
<td>0.91</td>
<td>0.18</td>
</tr>
</tbody>
</table>

5 The AP-42 Chapter 3.3-1 emission factor in lb/hp-hr was converted to lb/kgal emission factor using an average brake specific fuel consumption of 7,000 Btu / hp-hr, diesel heating value of 19,300 Btu / lb, and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4-1) since the source will limit the emissions from this unit by limiting the fuel usage.

6 The 40 CFR 98 Subpart C emission factors in kg/MMBtu were converted to lb/kgal emission factors using an average diesel heating value of 19,300 Btu / lb and diesel fuel density of 7.1 lb / gal (AP-42 Tables 3.3-1 and 3.4-1) since the source will limit the emissions from this unit by limiting the fuel usage.

6 Emission factor (lb/kgal) = 40 CFR 98 EF (kg/MMBtu) * 1/10^6 (MMBtu/Btu) * 19,300 (Btu/lb) * 7.1 (lb/gal) * 1,000 (gal/kgal)

<table>
<thead>
<tr>
<th>Summed Limited Emissions in tons/yr</th>
<th>CO2 Total in tons/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Methodology

Limited Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Limited Hours Operated per Year]
Limited Diesel Fuel Usage (gal/yr) = Limited Throughput (hp-hr/yr) * 7000 (Btu/hp-hr) * 1/19300 (Btu/lb) * 1/7.1 (lb/gal)
Emission Factors are from AP42 (Supplement B 10/96), Tables 3.3-1 and 3.3-2 and have been converted to lb/kgal
CH4 and N2O Emission Factor from 40 CFR 98 Subpart C Table C-2 and have been converted to lb/kgal
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Limited Emissions (tons/yr) = [Limited Diesel Fuel Usage (gal/yr) * Emission Factor (lb/kgal)] / (1,000 gal/kgal) / (2,000 lb/ton)
# ATSD Appendix A.2: Limited Emissions Summary

## Large Reciprocating Internal Combustion Engines - Diesel Fuel

### Output Rating (>600 HP)

**Company Name:** Walsh & Kelly, Inc.  
**Source Address:** 21201 Wicker Avenue, Lowell, Indiana  
**Permit Number:** 089-41969-05255  
**Reviewer:** Daniel W. Pell

<table>
<thead>
<tr>
<th>Output Horsepower Rating (hp)</th>
<th>0.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited Hours Operated per Year</td>
<td>2000</td>
</tr>
<tr>
<td>Limited Throughput (hp-hr/yr)</td>
<td>0</td>
</tr>
<tr>
<td>Limited Diesel Fuel Usage (gal/yr)</td>
<td>0</td>
</tr>
</tbody>
</table>

### Sulfur Content (% by weight)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>7.05E-04</th>
</tr>
</thead>
</table>

### Green House Gas Emissions (GHG)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CO2</th>
<th>CH4</th>
<th>N2O</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emission Factor in lb/hp-hr</td>
<td>1.78</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Emission Factor in lb/MMBtu</td>
<td>2.20462</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Emission Factor in gal/MMBtu</td>
<td>7.70783</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### Methodology

- Limited Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Limited Hours Operated per Year]  
- Limited Diesel Fuel Usage (gal/yr) = Limited Throughput (hp-hr/yr) * 7000 (Btu/hp-hr) * 1/16000 (lb/Btu) * 1/7.1 (gal/lb)  
- Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1, 3.4-2, 3.4-3, and 3.4-4 and have been converted to lb/kgal.  
- N2O Emission Factor from 40 CFR 98 Subpart C Table C-2 and have been converted to lb/kgal.  
- Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.  
- Limited Emissions (tons/yr) = [Limited Diesel Fuel Usage (gal/yr) * Emission Factor (lb/kgal)] / (1,000 ga/kgal) / (2,000 lb/ton)  
Appendix A.2: Limited Emissions Summary

Asphalt Load-Out, Silo Filling, and Yard Emissions

Company Name: Walsh & Kelly, Inc.
Source Address: 21201 Wicker Avenue, Lowell, Indiana
Permit Number: 089-41969-05255
Reviewer: Daniel W. Pell

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

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

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Load-Out</th>
<th>Silo Filling</th>
<th>On-Site Yard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PM*</td>
<td>5.2E-04</td>
<td>5.9E-04</td>
<td>NA</td>
</tr>
<tr>
<td>Organic PM</td>
<td>3.4E-04</td>
<td>2.5E-04</td>
<td>NA</td>
</tr>
<tr>
<td>TOC</td>
<td>0.004</td>
<td>0.012</td>
<td>0.001</td>
</tr>
<tr>
<td>CO</td>
<td>0.001</td>
<td>0.001</td>
<td>3.5E-04</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Emission Factor (lb/ton asphalt)</th>
<th>Limited Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PM/HAPs</td>
<td>0.012</td>
</tr>
<tr>
<td>VOC/HAPs</td>
<td>0.031</td>
</tr>
<tr>
<td>non-VOC/HAPs</td>
<td>1.6E-04</td>
</tr>
<tr>
<td>non-VOC/non-HAPs</td>
<td>0.15</td>
</tr>
<tr>
<td>Total VOCs</td>
<td>1.95</td>
</tr>
<tr>
<td>Total HAPs</td>
<td>0.04</td>
</tr>
<tr>
<td>Worst Single HAP (formaldehyde)</td>
<td>0.044</td>
</tr>
</tbody>
</table>

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 = 0.000032 + 0.000105(-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

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
### 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>Speciation Profile</th>
<th>Limited Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAH HAPs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Load-out</td>
<td>Silo Filling</td>
<td>Onsite Yard</td>
<td>Total</td>
</tr>
<tr>
<td>Acenaphthene</td>
<td>83-32-9</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.08%</td>
<td>0.26%</td>
<td>0.47%</td>
<td>4.4E-04</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>
<td>4.8E-05</td>
<td>1.8E-05</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>
<td>1.2E-04</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>3.2E-05</td>
<td>7.1E-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>1.3E-05</td>
<td>NA</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>3.8E-06</td>
<td>NA</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>3.2E-06</td>
<td>NA</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>0.0031%</td>
<td>0</td>
<td>3.8E-06</td>
<td>NA</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>0.0065%</td>
<td>1.3E-05</td>
<td>1.2E-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>1.8E-04</td>
<td>2.7E-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>0.0037%</td>
<td>0</td>
<td>6.3E-07</td>
<td>NA</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>8.5E-05</td>
<td>1.9E-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>1.3E-03</td>
<td>1.3E-03</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>
<td>8.0E-07</td>
<td>NA</td>
</tr>
<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>4.1E-03</td>
<td>6.7E-03</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>2.1E-03</td>
<td>2.3E-03</td>
</tr>
<tr>
<td>Phenanthrene</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>
<td>3.8E-05</td>
<td>3.8E-05</td>
</tr>
<tr>
<td>Pyrene</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>1.4E-03</td>
<td>2.3E-03</td>
</tr>
<tr>
<td>Total PAH HAPs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.010</td>
<td>0.014</td>
<td>0</td>
<td>0.025</td>
</tr>
<tr>
<td>Other semi-volatile HAPs</td>
<td></td>
<td></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>2.0E-03</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
### Appendix A.2: Limited Emissions Summary

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

**Limited Emissions**

Organic Volatile-Based Compounds (Table 11.1-16)

<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 TOC)</td>
<td></td>
<td><strong>Load-out</strong></td>
</tr>
<tr>
<td><strong>VOC</strong></td>
<td>VOC</td>
<td></td>
<td></td>
<td>TOC</td>
<td>94%</td>
<td>1.95</td>
</tr>
<tr>
<td><strong>non-VOC/non-HAPS</strong></td>
<td>71-43-2</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.052%</td>
<td>0.032%</td>
</tr>
<tr>
<td><strong>Bromomethane</strong></td>
<td>74-83-9</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.0086%</td>
<td>0.0049%</td>
</tr>
<tr>
<td><strong>Carbon Disulfide</strong></td>
<td>75-15-0</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.913%</td>
<td>0.018%</td>
</tr>
<tr>
<td><strong>Chloroethane</strong></td>
<td>75-00-3</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.0021%</td>
<td>0.004%</td>
</tr>
<tr>
<td><strong>Cumene</strong></td>
<td>92-82-8</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.11%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Ethylbenzene</strong></td>
<td>100-41-4</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.28%</td>
<td>0.038%</td>
</tr>
<tr>
<td><strong>Formaldehyde</strong></td>
<td>50-00-0</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.088%</td>
<td>0.09%</td>
</tr>
<tr>
<td><strong>n-Hexane</strong></td>
<td>100-54-3</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.15%</td>
<td>0.10%</td>
</tr>
<tr>
<td><strong>Isoctane</strong></td>
<td>540-84-1</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.0016%</td>
<td>0.00031%</td>
</tr>
<tr>
<td><strong>Methyl Chloride</strong></td>
<td>75-09-2</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0%</td>
<td>0.00027%</td>
</tr>
<tr>
<td><strong>MTBE</strong></td>
<td>1634-04-4</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Styrene</strong></td>
<td>100-42-5</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.007%</td>
<td>0.0004%</td>
</tr>
<tr>
<td><strong>Tetrachloroethylene</strong></td>
<td>127-18-4</td>
<td>non-VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.007%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Toluene</strong></td>
<td>100-88-3</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.21%</td>
<td>0.062%</td>
</tr>
<tr>
<td><strong>1,1,1-Trichloroethane</strong></td>
<td>71-55-6</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Trichloroethylene</strong></td>
<td>79-01-6</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Trichlorofluoromethane</strong></td>
<td>75-69-4</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.0013%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>m,p-Xylene</strong></td>
<td>1330-20-7</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.41%</td>
<td>0.20%</td>
</tr>
<tr>
<td><strong>o-Xylene</strong></td>
<td>95-47-6</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.04%</td>
<td>0.031%</td>
</tr>
<tr>
<td><strong>Total volatile organic HAPs</strong></td>
<td>1.20%</td>
<td>1.30%</td>
<td>0.031</td>
<td>0.079</td>
<td>0.008</td>
<td>0.119</td>
</tr>
</tbody>
</table>

**Methodology**

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

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

**Abbreviations**

TOC = Total Organic Compounds

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

MTBE = Methyl tert butyl ether
### Limited Emissions Summary

**Company Name:** Walsh & Kelly, Inc.  
**Source Address:** 21201 Wicker Avenue, Lowell, Indiana  
**Permit Number:** 089-41969-05255  
**Reviewer:** Daniel W. Pell

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.

\[
Ef = 1.7\left(\frac{s}{1.5}\right)\left(\frac{365-p}{235}\right)\left(\frac{f}{15}\right)
\]

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

#### Material Storage Piles

<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>0.50</td>
<td>0.275</td>
<td>0.096</td>
</tr>
<tr>
<td>Limestone</td>
<td>1.6</td>
<td>1.85</td>
<td>3.00</td>
<td>1.014</td>
<td>0.355</td>
</tr>
<tr>
<td>RAP</td>
<td>0.5</td>
<td>0.58</td>
<td>2.00</td>
<td>0.211</td>
<td>0.074</td>
</tr>
<tr>
<td>Gravel</td>
<td>1.6</td>
<td>1.85</td>
<td>0.25</td>
<td>0.084</td>
<td>0.030</td>
</tr>
<tr>
<td>Shingles</td>
<td>0.5</td>
<td>0.58</td>
<td>0.25</td>
<td>0.026</td>
<td>0.009</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** 2.41 0.84

**Methodology**
- PTE of PM (tons/yr) = (Emission Factor (lb/acre/day)) * (Maximum Pile Size (acres)) * (ton/2000 lbs) * (365 days/yr)
- PTE of PM10/PM2.5 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%
- Silt content values obtained from AP-42 Table 13.2.4-1 (dated 1/95)
- Maximum anticipated pile size (acres) provided by the source.

**Abbreviations**
- 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: Walsh & Kelly, Inc.
Source Address: 21201 Wicker Avenue, Lowell, Indiana
Permit Number: 089-41969-05255
Reviewer: Daniel W. Pell

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)

\[ Ef \] values are calculated as follows:

- \( Ef \) (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 = 1,000,000 tons/yr

Percent Asphalt Cement/Binder (weight %) = 5.0%

Maximum Material Handling Throughput = 950,000 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>1.08</td>
<td>0.51</td>
<td>0.08</td>
</tr>
<tr>
<td>Front-end loader dumping of materials into feeder bins</td>
<td>1.08</td>
<td>0.51</td>
<td>0.08</td>
</tr>
<tr>
<td>Conveyor dropping material into dryer/mixer or batch tower</td>
<td>1.08</td>
<td>0.51</td>
<td>0.08</td>
</tr>
<tr>
<td><strong>Total (tons/yr)</strong></td>
<td><strong>3.23</strong></td>
<td><strong>1.53</strong></td>
<td><strong>0.23</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 (tons/yr)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crushing</td>
<td>0.0054</td>
<td>0.0024</td>
<td>2.57</td>
<td>1.14</td>
</tr>
<tr>
<td>Screening</td>
<td>0.025</td>
<td>0.0087</td>
<td>11.88</td>
<td>4.13</td>
</tr>
<tr>
<td>Conveying</td>
<td>0.003</td>
<td>0.0011</td>
<td>1.43</td>
<td>0.52</td>
</tr>
<tr>
<td><strong>Limited Potential to Emit (tons/yr)</strong></td>
<td><strong>15.87</strong></td>
<td><strong>5.80</strong></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 %)]

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

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

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

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

**Assumes PM10 = PM2.5

Abbreviations
- PM = Particulate Matter
- PM10 = Particulate Matter (<10 um)
- PM2.5 = Particulate Matter (<2.5 um)
- PTE = Potential to Emit
### Appendix A.2: Limited Emissions Summary

#### Unpaved Roads

The following calculations determine the amount of emissions created by unpaved roads, based on 8760 hours of use and AP-42, Ch.13.2.2 (12/2003).

**Annual Asphalt Production Limitation:** 17000 tons/yr

**Percent Asphalt Cement/Binder (weight %):** 5.55

**Maximum Material Handling Throughput:** 65000 tons/yr

**Maximum Asphalt Cement/Binder Throughput:** 5% No. 2 fuel oil limitation

**Maximum one-way distance (miles) (tons/yr):** 4100

**Maximum one-way distance (miles) (ton/trip):** 110

**Maximum one-way distance (miles) (ft/trip):** 5280

**Average Miles Per Trip (miles/trip) =** SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]

**Average Vehicle Weight Per Trip (ton/trip) =** SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]

**Maximum one-way distance (feet/trip) =** Maximum one-way distance (miles) * 5280

**Maximum one-way distance (miles):** 4100

**Maximum one-way distance (ft/trip):** 21000

**Maximum one-way distance (miles/trip):** 220

**Maximum Vehicle Weight Per Trip (ton):** 20 tons/trip

<table>
<thead>
<tr>
<th>Process</th>
<th>Vehicle Type</th>
<th>Maximum Weight of Vehicle (tons)</th>
<th>Maximum Weight of Load (tons)</th>
<th>Maximum trips per year (trip/yr)</th>
<th>Total Weight driven per year (ton/yr)</th>
<th>Maximum one-way distance (miles) (ton/yr)</th>
<th>Maximum one-way distance (miles) (ton/trip)</th>
<th>Maximum one-way distance (miles) (ft/trip)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate/TP</td>
<td>Truck Enter Full</td>
<td>Dump Truck (16 CY)</td>
<td>17.0</td>
<td>22.4</td>
<td>39.4</td>
<td>4.2E+04</td>
<td>7.1E+04</td>
<td>300</td>
</tr>
<tr>
<td>Aggregate/TP</td>
<td>Truck Leave Empty</td>
<td>Dump Truck (16 CY)</td>
<td>17.0</td>
<td>22.4</td>
<td>39.4</td>
<td>4.2E+04</td>
<td>7.1E+04</td>
<td>300</td>
</tr>
<tr>
<td>Aggregate/TP</td>
<td>Truck Leave Empty</td>
<td>Aggregate/RAP Loader Full</td>
<td>15.0</td>
<td>4.2</td>
<td>19.2</td>
<td>4.2E+05</td>
<td>7.1E+05</td>
<td>300</td>
</tr>
<tr>
<td>Aggregate/TP</td>
<td>Loader Full</td>
<td>Aggregate/RAP Loader Full</td>
<td>15.0</td>
<td>4.2</td>
<td>19.2</td>
<td>4.2E+05</td>
<td>7.1E+05</td>
<td>300</td>
</tr>
<tr>
<td>Aggregate/TP</td>
<td>Loader Full</td>
<td>Aggregate/RAP Loader Full</td>
<td>15.0</td>
<td>4.2</td>
<td>19.2</td>
<td>4.2E+05</td>
<td>7.1E+05</td>
<td>300</td>
</tr>
<tr>
<td>Aggregate/TP</td>
<td>Loader Full</td>
<td>Aggregate/RAP Loader Full</td>
<td>15.0</td>
<td>4.2</td>
<td>19.2</td>
<td>4.2E+05</td>
<td>7.1E+05</td>
<td>300</td>
</tr>
</tbody>
</table>

**Unmitigated Emission Factor, Ef:** 1.48

**Mitigated Emission Factor, Emt:** (Before Control)

**Mitigated Emission Factor, Emt:** (After Control)

**Mitigated Emission Factor, Emt:** (Before Control) * (After Control)

**Mitigated Emission Factor, Emt:** (Before Control) * (After Control) * (Dimout to control measures outlined in fugitive dust control plan)

#### Methodology

- **Maximum Material Handling Throughput:** Annual Asphalt Production Limitation * (1 - Percent Asphalt Cement/Binder (weight %))
- **Maximum Asphalt Cement/Binder Throughput:** Annual Asphalt Production Limitation * (Percent Asphalt Cement/Binder (weight %))
- **Maximum Vehicle Weight:** Maximum Weight of Vehicle and Load (ton/trip) * Maximum trips per year (trip/yr)
- **Total Weight driven per year (ton/yr):** Maximum Weight of Vehicle and Load (ton/trip) * Maximum trips per year (trip/yr)
- **Mitigated PTE of PM:** Mitigated Emission Factor (Before Control) * Mitigated Emission Factor (After Control) * (Dimout to control measures outlined in fugitive dust control plan)

### Abbreviations

- PM = Particulate Matter
- PM2.5 = Particulate Matter (≤ 2.5 um)
- PM10 = Particulate Matter (> 2.5 um)
- PTE = Potential to Emit
- PTE of PM = Potential to Emit (PM)
- PTE of PM2.5 = Potential to Emit (PM2.5)
- PTE of PM10 = Potential to Emit (PM10)

---

**Source Address:** 21201 Wicker Avenue, Lowell, Indiana

**Permit Number:** 089-419690-05205

**Reviewer:** Daniel W. Pell
### Appendix A.2: Limited Emissions Summary

#### Paved Roads

**Company Name:** Walsh & Kelly, Inc.  
**Source Address:** 2101 Wicker Avenue, Lowell, Indiana  
**Permit Number:** 089-41969-05255  
**Reviewer:** Daniel W. Pell

**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 (2000).

<table>
<thead>
<tr>
<th>Process</th>
<th>Vehicle Type</th>
<th>Maximum Weight of Vehicle (ton)</th>
<th>Maximum Weight of Load (ton)</th>
<th>Maximum Trips per Year (trip/yr)</th>
<th>Maximum one-way distance (mi/trip)</th>
<th>Maximum one-way miles (mi/yr)</th>
<th>Maximum Weight driven per year (ton/yr)</th>
<th>Maximum Vehicle Weight (ton)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate/Concrete Truck Enter Empty</td>
<td>6000 gal</td>
<td>14.0</td>
<td>14.0</td>
<td>2,020</td>
<td>2,020</td>
<td>4,040</td>
<td>4,040</td>
<td>2,020</td>
</tr>
<tr>
<td>Aggregate/Concrete Truck Leave Full</td>
<td>6000 gal</td>
<td>14.0</td>
<td>14.0</td>
<td>2,020</td>
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<td>2,020</td>
<td>4,040</td>
<td>4,040</td>
<td>2,020</td>
</tr>
</tbody>
</table>

**Mitigated Emission Factor (After Control), E_{ext} = E * [1 - (p/4N)]**

where p = \[k * (sL)^0.91 * (W)^1.02\]  
\[\text{Equation 1 from AP-42 13.2.1}\]

where k = \[\text{Unmitigated Emission Factor, } E = \text{Unmitigated Emission Factor, } E_{before} * (\text{particle size multiplier})\]

**Dust Control Efficiency = \[\text{Mitigated PTE of PM}_{2.5} / \text{Unmitigated PTE of PM}_{2.5}\]**

**Abbriviations**

PM = Particulate Matter  
PM10 = Particulate Matter (<10 um)  
PM2.5 = Particulate Matter (<2.5 um)  
PTE = Potential to Emit
Cold Mix Asphalt Production and Stockpiles

Company Name: Walsh & Kelly, Inc.
Source Address: 21201 Wicker Avenue, Lowell, Indiana
Permit Number: 089-41969-05255
Reviewer: Daniel W. Pell

The following calculations determine the amount of VOC and HAP emissions created from volatilization of solvent used as diluent in the liquid binder for cold mix asphalt production

Limited VOC Emissions from the Sum of the Liquid Binders = 24.0 tons/yr

<table>
<thead>
<tr>
<th>Volatile Organic Compounds</th>
<th>Maximum weight % of VOC solvent in binder</th>
<th>Weight % VOC solvent in binder that evaporates</th>
<th>VOC Solvent Usage Limitation (tons/yr)</th>
<th>Limited PTE of VOC (tons/yr)</th>
<th>Liquid Binder Adjustment Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut back asphalt rapid cure (assuming gasoline or naphtha solvent)</td>
<td>25.3%</td>
<td>95.0%</td>
<td>25.3</td>
<td>24.0</td>
<td>1.053</td>
</tr>
<tr>
<td>Cut back asphalt medium cure (assuming kerosene solvent)</td>
<td>28.6%</td>
<td>70.0%</td>
<td>34.3</td>
<td>24.0</td>
<td>1.429</td>
</tr>
<tr>
<td>Cut back asphalt slow cure (assuming fuel oil solvent)</td>
<td>20.0%</td>
<td>25.0%</td>
<td>96.0</td>
<td>24.0</td>
<td>4.000</td>
</tr>
<tr>
<td>Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)</td>
<td>15.0%</td>
<td>46.4%</td>
<td>51.7</td>
<td>24.0</td>
<td>2.155</td>
</tr>
<tr>
<td>Other asphalt with solvent binder</td>
<td>25.9%</td>
<td>2.5%</td>
<td>960.0</td>
<td>24.0</td>
<td>40.0</td>
</tr>
</tbody>
</table>

Worst Case Limited PTE of VOC = 24.0 tons/yr

| Hazardous Air Pollutant (HAP) Content (% by weight) For Various Petroleum Solvents* |
|---------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|-----------------------------------------------|
| Volatile Organic HAP | CAS# | Gasoline | Kerosene | Diesel (#2) | No. 2 Fuel Oil | No. 6 Fuel Oil |
| 1,3-Butadiene | 106-99-0 | 3.70E-5% | | | | |
| 2,2,4-Trimethylpentane | 540-84-1 | 2.40% | | | | |
| Acmaphylene | 83-32-9 | 4.70E-5% | | | | |
| Acenaphthylene | 208-66-8 | 4.50E-5% | | | | |
| Anthracene | 120-12-7 | 1.20E-6% | | | | |
| Benzene | 71-43-2 | 1.90% | | | | |
| Benzo(a)anthracene | 50-55-3 | 9.60E-7% | | | | |
| Benzo(a)pyrene | 50-32-8 | 2.20E-6% | | | | |
| Benzo(g,h,i)perylene | 191-24-2 | 1.20E-7% | | | | |
| Benzyli | 92-52-4 | 6.30E-4% | | | | |
| Chrysene | 218-01-9 | 4.50E-7% | | | | |
| Ethylbenzene | 100-41-4 | 1.70% | | | | |
| Fluoranthene | 206-64-0 | 7.10E-6% | | | | |
| Fluorene | 86-73-7 | 4.20E-5% | | | | |
| Indeno(1,2,3-cd)pyrene | 193-39-5 | 1.60E-7% | | | | |
| Methyl-terminated butylether | 1654-04-4 | 0.33% | | | | |
| Naphthalene | 91-20-3 | 0.25% | 0.31% | 0.26% | 0.22% | 4.20E-6% |
| n-Hexane | 110-54-3 | 2.40% | | | | |
| Phenanthrene | 85-01-8 | 8.60E-6% | | | | |
| Pyrene | 129-00-0 | 2.40E-6% | | | | |
| Toluene | 108-86-3 | 8.10% | | | | |
| Total Xylenes | 1330-20-7 | 9.60% | | | | |
| Total Organic HAPs | | 26.08% | 0.33% | 1.29% | 0.68% | 0.19% |
| Worst Single HAP | | 9.99% | 0.31% | 0.59% | 0.43% | 0.97% |

Methodology
Limited PTE of VOC (tons/yr) = [Weight % VOC solvent in binder that evaporates] * [VOC Solvent Usage Limitation (tons/yr)]
Limited PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]
Limited PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]


Abbreviations
VOC = Volatile Organic Compounds
PTE = Potential to Emit
Appendix A.2: Limited Emissions Summary
Gasoline Fuel Transfer and Dispensing Operation

Company Name: Walsh & Kelly, Inc.
Source Address: 21201 Wicker Avenue, Lowell, Indiana
Permit Number: 089-41969-05255
Reviewer: Daniel W. Pell

Gasoline Throughput = 0 gallons/day = 0.0 kgal/yr

Volatile Organic Compounds

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Emission Factor (lb/kgal of throughput)</th>
<th>PTE of VOC (tons/yr)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filling storage tank (balanced submerged filling)</td>
<td>0.3</td>
<td>0.00</td>
</tr>
<tr>
<td>Tank breathing and emptying</td>
<td>1.0</td>
<td>0.00</td>
</tr>
<tr>
<td>Vehicle refueling (displaced losses - controlled)</td>
<td>1.1</td>
<td>0.00</td>
</tr>
<tr>
<td>Spillage</td>
<td>0.7</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>0.00</td>
</tr>
</tbody>
</table>

Hazardous Air Pollutants

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Worst Case Total HAP Content of VOC solvent (weight %)*</td>
<td>28.08%</td>
</tr>
<tr>
<td>Worst Case Single HAP Content of VOC solvent (weight %)*</td>
<td>9.0% Xylenes</td>
</tr>
<tr>
<td>Limited PTE of Total HAPs (tons/yr)</td>
<td>0.00</td>
</tr>
<tr>
<td>Limited PTE of Single HAP (tons/yr)</td>
<td>0.00 Xylenes</td>
</tr>
</tbody>
</table>

Methodology

The gasoline throughput was provided by the source.

\[
\text{Gasoline Throughput (kcal/yr)} = \frac{\text{Gasoline Throughput (lbs/day)}}{1000 \text{ gal}} \times \frac{365 \text{ days/yr}}{} \times \text{kgal/1000 gal}
\]

\[
\text{PTE of VOC (tons/yr)} = \frac{\text{Gasoline Throughput (kgal/yr)}}{2000 \text{ lb}} \times \text{Emission Factor (lb/kgal)} \times \text{ton/2000 lb}
\]

\[
\text{PTE of Total HAPs (tons/yr)} = \frac{\text{Worst Case Total HAP Content of VOC solvent (weight %)}}{100} \times \text{PTE of VOC (tons/yr)}
\]

\[
\text{PTE of Single HAP (tons/yr)} = \frac{\text{Worst Case Single HAP Content of VOC solvent (weight %)}}{100} \times \text{PTE of VOC (tons/yr)}
\]


Abbreviations

VOC = Volatile Organic Compounds
PTE = Potential to Emit
December 2, 2019

John Peisker  
Walsh & Kelly Inc  
24358 SR 23  
South Bend, IN 46614  

Re: Public Notice  
Walsh & Kelly, Inc.  
Permit Level: FESOP Significant Permit Rev  
Permit Number: 089-41969-05255

Dear John Peisker:

Enclosed is a copy of your draft FESOP Significant Permit Rev (Minor PSD/EO) (120), 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 Schneider Branch Library, 24002 Parrish Avenue in Schneider IN 46367-0019. 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 Daniel W. Pell, 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 4-8532 or dial (317) 234-8532.

Sincerely,

L. Pogost

L. Pogost  
Permits Branch  
Office of Air Quality

Enclosures  
PN Applicant Cover Letter 4/12/19
December 2, 2019

To: Schneider Branch Library 24002 Parrish Avenue Schneider IN 46367-0019 (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: Walsh & Kelly, Inc.
Permit Number: 089-41969-05255

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

December 2, 2019
Walsh & Kelly, Inc.  
089-41969-05255

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
## Mail Code 61-53

### IDEM Staff

LPOGOST 12/2/2019
Walsh & Kelly Inc 089-41969-05255 draft/

### Name and address of Sender

<table>
<thead>
<tr>
<th>Name, Address, Street and Post Office Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indiana Department of Environmental Management</td>
</tr>
<tr>
<td>Office of Air Quality – Permits Branch</td>
</tr>
<tr>
<td>100 N. Senate</td>
</tr>
<tr>
<td>Indianapolis, IN 46204</td>
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</tbody>
</table>

### Type of Mail:

CERTIFICATE OF MAILING ONLY

### Line Number | Article Number | Name, Address, Street and Post Office Address |
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<tr>
<td>1</td>
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<td>John Peisker Walsh &amp; Kelly Inc 24358 SR 23 South Bend IN 46614 (Source CAATS)</td>
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<td>2</td>
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<td>Lake County Health Department-Gary 1145 W. 5th Ave Gary IN 46402-1795 (Health Department)</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>WJOB / WZVN Radio 6405 Olcott Ave Hammond IN 46320 (Affected Party)</td>
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<td>4</td>
<td></td>
<td>Lowell Town Council and Town Manager PO Box 157, 501 East Main Street Lowell IN 46356 (Local Official)</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>Schneider Branch Library 24002 Parrish Avenue Schneider IN 46367-0019 (Library)</td>
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<td>6</td>
<td></td>
<td>Craig Hogarth 7901 West Morris Street Indianapolis IN 46231 (Affected Party)</td>
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<td>7</td>
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<td>Lake County Commissioners 2293 N. Main St, Building A 3rd Floor Crown Point IN 46307 (Local Official)</td>
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<tr>
<td>8</td>
<td></td>
<td>Anthony Copeland 2006 E. 140th Street East Chicago IN 46312 (Affected Party)</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>Barbara G. Perez 506 Lilac Street East Chicago IN 46312 (Affected Party)</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>Mr. Robert Garcia 3733 Parrish Avenue East Chicago IN 46312 (Affected Party)</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>Ms. Karen Kroczek 8212 Madison Ave Munster IN 46321-1627 (Affected Party)</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>Joseph Hero 11723 S Oakridge Drive St. John IN 46373 (Affected Party)</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>Mr. Larry Davis 268 South, 600 West Hebron IN 46341 (Affected Party)</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>Mark Coleman PO Box 85 Beverly Shores IN 46301-0085 (Affected Party)</td>
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<td>15</td>
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<td>Jeff Mayes News-Dispatch 422 Franklin St Michigan City IN 46360 (Affected Party)</td>
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### Postage | Handing Charges | Act. Value (If Registered) | Insured Value | Due Send if COD | R.R. Fee | S.D. Fee | S.H. Fee | Rest. Del. Fee | Remarks |
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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 on coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.