



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: July 24, 2009

RE: Walsh & Kelly, Inc / 127-27125-05258

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

Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures
FNPER.dot12/03/07



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Federally Enforceable State Operating Permit
Renewal

OFFICE OF AIR QUALITY

Walsh & Kelly, Inc.
(Portable)

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

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

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

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

Table with 2 columns and 2 rows containing permit details: Operation Permit No., Issued by (with signature), Issuance Date, and Expiration Date.

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SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a portable hot mix asphalt plant that uses slag in their aggregate mix.

Initial Source Address:	3221 Bertholet Boulevard, Valparaiso, Indiana 46383
Mailing Address:	24358 State Road 23, South Bend, Indiana 46614
General Source Phone Number:	(574) 288-4811
SIC Code:	2951
County Location:	Porter
Source Location Status:	Nonattainment for 8-hour ozone standard Nonattainment for PM _{2.5} standard Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

- (a) One (1) portable drum hot-mix asphalt plant, constructed in 2004, consisting the following:
- (1) One (1) drum mixer, identified as #5, with a maximum capacity of 400 tons/hr, and one (1) aggregate dryer/burner, identified as #7, which has a maximum heat input rate of 100 MMBtu/hr, using slag in the aggregate mix, using recycled (waste) oil as the primary fuel, controlled by a baghouse, identified as #8, and exhausting through stack S-1. The backup fuels are Natural gas and No. 2 fuel oil.

Under NSPS Subpart I, the drum mixer (#5) & aggregate dryer/burner (#7) are considered an affected facility.
 - (2) One (1) covered slat conveyor, identified as #3, with a maximum throughput rate of four hundred (400) tons/hr, with no emission controls, and exhausting to the atmosphere.
 - (3) One (1) asphalt load-out process, identified as #LO1, with a maximum throughput rate of four hundred (400) tons/hr, with no emission controls, and exhausting to the atmosphere.
 - (4) Two (2) conveyors sending aggregate to the dryer, collectively identified as #21, with a maximum throughput rate of three hundred twenty (320) tons/hr and sixty (60) tons/hr, respectively, with no emission controls and exhausting to the atmosphere.

- (5) Three (3) heated volatile liquid storage vessels, collectively identified as #10, #11, and #14, containing liquid asphalt cement, with #10 and #11 constructed in 2004, each with a maximum capacity of 20,000, and with #14 constructed in 2006, with a maximum capacity of 30,000 gallons. These three vessels are heated to a maximum of 290°F, have no emission controls and exhaust through vents V-3, V-4, and V-6.
 - (6) Seven (7) aggregate cold bins, collectively identified as #4, each with a maximum storage capacity of thirty (30) tons, constructed in 2004, with no emission controls and exhausting to the atmosphere.
 - (7) Three (3) asphalt binder surge bins, collectively identified as #2, each with a maximum capacity of 200 tons, constructed in 2004, with no emission controls and exhausting to the atmosphere.
- (b) One Recycled Asphalt Pavement (RAP) operation, constructed in 2004, consisting of the following:
- (1) One (1) RAP crushing and screening process, collectively identified as #6a, constructed in 2004, with a maximum capacity to process 300 tons/hr, with no emission controls and exhausting to the atmosphere.

Under NSPS Subpart OOO, the RAP crusher, identified as #6a, is considered an affected source as part of an existing hot mix asphalt facility.

- (2) Two (2) RAP feed bins, collectively identified as #6b, constructed in 2004, with no emission controls and exhausting to the atmosphere.
- (c) One (1) natural gas-fired hot oil heater, identified as #13, with a maximum heat input capacity of two (2.0) million British thermal units per hour (MMBtu/hr), constructed in 2004, with no emission controls and exhausting through stack S-2.

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

This portable source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (d) Eleven (11) aggregate storage piles, identified as A1 - A11, respectively, with a total capacity of 30,500 tons, with a total throughput rate of 400 tons per hour, with no emission controls and exhausting to the atmosphere.
- (e) Two (2) petroleum fuel, other than gasoline, dispensing facilities, consisting of:
 - (1) One (1) volatile liquid storage vessel, identified as DT1, having a maximum storage capacity of 800 gallons, constructed in 2004, with no emission controls and exhausting to the atmosphere. This tank dispenses less than or equal to 10,000 gallons of No. 2 low-sulfur diesel fuel per year to the front-loader..
 - (2) One (1) volatile liquid storage vessel, identified as #12, constructed in 2004, having a maximum storage capacity of 20,000 gallons, with no emission controls and exhausting through vent V-5. This tank has a peak usage rate of 560 gal/hr, and dispenses less than or equal to 300,000 gallons of recycled (waste) oil per year.

- (f) Degreasing operations using cleaners and solvents having a vapor pressure less than or equal to 15mm Hg or 0.3 psia measured at one hundred degrees Fahrenheit (100°F) or having a vapor pressure equal to or less than five (5) mm Hg or one-tenth (0.1) psia measured at sixty-eight degrees Fahrenheit (68°F). The usage of all cleaners and solvents combined does not exceed one hundred forty-five (145) gallons per twelve (12) consecutive month period, and is not subject to 326 IAC 20-6.
- (g) Closed loop heating and cooling systems.
- (h) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (i) Paved and unpaved roads and parking lots with public access.
- (j) Combustion source flame safety purging on startup.
- (k) A laboratory as defined in 326 IAC 2-7-1(21)(D)

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

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

SECTION B GENERAL CONDITIONS

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

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

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

-
- (a) This permit, F127-27125-05258, 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. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). 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) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, 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 the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

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

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

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMP) 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.
- (b) A copy of the PMP 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 PMP whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMP do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) 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, and 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 Compliance Section)
Facsimile Number: 317-233-6865
Northwest Regional Office phone: (219) 757-0265; fax: (219) 757-0267.

- (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 the certification 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.

- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

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

- (a) All terms and conditions of permits established prior to F127-27125-05258 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

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

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

B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
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using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. 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.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

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

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)] The notification by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
 - (1) That this permit contains a material mistake.
 - (2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.
 - (3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]
- (c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.17 Permit Renewal [326 IAC 2-8-3(h)]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
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- (b) A timely renewal application is one that is:
 - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.18 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

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

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

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

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

B.19 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

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

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

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

and

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

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

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

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

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

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

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

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

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

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

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

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

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

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

The application which shall be submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

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

- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.24 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

(a) Pursuant to 326 IAC 2-8:

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

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

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

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

C.3 Opacity [326 IAC 5-1]

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

- (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.

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

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

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

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

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

C.6 Fugitive Dust Emissions [326 IAC 6-4]

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

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

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

C.8 Lake County: Fugitive Particulate Matter [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 average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).
- (d) The opacity of fugitive particulate emissions from continuous transfer of material onto and out of storage piles shall not exceed ten percent (10%) on a three (3) minute average.
- (e) The opacity of fugitive particulate emissions from storage piles shall not exceed ten percent (10%) on a six (6) minute average.
- (f) There shall be a zero (0) percent frequency of visible emission observations of a material during the inplant transportation of material by truck or rail at any time.
- (g) The opacity of fugitive particulate emissions from the inplant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).
- (h) There shall be a zero (0) percent frequency of visible emission observations from a building enclosing all or part of the material processing equipment, except from a vent in the building.

- (i) The PM₁₀ emissions from building vents shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
- (j) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).
- (k) The PM₁₀ emissions from each material processing stack shall not exceed twenty-two thousandths (0.022) grains per dry standard cubic foot and ten percent (10%) opacity.
- (l) Fugitive particulate matter from the material processing facilities shall not exceed ten percent (10%) opacity.
- (m) 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).

Material processing facilities include crushers, screens, grinders, mixers, dryers, belt conveyors, bucket elevators, bagging operations, storage bins, and truck or railroad car loading stations.

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

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

- (B) Removal or demolition contractor; or
- (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

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

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

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

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

- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A 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 certification 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 certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance or ninety (90) days of initial start-up, whichever is later. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, 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 the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.13 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

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

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

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

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

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

- (a) The Permittee shall maintain the most recently submitted written emergency reduction plans (ERP) 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.16 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

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

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

- (a) Upon detecting an excursion or exceedance, the Permittee shall 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 emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned 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 within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

- (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 maintain the following records:
 - (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

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

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) 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 the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.19 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

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

- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance or ninety (90) days of initial start-up, whichever is later.

C.20 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of 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
- (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) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

Portable Source Requirement

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

- (a) This permit is approved for operation all attainment areas for ozone in Indiana and in Porter County which is classified as severe nonattainment for ozone. This determination is based on the requirements of Prevention of Significant Deterioration in 326 IAC 2-2, and Emission Offset requirements in 326 IAC 2-3. Prior to locating in any other severe nonattainment area, the Permittee must submit a request and obtain a permit revision.
- (b) A request to relocate shall be submitted to IDEM, OAQ at least thirty (30) days prior to the intended date of relocation. This submittal shall include the following:
 - (1) A list of governmental officials entitled to receive notice of application to relocate. IC 13-15-3-1
 - (2) A list of adjacent landowners that the Permittee will send written notice to not more than ten (10) days after submission of the request to relocate. IC 13-15-8
 - (3) The address of the new location for the portable source.

- (4) Indication of whether or not this portable source will be relocated near or adjacent to another (portable or stationary) permitted source.
- (5) If relocating near or adjacent to another permitted source, include the following:
 - (A) Source name, location address, and permit number of the other source.
 - (B) Indicate whether or not the two sources share common ownership.
 - (C) Indicate whether or not the two sources will be considered as one source (for permitting purposes.)
 - (D) If the two sources will be considered as one source, indicate whether or not this combined emission source has received the necessary approvals from IDEM to allow the relocation and include the permit number of the approval.

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

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

Stratospheric Ozone Protection

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

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

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) portable drum hot-mix asphalt plant, constructed in 2004, consisting the following:
- (1) One (1) drum mixer, identified as #5, with a maximum capacity of 400 tons/hr, and one (1) aggregate dryer/burner, identified as #7, which has a maximum heat input rate of 100 MMBtu/hr, using slag in the aggregate mix, using recycled (waste) oil as the primary fuel, controlled by a baghouse, identified as #8, and exhausting through stack S-1. The backup fuels are Natural gas and No. 2 fuel oil.
- Under NSPS Subpart I, the drum mixer (#5) & aggregate dryer/burner (#7) are considered an affected facility.
- (2) One (1) covered slat conveyor, identified as #3, with a maximum throughput rate of four hundred (400) tons/hr, with no emission controls, and exhausting to the atmosphere.
 - (3) One (1) asphalt load-out process, identified as #LO1, with a maximum throughput rate of four hundred (400) tons/hr, with no emission controls, and exhausting to the atmosphere.
 - (4) Two (2) conveyors sending aggregate to the dryer, collectively identified as #21, with a maximum throughput rate of three hundred twenty (320) tons/hr and sixty (60) tons/hr, respectively, with no emission controls and exhausting to the atmosphere.
 - (5) Three (3) heated volatile liquid storage vessels, collectively identified as #10, #11, and #14, containing liquid asphalt cement, with #10 and #11 constructed in 2004, each with a maximum capacity of 20,000, and with #14 constructed in 2006, with a maximum capacity of 30,000 gallons. These three vessels are heated to a maximum of 290°F, have no emission controls and exhaust through vents V-3, V-4, and V-6.
 - (6) Seven (7) aggregate cold bins, collectively identified as #4, each with a maximum storage capacity of thirty (30) tons, constructed in 2004, with no emission controls and exhausting to the atmosphere.
 - (7) Three (3) asphalt binder surge bins, collectively identified as #2, each with a maximum capacity of 200 tons, constructed in 2004, with no emission controls and exhausting to the atmosphere.

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

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

D.1.1 Particulate Matter (PM) [326 IAC 6.5-1-2] [326 IAC 6.8-1-1]

- (a) Pursuant to 326 IAC 6.5-1-2 (Particulate Matter Limitations Except in Lake County), particulate matter (PM) emissions from the mixer/dryer shall not exceed 0.03 grain per dry standard cubic foot (gr/dscf) of exhaust air when the source is located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties.
- (b) Pursuant to 326 IAC 6.8-1-1 (Particulate Matter Limitations for Lake County), particulate matter (PM) emissions from the mixer/dryer shall not exceed 0.03 grain per dry standard

cubic foot (gr/dscf) of exhaust air when the source is located in Lake County.

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

In order to render 326 IAC 2-2 not applicable, the Permittee shall comply with the following:

- (a) The amount of asphalt processed shall not exceed 1,500,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) Emissions from the mixer/dryer shall not exceed 0.10 pounds PM per ton of asphalt produced.

Compliance with these limitations shall limit total source-wide PM emissions to less than two hundred fifty (250) tons per twelve (12) consecutive month period. Therefore, compliance with this limit will render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

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

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

- (a) The amount of asphalt processed shall not exceed 1,500,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) The amount of slag used shall not exceed two hundred sixty thousand (260,000) tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (c) PM₁₀ emissions shall not exceed 0.115 pounds per ton of asphalt produced.
- (d) PM_{2.5} emissions shall not exceed 0.115 pounds per ton of asphalt produced.
- (e) CO emissions shall not exceed 0.130 pounds per ton of asphalt produced.
- (f) VOC emissions shall not exceed 0.035 pounds per ton of asphalt produced.
- (g) SO₂ emissions from the use of slag shall not exceed 0.74 pounds SO₂ per ton of slag processed.
- (h) The sulfur content of the slag used shall not exceed one and five-tenths percent (1.5%) by weight.

Compliance with these limitations, combined with emissions from all other emission units, cold mix asphalt production, and fugitives, shall limit source-wide PM₁₀, PM_{2.5}, SO₂ and CO emissions to less than one hundred (100) tons per twelve (12) consecutive month period and shall limit source-wide VOC to less than fifty (50) tons per twelve (12) consecutive month period. Therefore, compliance with these limits will render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-7 (Part 70) not applicable.

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

Pursuant to 326 IAC 2-8-4 and in order to limit the SO₂, NO_x, and HCl emissions from all emission units at this source, the Permittee shall comply with the following:

- (a) Fuel Content Specifications:
The Permittee shall comply with the following limitations:
 - (1) The sulfur content of the recycled (waste) oil used shall not exceed five-tenths percent (0.5%) by weight.

- (2) The sulfur content of the No. 2 diesel fuel used shall not exceed five-tenths percent (0.50%) by weight.
- (3) The HCL emissions shall not exceed 0.0132 pounds of HCl per gallon of recycled (waste) oil used.
- (4) The recycled (waste) oil shall not contain more than 1.00% ash, 0.20% chlorine, and 0.01% Lead by weight.

(b) Single Fuel Usage Limitations:

When using only one type of fuel during a twelve (12) consecutive month period, the Permittee shall comply with the following limitations:

- (1) Recycled (waste) oil usage shall not exceed 800,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month,
- (2) No. 2 diesel fuel usage shall not exceed 125,000 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month; and
- (3) Natural gas usage shall not exceed 325 million cubic feet (MMCF) per twelve (12) consecutive month period, with compliance determined at the end of each month,

(c) Multiple Fuel Usage Limitations:

When using multiple types of fuel and/or using slag during a twelve (12) consecutive month period, the Permittee shall comply with the following limitations:

- (1) NO_x emissions from all equipment at this source shall be less than one hundred (100) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (2) VOC emissions from all equipment at this source shall be less than fifty (50) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (3) CO emissions from all equipment at this source shall be less than one hundred (100) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (4) SO₂ emissions from all equipment at this source shall be less than one hundred (100) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (5) PM₁₀ emissions from all equipment at this source shall be less than one hundred (100) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (6) PM_{2.5} emissions from all equipment at this source shall be less than one hundred (100) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (7) HAP emissions from all equipment at this source shall be less than ten (10) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

- (8) Total HAP emissions from all equipment at this source shall be less than twenty-five (25) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with these limits and the limits contained in Conditions D.1.3 and D.1.6, combined with the potential emissions from all other emission units at this source, will satisfy 326 IAC 2-8-4 (FESOP), and will render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (PSD), 326 IAC 2-3 (Emission Offset), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable. These limitations are authorized under 326 IAC 2-8-18.

D.1.5 SO₂ Emissions [326 IAC 7-1.1-2]

Pursuant to 326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations), the SO₂ emissions from the drum mixer (#5) & aggregate dryer/burner (#7) which exhaust through stack S-1 shall not exceed the following:

- (a) 1.6 lbs/MMBtu while burning residual oil (including No. 5 fuel oil, No. 6 fuel oil, and used/recycled (waste) oil),
- (b) 0.5 lbs/MMBtu while burning distillate oil (including No. 2 fuel oil, No. 4 fuel oil, and diesel fuel oil),

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

Compliance with Condition D.1.4 will also satisfy Condition D.1.5.

D.1.6 VOC Emissions [326 IAC 2-8-4][326 IAC 8-5-2]

The usage of liquid binder in the production of cold mix cutback asphalt shall be limited such that VOC emissions do not exceed twenty-one and five-tenths (21.5) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with this limit, combined with the limits contained in Conditions D.1.3, shall limit source-wide VOC to less than fifty (50) tons per twelve (12) consecutive month period and shall render 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD) not applicable.

D.1.7 VOC Emissions [326 IAC 8-5-2]

Pursuant to 326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving), the use of cutback asphalt or asphalt emulsion shall not contain more than seven percent (7%) oil distillate by volume of emulsion for any paving application except the following purposes:

- (1) penetrating prime coating
- (2) stockpile storage
- (3) application during the months of November, December, January, February and March.

D.1.8 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the drum mixer (#5) & aggregate dryer/burner (#7) and their control device, identified as baghouse #8.

Compliance Determination Requirements

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

In order to demonstrate compliance with the Conditions D.1.1, D.1.2, D.1.3, and D.1.4, the Permittee shall perform the following:

- (a) In order to demonstrate compliance with Conditions D.1.1, D.1.2, D.1.3, and D.1.4, within 180 days of publication of the new or revised condensable PM test method(s) referenced in the U. S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), signed on May 8th, 2008, the Permittee shall perform PM₁₀ and PM_{2.5} testing on the exhaust from the aggregate mixer (#5) & dryer/burner #7, utilizing methods as approved by the Commissioner.

These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM₁₀ and PM_{2.5} includes filterable and condensable PM. Testing shall be conducted in accordance with Section C- Performance Testing.

- (b) In order to demonstrate compliance with Conditions D.1.1, D.1.2, D.1.3, and D.1.4, within five (5) years from the last valid compliance demonstration, the Permittee shall perform PM testing on the exhaust from the mixer/dryer, utilizing methods as approved by the Commissioner.

This test shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

- (c) In order to demonstrate compliance with Condition D.1.3(g), within 180 days of issuance of this permit, the Permittee shall perform SO₂ testing on the exhaust from the mixer/dryer, utilizing methods as approved by the Commissioner.

This test shall be repeated at least once every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with Section C - Performance Testing.

D.1.10 PM, PM₁₀, and PM_{2.5} Control

- (a) In order to comply with Conditions D.1.1, D.1.2, D.1.3, and D.1.4, the baghouse, identified as #8, for particulate control, shall be in operation and control emissions from drum mixer (#5) & aggregate dryer/burner (#7) at all times that the mixer/dryer is in operation.
- (b) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

D.1.11 Slag and Fuel Usage Limitations

- (a) Sulfur dioxide emission calculation
In order to comply with Conditions D.1.3, D.1.4, and D.1.5, when using any aggregate mix containing slag and any combination of fuel types, the Permittee shall limit slag and fuel usage according to the following formulas:

$$\text{SO}_2 \text{ Emissions (tons/month)} = (73.5 X + 7.85 Y + 0.6 Z + 0.74 W)/(2000 \text{ lbs/ton})$$

Where

- X = Monthly Recycled (waste) Oil Usage in kgal/month
- Y = Monthly No. 2 Low-sulfur Diesel Fuel Usage in kgal/month
- Z = Monthly Natural Gas Usage in MMCF/month
- W = Monthly Slag Usage in tons/month

(b) Hydrogen chloride emission calculation

In order to comply with Condition D.1.4, when using recycled (waste) oil, the Permittee shall limit fuel usage according to the following formula:

$$\text{HCl} = \frac{U*(0.0396)}{(2000 \text{ lbs/ ton})}$$

where:

U = gallons of recycled (waste) oil

(c) Nitrogen oxides emission calculation

In order to comply with Condition D.1.4, when combusting any fuel, the Permittee shall limit fuel usage according to the following formula:

$$\text{NOx Emissions (tons/month)} = (19 X + 24 Y + 190 Z)/(2000 \text{ lb/ton})$$

Where

- X = Monthly Recycled (waste) Oil Usage in kgal/month
- Y = Monthly No. 2 Low-sulfur Diesel Fuel Usage in kgal/month
- Z = Monthly Natural Gas Usage in MMCF/month

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

(a) Compliance with the slag limitations established in Condition D.1.3(h) shall be determined utilizing one of the following options:

- (1) Providing vendor analysis of all slag delivered, if accompanied by a vendor certification; or
- (2) Analyzing a sample of the slag delivery to determine the sulfur content of the 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.

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.

(b) Compliance with the fuel limitations established in Conditions D.1.3, D.1.4, and D.1.5 shall be determined utilizing one of the following options. Pursuant to 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements), compliance shall be demonstrated on a thirty (30) day calendar-month average.

- (1) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million British thermal units (MMBtu) heat input when burning distillate fuel oil and 1.6 pounds per MMBtu when burning residual oil by:

- (A) Providing vendor analysis of all fuel delivered, if accompanied by a vendor certification; or
- (B) Analyzing the fuel sample to determine the sulfur content of the fuel via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (i) Fuel samples may be collected from the fuel storage tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (ii) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (2) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 100 MMBtu/hr burner (#7), using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

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

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

In order to comply with Condition D.1.4, the Permittee shall demonstrate that the chlorine content of the fuel used in the fuel combustion equipment does not exceed two-tenths of a percent (0.2%) by weight, when combusting recycled (waste) oil, by providing a vendor analysis of each fuel delivery accompanied by a vendor certification.

D.1.14 Volatile Organic Compounds (VOC)

The Permittee shall determine compliance with the VOC emissions limitation in Conditions D.1.6 and D.1.7 based on the following:

- (a) The VOC emissions from the use liquid binders in cold mix asphalt production shall be less than or equal to twenty-one and five-tenths (21.5) tons per twelve (12) consecutive month period, with compliance determined at the end of each month. This shall be achieved by limiting the total VOC usage of any selected binder to less than or equal to the stated limit for that binder during the last twelve (12) consecutive month period. When more than one binder is used, the formula in (a)(6) must be applied so that the total VOC emitted does not exceed twenty-one and five-tenths (21.5) tons per twelve (12) consecutive month period.

The total VOC usage for each liquid binder used in cold mix asphalt production shall be limited as follows:

- (1) Cutback asphalt rapid cure liquid binder usage shall not exceed 22.6 tons of VOC solvent per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (A) 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) Cutback asphalt medium cure liquid binder usage shall not exceed 30.7 tons of VOC solvent per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (A) 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) Cutback asphalt slow cure liquid binder usage shall not exceed 86.0 tons of VOC solvent per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (A) 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 liquid binder usage shall not exceed 46.3 tons of VOC solvent per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (A) 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 liquid binder shall not exceed 860 tons of VOC solvent per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (A) 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
- (6) The VOC solvent allotments in c(1) through c(5) above shall be adjusted when more than one type of binder is used and the monthly VOC emissions for each type of binder shall be determined by the following formula:

$$\text{VOC Emissions (tons/month)} = \frac{\text{VOC solvent contained in binder (tons/month)}}{\text{Adjustment ratio}} \times 95\%$$

Type of Binders	Adjustment Ratio
Cutback Asphalt Rapid Cure	1.05
Cutback Asphalt Medium Cure	1.43
Cutback Asphalt Slow Cure	4.00
Emulsified Asphalt	2.16
Other Asphalt	40.0

Compliance with these limits, combined with the VOC emissions from the combustion of recycled (waste) oil, will limit the VOC emissions from the entire source to less than fifty (50) tons per twelve (12) consecutive month period.

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

D.1.15 Visible Emissions Notations

- (a) Visible emission notations of the conveyers, material transfer points, and the mixer/dryer stack exhaust (S-1) shall be performed at least once per day during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emission is observed, the Permittee shall take reasonable response steps in accordance with Section C- Response to Excursions and Exceedances. Failure to take response steps in accordance with Section C – Response to Excursions and Exceedances shall be considered a deviation from this permit.

D.1.16 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouse used in conjunction with the mixer/dryer, at least once per day when the mixing/drying process is in operation and venting to the atmosphere. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 8.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions and Exceedances. A pressure reading that is outside of the above mentioned range is not a deviation from this permit, however, failure to take response steps in accordance with Section C – Response to Excursions and Exceedances, shall be considered a deviation from this permit.

The instrument used for determining the pressure shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.17 Broken or Failed Bag Detection

In the event that bag failure has been observed:

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

Bag failure can be indicated by a significant drop in the baghouses' 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 Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.18 Cutback Asphalt Production Rate [326 IAC 2-8-4][326 IAC 2-3]

To document compliance with Conditions D.1.6 and D.1.7, the Permittee shall maintain daily records at the source of the following values:

- (a) Amount of binder used in the production of cold mix cutback asphalt; and
- (b) Average VOC content (wt%) of the binder.

D.1.19 Record Keeping Requirements [326 IAC 2-8-4][326 IAC 2-2][326 IAC 2-3][326 IAC 7-1.1-2] [326 IAC 7-2-1]

- (a) To document compliance with Conditions D.1.1, D.1.2, D.1.3, and D.1.11 the Permittee shall maintain records of the amount of asphalt produced per month.
- (b) To document compliance with Conditions D.1.3(b) the Permittee shall maintain records of the amount of slag used per month. For the annual slag usage limit, the compliance determination period is the most recent twelve (12) consecutive month period.
- (c) To document compliance with Condition D.1.3(g), the Permittee shall maintain records in accordance with (1) through (6) below. Records maintained for (1) through (6) shall be taken daily and shall be complete and sufficient to establish compliance with the SO₂ emission limits established in Condition D.1.3(g). For the sulfur content limit, the compliance determination period is each calendar month.

- (1) Calendar dates covered in the compliance determination period;
- (2) Actual slag usage, sulfur content in weight percent (wt%) and the equivalent sulfur dioxide emission rates for all slag used at the source per month;
- (3) A certification, signed by the owner or operator, that the records of the slag supplier certifications represent all of the slag used during the period; and

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

- (4) Slag supplier certifications;
- (5) The name of the slag supplier; and
- (6) A statement from the slag supplier that certifies the sulfur content of the slag.

- (d) To document compliance with Conditions D.1.3, D.1.4, and D.1.5, the Permittee shall maintain records in accordance with (1) through (7) below. Records maintained for (1) through (7) shall be taken daily and shall be complete and sufficient to establish compliance with the SO₂, HCl and NO_x emission limits established in Conditions D.1.3, D.1.4, and D.1.5. 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;

- (3) Actual recycled (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

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

- (5) Fuel supplier certifications;
 - (6) The name of the fuel supplier; and
 - (7) A statement from the fuel supplier that certifies the sulfur content of the No. 2 diesel fuel and the recycled (waste) oil, and the chlorine, ash, and lead content of recycled (waste) oil.
- (e) To document compliance with Conditions D.1.4 and D.1.11 when combusting more than one fuel per twelve (12) consecutive month period in the mixer/dryer and all other combustion equipment, the Permittee shall maintain records of actual fuel usage and equivalent sulfur dioxide, hydrogen chloride, and nitrogen oxides emission rates for each fuel used at the source per month.
 - (f) The Permittee shall maintain records sufficient to verify compliance with the procedures specified in Condition D.1.11 and D.1.12. Records shall be maintained for a period of five (5) years and shall be made available upon request by IDEM, OAQ.
 - (g) To document compliance with Condition D.1.15, the Permittee shall maintain records of visible emission notations of the conveyers, material transfer points, and the mixer/dryer stack exhaust (S-1) at least once per day when the asphalt plant is operating. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the plant did not operate that day).
 - (h) To document compliance with Condition D.1.16, the Permittee shall maintain records of the pressure drop daily. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g., the mixer/dryer did not operate that day).
 - (i) The Permittee shall maintain records of all recording/monitoring data, calculations, and support information in accordance with Section C - General Record Keeping Requirements, of this permit. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

D.1.20 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1 - D.1.7, shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.2

FACILITY OPERATION CONDITIONS

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

- (f) Degreasing operations using cleaners and solvents having a vapor pressure equal to or less than 15mm Hg or 0.3 psia measured at one hundred degrees Fahrenheit (100°F) or having a vapor pressure equal to or less than five (5) mm Hg or one-tenth (0.1) psia measured at sixty-eight degrees Fahrenheit (68°F). The usage of all cleaners and solvents combined does not exceed one hundred forty-five (145) gallons per twelve (12) consecutive month period, and is not subject to 326 IAC 20-6.

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

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

D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

D.2.2 Volatile Organic Compounds (VOC) [326 IAC 8-3-5]

(a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:

- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) The solvent volatility is greater than fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch measured at one hundred degrees Fahrenheit (100°F);
 - (B) The solvent is agitated; or
 - (C) The solvent is heated.
- (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than thirty-two (32) millimeters of mercury or six-tenths (0.6)

pounds per square inch (psi), measured at one hundred degrees Fahrenheit (100°F), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch (psi) measured at one hundred degrees Fahrenheit (100°F), or if the solvent is heated to a temperature greater than one hundred twenty degrees Fahrenheit (120°F):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), for cold cleaning facility construction of which commenced after July 1, 1990, the Permittee shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-6.1-5(a)(1)]: Volatile Liquid Storage Vessels

- (a) One (1) portable drum hot-mix asphalt plant, constructed in 2004, consisting the following:
- ...
- (5) Three (3) heated volatile liquid storage vessels, collectively identified as #10, #11, and #14, containing liquid asphalt cement, with #10 and #11 constructed in 2004, each with maximum capacity of 20,000, and with #14 constructed in 2006, with a maximum capacity of 30,000 gallons. These three vessels are heated to a maximum of 290°F, have no emission controls and exhaust through vents V-3, V-4, and V-6.
- ...
- (e) Two (2) petroleum fuel, other than gasoline, dispensing facilities, consisting of:
- (1) One (1) volatile liquid storage vessel, identified as DT1, having a maximum storage capacity of 800 gallons, constructed in 2004, with no emission controls and exhausting to the atmosphere. This tank dispenses less than or equal to 10,000 gallons of No. 2 diesel fuel per year to the front-loader.
- (2) One (1) volatile liquid storage vessel, identified as #12, constructed in 2004, having a maximum storage capacity of 20,000 gallons, with no emission controls and exhausting through vent V-5. This tank has a peak usage rate of 560 gal/hr, and dispenses less than or equal to 300,000 gallons of recycled (waste) oil per year.

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

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.3.1 Volatile Organic Compound Rules [326 IAC 8-9]

Pursuant to 326 IAC 8-9-1 (Volatile Organic Liquid Storage Vessels), stationary vessels, identified as #10, #11, #12, #14, and DT1, used to store volatile organic liquid, with a capacity of less than thirty-nine thousand (39,000) gallons are subject to the reporting and record keeping provisions of section 8-9-6(a) & (6)(b) and are exempt from all other provisions of this rule.

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

D.3.2 Record Keeping Requirements

- (a) To document compliance with Condition D.3.1 the Permittee, as the owner or operator of the organic liquid storage vessels identified as #10, #11, #12, #14, and DT1, shall maintain the records required by Condition D.3.2(b) for the life of the vessel.
- (b) The owner or operator of the organic liquid storage vessels, identified as #10, #11, #12, #14, and DT1, shall maintain a record and submit to the department a report containing the following information for each vessel:
- (1) The vessel identification number.
- (2) The vessel dimensions.
- (3) The vessel capacity.

- (4) A description of the emission control equipment for each vessel.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.
- (d) Records necessary to demonstrate compliance shall be available within thirty (30) days of the end of each compliance period.

SECTION E.1 NEW SOURCE PERFORMANCE STANDARDS (NSPS) for Hot Mix Asphalt Facilities

Affected Source Description [40 CFR 60.90]:

(a) One (1) portable drum hot-mix asphalt plant, constructed in 2004, consisting the following:

- (1) One (1) drum mixer, identified as #5, with a maximum capacity of 400 tons/hr, and one (1) aggregate dryer/burner, identified as #7, which has a maximum heat input rate of 100 MMBtu/hr, using slag in the aggregate mix, using recycled (waste) oil as the primary fuel, controlled by a baghouse, identified as #8, and exhausting through stack S-1. The backup fuels are Natural gas and No. 2 fuel oil.

Under NSPS Subpart I, the drum mixer (#5) & aggregate dryer/burner (#7) are considered an affected facility.

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

NSPS 40 CFR Part 60 Subpart I Requirements: Hot Mix Asphalt Facilities

E.1.1 General Provisions Relating to NSPS [326 IAC 12][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, except as otherwise specified in 40 CFR 60, Subpart I.

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

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

E.1.2 NSPS Subpart I: Affected Facilities [40 CFR Part 60, Subpart I] [326 IAC 12-1]

Pursuant to 40 CFR 60.90(a), for the purposes of this subpart, a hot mix asphalt facility is comprised only of any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler, systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems.

At this source, the affected facilities associated with emission control systems to which the provisions of this subpart apply are:

The drum mixer, identified as #5
The aggregate dryer/burner, identified as #7

E.1.3 NSPS Subpart I: Applicable Provisions [40 CFR Part 60, Subpart I] [326 IAC 12]

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

The affected sources at this location are subject to the following portions of 40 CFR 60, Subpart I:

- 40 CFR 60.90
- 40 CFR 60.91
- 40 CFR 60.92
- 40 CFR 60.93

SECTION E.2 NEW SOURCE PERFORMANCE STANDARDS (NSPS)

Affected Source Description [40 CFR 60.670]:

- (b) One Recycled Asphalt Pavement (RAP) operation, constructed in 2004, consisting of the following:
- (1) One (1) RAP crushing and screening process, collectively identified as #6a, constructed in 2004, with a maximum capacity to process 300 tons/hr, with no emission controls and exhausting to the atmosphere.
- Under NSPS Subpart OOO, the RAP crusher, identified as #6a, is considered an affected source as part of an existing hot mix asphalt facility.

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

NSPS 40 CFR Part 60 Subpart OOO Requirements: Nonmetallic Mineral Processing Plants

E.2.1 General Provisions Relating to NSPS [326 IAC 12][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, except as otherwise specified in 40 CFR 60, Subpart OOO.
- (b) Pursuant to 40 CFR 60.10, the Permittee shall submit all required notifications and reports to:

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

E.2.2 NSPS Subpart OOO: Affected Facilities [40 CFR Part 60, Subpart OOO] [326 IAC 12-1]

Pursuant to 40 CFR 60.670, the provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants that commence construction, modification, or reconstruction after August 31, 1983: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin are subject to the provisions of this subpart.

At this source, the affected facilities to which the provisions of this subpart apply are:

The Recycled Asphalt Pavement (RAP) crusher, identified as #6a

E.2.3 NSPS Subpart OOO: Applicable Provisions [40 CFR Part 60, Subpart OOO] [326 IAC 12]

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

The affected facilities at this location are subject to the following portions of 40 CFR 60, Subpart 000:

- 40 CFR 60.670 (a)(1), (d), (e), (f)
- 40 CFR 60.671
- 40 CFR 60.672 (b)
- 40 CFR 60.673
- 40 CFR 60.675 (c)(1)(i)-(ii), (e)(1-3), (i)
- 40 CFR 60.676 (a)(1),(f), (h), (i)(2), (j), (k)
- Table 1, Table 3

E.2.4 One-Time Deadlines for Nonmetallic Mineral Processing Plants [40 CFR Part 60, Subpart 000]
[326 IAC 12-1]

The Permittee shall comply with the following notification requirements by the dates listed:

Requirement	Rule Cite	Affected Facility	Deadline
Submit Initial Notification	40 CFR 63.672(a)	RAP crusher (#6a)	within 60 days of start-up
Conduct Initial Compliance Demonstrations	40 CFR 63.672(b)	RAP crusher (#6a)	within 60 days of start-up
Conduct Repeat Compliance Demonstration	40 CFR 63.11 40 CFR 63.675	RAP crusher (#6a)	within 5 years of previous test

**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.
Initial Source Address: 3221 Bertholet Boulevard, Valparaiso, Indiana 46383
Mailing Address: 24358 State Road 23, South Bend, Indiana 46614
FESOP Permit No.: F127-27125-05258

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Date:

**Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865**

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) EMERGENCY OCCURRENCE REPORT

Source Name: Walsh & Kelly, Inc.
Initial Source Address: 3221 Bertholet Boulevard, Valparaiso, Indiana 46383
Mailing Address: 24358 State Road 23, South Bend, Indiana 46614
FESOP Permit No.: F127-27125-05258

This form consists of 2 pages

Page 1 of 2

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

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

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

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

Page 2 of 2

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

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

FESOP Quarterly Report

Source Name: Walsh & Kelly, Inc.
Initial Source Address: 3221 Bertholet Boulevard, Valparaiso, Indiana 46383
Mailing Address: 24358 State Road 23, South Bend, Indiana 46614
FESOP Permit No.: F127-27125-05258
Facility: Entire Asphalt Plant
Parameter: Asphalt Production
Limit: Less than 1,500,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR: _____

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

- No deviation occurred in this month.
- Deviation/s occurred in this month.
Deviation has been reported on _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

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

FESOP Quarterly Report

Source Name: Walsh & Kelly, Inc.
Initial Source Address: 3221 Bertholet Boulevard, Valparaiso, Indiana 46383
Mailing Address: 24358 State Road 23, South Bend, Indiana 46614
FESOP Permit No.: F127-27125-05258
Facility: Entire Asphalt Plant
Parameter: Slag Usage
Limit: This source shall use slag containing aggregate mixes with less than or equal to 1.5 % sulfur by weight, and shall use less than 260,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month..

YEAR: _____

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

- No deviation occurred in this month.
- Deviation/s occurred in this month.
Deviation has been reported on _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

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

FESOP Quarterly Report

Source Name: Walsh & Kelly, Inc.
 Initial Source Address: 3221 Bertholet Boulevard, Valparaiso, Indiana 46383
 Mailing Address: 24358 State Road 23, South Bend, Indiana 46614
 FESOP Permit No.: F127-27125-05258
 Facility: drum mixer (#5) & aggregate dryer/burner (#7)
 Parameter: SO₂ Emissions
 Limit: Less than 100 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

SO₂ Emissions (tons/month) = (73.5 X + 7.85 Y + 0.6 Z + 0.74 W)/(2000 lbs/ton)

Where

- X = Monthly Recycled (waste) Oil Usage in kgal/month
- Y = Monthly No. 2 Low-sulfur Diesel Fuel Usage in kgal/month
- Z = Monthly Natural Gas Usage in MMCF/month
- W = Monthly Slag Usage in tons/month

YEAR: _____

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

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

Submitted by: _____

Title / Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

FESOP Quarterly Report

Source Name: Walsh & Kelly, Inc.
 Initial Source Address: 3221 Bertholet Boulevard, Valparaiso, Indiana 46383
 Mailing Address: 24358 State Road 23, South Bend, Indiana 46614
 FESOP No.: F127-27125-05258
 Facility: All combustion units
 Parameter: NO_x Emissions
 Limit: Less than 100 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

NO_x Emissions (tons/month) = (19 X + 24 Y + 280 Z)/2000

Where X = Monthly Recycled (waste) Oil Usage in kgal/month
 Y = Monthly No. 2 Low-sulfur Diesel Fuel Usage in kgal/month
 Z = Monthly Natural Gas Usage in MMCF/month

YEAR: _____

Month	NO _x Emissions 1	NO _x Emissions 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

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

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

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

FESOP Quarterly Report

Source Name: Walsh & Kelly, Inc.
 Initial Source Address: 3221 Bertholet Boulevard, Valparaiso, Indiana 46383
 Mailing Address: 24358 State Road 23, South Bend, Indiana 46614
 FESOP No.: F127-27125-05258
 Facility: Entire Asphalt Plant
 Parameter: VOC Usage in Cold Mix Production
 Limit: Less than 21.5 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

Emissions of VOC (tons) = Amount of solvent Used (tons) x %VOC in binder.

YEAR: _____

Month	VOC Emissions 1		VOC Emissions 2	Column 1 + Column 2
	This Month		Previous 11 Months	12 Month Total
Month 1	%VOC	Usage		
	Emissions			
Month 2	%VOC	Usage		
	Emissions			
Month 3	%VOC	Usage		
	Emissions			

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

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

**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.
Initial Source Address: 3221 Bertholet Boulevard, Valparaiso, Indiana 46383
Mailing Address: 24358 State Road 23, South Bend, Indiana 46614
FESOP Permit No.: F127-27125-05258

Months: _____ to _____ Year: _____

Page 1 of 2

<p>This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, 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 ANo deviations occurred this reporting period@.</p>	
<input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
<input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
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Probable Cause of Deviation:	
Response Steps Taken:	

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Attachment A

40 CFR 60 Subpart I

STANDARDS OF PERFORMANCE FOR HOT MIX ASPHALT FACILITIES

in support of a

FESOP Renewal
Pages 1 - 2

Source Name:	Walsh & Kelly, Inc.
Initial Source Location:	3221 Bertholet Boulevard, Valparaiso, Indiana 46383
County:	Porter
SIC Code:	2951
Permit Renewal No.:	F127-27125-05258
Permit Reviewer:	Sandra Carr

TITLE 40: PROTECTION OF ENVIRONMENT
PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES
SUBPART I—STANDARDS OF PERFORMANCE FOR HOT MIX ASPHALT FACILITIES

e-CFR Data is current as of May 18, 2009

§ 60.90 Applicability and designation of affected facility.

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

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

§ 60.91 Definitions.

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

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

[51 FR 12325, Apr. 10, 1986]

§ 60.92 Standard for particulate matter.

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

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

§ 60.93 Test methods and procedures.

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

[54 FR 6667, Feb. 14, 1989]

Attachment B

40 CFR 60 Subpart OOO

STANDARDS OF PERFORMANCE FOR

NONMETALLIC MINERAL PROCESSING PLANTS

in support of a

FESOP Renewal

Pages 1 - 16

Source Name:	Walsh & Kelly, Inc.
Initial Source Location:	3221 Bertholet Boulevard, Valparaiso, Indiana 46383
County:	Porter
SIC Code:	2951
Permit Renewal No.:	F127-27125-05258
Permit Reviewer:	Sandra Carr

Standards of Performance for Nonmetallic Mineral Processing Plants

Title 40: PROTECTION OF ENVIRONMENT
Part 60: STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES
Subpart: OOO

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

e-CFR Data is current as of May 5, 2009

§ 60.670 Applicability and designation of affected facility.

- (a) (1) Except as provided in paragraphs (a)(2), (b), (c), and (d) of this section, the provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin are subject to the provisions of this subpart.
- (2) The provisions of this subpart do not apply to the following operations: All facilities located in underground mines; plants without crushers or grinding mills above ground; and wet material processing operations (as defined in §60.671).
- (b) An affected facility that is subject to the provisions of subparts F or I of this part or that follows in the plant process any facility subject to the provisions of subparts F or I of this part is not subject to the provisions of this subpart.
- (c) Facilities at the following plants are not subject to the provisions of this subpart:
- (1) Fixed sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 23 megagrams per hour (25 tons per hour) or less;
 - (2) Portable sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 136 megagrams per hour (150 tons per hour) or less; and
 - (3) Common clay plants and pumice plants with capacities, as defined in §60.671, of 9 megagrams per hour (10 tons per hour) or less.
- (d) (1) When an existing facility is replaced by a piece of equipment of equal or smaller size, as defined in §60.671, having the same function as the existing facility, and there is no increase in the amount of emissions, the new facility is exempt from the provisions of §§60.672, 60.674, and 60.675 except as provided for in paragraph (d)(3) of this section.
- (2) An owner or operator complying with paragraph (d)(1) of this section shall submit the information required in §60.676(a).
- (3) An owner or operator replacing all existing facilities in a production line with new facilities does not qualify for the exemption described in paragraph (d)(1) of this section and must comply with the provisions of §§60.672, 60.674 and 60.675.
- (e) An affected facility under paragraph (a) of this section that commences construction, modification, or reconstruction after August 31, 1983, is subject to the requirements of this part.

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

§ 60.671 Definitions.

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

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

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

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

Building means any frame structure with a roof.

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

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

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

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

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

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

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

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

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

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

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

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

- (1) Crushed and Broken Stone, including Limestone, Dolomite, Granite, Traprock, Sandstone, Quartz, Quartzite, Marl, Marble, Slate, Shale, Oil Shale, and Shell.
- (2) Sand and Gravel.
- (3) Clay including Kaolin, Fireclay, Bentonite, Fuller's Earth, Ball Clay, and Common Clay.
- (4) Rock Salt.
- (5) Gypsum (natural or synthetic).
- (6) Sodium Compounds, including Sodium Carbonate, Sodium Chloride, and Sodium Sulfate.
- (7) Pumice.
- (8) Gilsonite.
- (9) Talc and Pyrophyllite.
- (10) Boron, including Borax, Kernite, and Colemanite.
- (11) Barite.
- (12) Fluorospar.
- (13) Feldspar.
- (14) Diatomite.
- (15) Perlite.
- (16) Vermiculite.
- (17) Mica.
- (18) Kyanite, including Andalusite, Sillimanite, Topaz, and Dumortierite.

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

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

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

Saturated material means, for purposes of this subpart, mineral material with sufficient surface moisture such that particulate matter emissions are not generated from processing of the material through screening operations, bucket

elevators and belt conveyors. Material that is wetted solely by wet suppression systems is not considered to be "saturated" for purposes of this definition.

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

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

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

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

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

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

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

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

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

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

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

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

§ 60.672 Standard for particulate matter (PM).

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

- (b) Affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.11. The requirements in Table 3 of this subpart apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems.
- (c) [Reserved]
- (d) Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section.
- (e) If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emission limits in paragraphs (a) and (b) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits:
 - (1) Fugitive emissions from the building openings (except for vents as defined in §60.671) must not exceed 7 percent opacity; and
 - (2) Vents (as defined in §60.671) in the building must meet the applicable stack emission limits and compliance requirements in Table 2 of this subpart.
- (f) Any baghouse that controls emissions from only an individual, enclosed storage bin is exempt from the applicable stack PM concentration limit (and associated performance testing) in Table 2 of this subpart but must meet the applicable stack opacity limit and compliance requirements in Table 2 of this subpart. This exemption from the stack PM concentration limit does not apply for multiple storage bins with combined stack emissions.

§ 60.673 Reconstruction.

- (a) The cost of replacement of ore-contact surfaces on processing equipment shall not be considered in calculating either the "fixed capital cost of the new components" or the "*fixed capital cost that would be required to construct a comparable new facility*" under §60.15. Ore-contact surfaces are crushing surfaces; screen meshes, bars, and plates; conveyor belts; and elevator buckets.
- (b) Under §60.15, the "*fixed capital cost of the new components*" includes the fixed capital cost of all depreciable components (except components specified in paragraph (a) of this section) which are or will be replaced pursuant to all continuous programs of component replacement commenced within any 2-year period following August 31, 1983.

§ 60.674 Monitoring of operations.

- (a) The owner or operator of any affected facility subject to the provisions of this subpart which uses a wet scrubber to control emissions shall install, calibrate, maintain and operate the following monitoring devices:
 - (1) A device for the continuous measurement of the pressure loss of the gas stream through the scrubber. The monitoring device must be certified by the manufacturer to be accurate within ± 250 Pascals ± 1 inch water gauge pressure and must be calibrated on an annual basis in accordance with manufacturer's instructions.
 - (2) A device for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within ± 5 percent of design scrubbing liquid flow rate and must be calibrated on an annual basis in accordance with manufacturer's instructions.
- (b) The owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expeditiously as practical if the owner or operator finds that water is not flowing properly during an inspection of

the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under §60.676(b).

- (1) If an affected facility relies on water carryover from upstream water sprays to control fugitive emissions, then that affected facility is exempt from the 5-year repeat testing requirement specified in Table 3 of this subpart provided that the affected facility meets the criteria in paragraphs (b)(1)(i) and (ii) of this section:
 - (i) The owner or operator of the affected facility conducts periodic inspections of the upstream water spray(s) that are responsible for controlling fugitive emissions from the affected facility. These inspections are conducted according to paragraph (b) of this section and §60.676(b), and
 - (ii) The owner or operator of the affected facility designates which upstream water spray(s) will be periodically inspected at the time of the initial performance test required under §60.11 of this part and §60.675 of this subpart.
- (2) If an affected facility that routinely uses wet suppression water sprays ceases operation of the water sprays or is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under §60.676(b) must specify the control mechanism being used instead of the water sprays.
- (c) Except as specified in paragraph (d) or (e) of this section, the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions must conduct quarterly 30-minute visible emissions inspections using EPA Method 22 (40 CFR part 60, Appendix A-7). The Method 22 (40 CFR part 60, Appendix A-7) test shall be conducted while the baghouse is operating. The test is successful if no visible emissions are observed. If any visible emissions are observed, the owner or operator of the affected facility must initiate corrective action within 24 hours to return the baghouse to normal operation. The owner or operator must record each Method 22 (40 CFR part 60, Appendix A-7) test, including the date and any corrective actions taken, in the logbook required under §60.676(b). The owner or operator of the affected facility may establish a different baghouse-specific success level for the visible emissions test (other than no visible emissions) by conducting a PM performance test according to §60.675(b) simultaneously with a Method 22 (40 CFR part 60, Appendix A-7) to determine what constitutes normal visible emissions from that affected facility's baghouse when it is in compliance with the applicable PM concentration limit in Table 2 of this subpart. The revised visible emissions success level must be incorporated into the permit for the affected facility.
- (d) As an alternative to the periodic Method 22 (40 CFR part 60, Appendix A-7) visible emissions inspections specified in paragraph (c) of this section, the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions may use a bag leak detection system. The owner or operator must install, operate, and maintain the bag leak detection system according to paragraphs (d)(1) through (3) of this section.
 - (1) Each bag leak detection system must meet the specifications and requirements in paragraphs (d)(1)(i) through (viii) of this section.
 - (i) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 1 milligram per dry standard cubic meter (0.00044 grains per actual cubic foot) or less.
 - (ii) The bag leak detection system sensor must provide output of relative PM loadings. The owner or operator shall continuously record the output from the bag leak detection system using electronic or other means (e.g. , using a strip chart recorder or a data logger).
 - (iii) The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to paragraph (d)(1)(iv) of this section, and the alarm must be located such that it can be heard by the appropriate plant personnel.

- (iv) In the initial adjustment of the bag leak detection system, the owner or operator must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time.
 - (v) Following initial adjustment, the owner or operator shall not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority except as provided in paragraph (d)(1)(vi) of this section.
 - (vi) Once per quarter, the owner or operator may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by paragraph (d)(2) of this section.
 - (vii) The owner or operator must install the bag leak detection sensor downstream of the fabric filter.
 - (viii) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.
- (2) The owner or operator of the affected facility must develop and submit to the Administrator or delegated authority for approval of a site-specific monitoring plan for each bag leak detection system. The owner or operator must operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. Each monitoring plan must describe the items in paragraphs (d)(2)(i) through (vi) of this section.
- (i) Installation of the bag leak detection system;
 - (ii) Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point will be established;
 - (iii) Operation of the bag leak detection system, including quality assurance procedures;
 - (iv) How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list;
 - (v) How the bag leak detection system output will be recorded and stored; and
 - (vi) Corrective action procedures as specified in paragraph (d)(3) of this section. In approving the site-specific monitoring plan, the Administrator or delegated authority may allow owners and operators more than 3 hours to alleviate a specific condition that causes an alarm if the owner or operator identifies in the monitoring plan this specific condition as one that could lead to an alarm, adequately explains why it is not feasible to alleviate this condition within 3 hours of the time the alarm occurs, and demonstrates that the requested time will ensure alleviation of this condition as expeditiously as practicable.
- (3) For each bag leak detection system, the owner or operator must initiate procedures to determine the cause of every alarm within 1 hour of the alarm. Except as provided in paragraph (d)(2)(vi) of this section, the owner or operator must alleviate the cause of the alarm within 3 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following:
- (i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM emissions;
 - (ii) Sealing off defective bags or filter media;
 - (iii) Replacing defective bags or filter media or otherwise repairing the control device;
 - (iv) Sealing off a defective fabric filter compartment;

- (v) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system; or
 - (vi) Shutting down the process producing the PM emissions.
- (e) As an alternative to the periodic Method 22 (40 CFR part 60, Appendix A–7) visible emissions inspections specified in paragraph (c) of this section, the owner or operator of any affected facility that is subject to the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart AAAAA) may follow the continuous compliance requirements in row 1 items (i) through (iii) of Table 6 to Subpart AAAAA of 40 CFR part 63.

§ 60.675 Test methods and procedures.

- (a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendices A–1 through A–7 of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (e) of this section.
- (b) The owner or operator shall determine compliance with the PM standards in §60.672(a) as follows:
- (1) Except as specified in paragraphs (e)(3) and (4) of this section, Method 5 of Appendix A–3 of this part or Method 17 of Appendix A–6 of this part shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5 (40 CFR part 60, Appendix A–3), if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.
 - (2) Method 9 of Appendix A–4 of this part and the procedures in §60.11 shall be used to determine opacity.
- (c) (1) In determining compliance with the particulate matter standards in §60.672(b) or §60.672(e)(1), the owner or operator shall use Method 9 of Appendix A–4 of this part and the procedures in §60.11, with the following additions:
- (i) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).
 - (ii) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9 of Appendix A–4 of this part, Section 2.1) must be followed.
 - (iii) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.
- (2) (i) In determining compliance with the opacity of stack emissions from any baghouse that controls emissions only from an individual enclosed storage bin under §60.672(f) of this subpart, using Method 9 (40 CFR part 60, Appendix A–4), the duration of the Method 9 (40 CFR part 60, Appendix A–4) observations shall be 1 hour (ten 6-minute averages).
- (ii) The duration of the Method 9 (40 CFR part 60, Appendix A–4) observations may be reduced to the duration the affected facility operates (but not less than 30 minutes) for baghouses that control storage bins or enclosed truck or railcar loading stations that operate for less than 1 hour at a time.
- (3) When determining compliance with the fugitive emissions standard for any affected facility described under §60.672(b) or §60.672(e)(1) of this subpart, the duration of the Method 9 (40 CFR part 60, Appendix A–4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Table 3 of this subpart must be based on the average of the five 6-minute averages.

- (d) To demonstrate compliance with the fugitive emission limits for buildings specified in §60.672(e)(1), the owner or operator must complete the testing specified in paragraph (d)(1) and (2) of this section. Performance tests must be conducted while all affected facilities inside the building are operating.
- (1) If the building encloses any affected facility that commences construction, modification, or reconstruction on or after April 22, 2008, the owner or operator of the affected facility must conduct an initial Method 9 (40 CFR part 60, Appendix A-4) performance test according to this section and §60.11.
 - (2) If the building encloses only affected facilities that commenced construction, modification, or reconstruction before April 22, 2008, and the owner or operator has previously conducted an initial Method 22 (40 CFR part 60, Appendix A-7) performance test showing zero visible emissions, then the owner or operator has demonstrated compliance with the opacity limit in §60.672(e)(1). If the owner or operator has not conducted an initial performance test for the building before April 22, 2008, then the owner or operator must conduct an initial Method 9 (40 CFR part 60, Appendix A-4) performance test according to this section and §60.11 to show compliance with the opacity limit in §60.672(e)(1).
- (e) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:
- (1) For the method and procedure of paragraph (c) of this section, if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:
 - (i) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.
 - (ii) Separate the emissions so that the opacity of emissions from each affected facility can be read.
 - (2) A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:
 - (i) No more than three emission points may be read concurrently.
 - (ii) All three emission points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.
 - (iii) If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer must stop taking readings for the other two points and continue reading just that single point.
 - (3) Method 5I of Appendix A-3 of this part may be used to determine the PM concentration as an alternative to the methods specified in paragraph (b)(1) of this section. Method 5I (40 CFR part 60, Appendix A-3) may be useful for affected facilities that operate for less than 1 hour at a time such as (but not limited to) storage bins or enclosed truck or railcar loading stations.
 - (4) In some cases, velocities of exhaust gases from building vents may be too low to measure accurately with the type S pitot tube specified in EPA Method 2 of Appendix A-1 of this part [*i.e.*, velocity head <1.3 mm H₂O (0.05 in. H₂O)] and referred to in EPA Method 5 of Appendix A-3 of this part. For these conditions, the owner or operator may determine the average gas flow rate produced by the power fans (*e.g.*, from vendor-supplied fan curves) to the building vent. The owner or operator may calculate the average gas velocity at the building vent measurement site using Equation 1 of this section and use this average velocity in determining and maintaining isokinetic sampling rates.

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

Where:

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

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

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

- (f) To comply with §60.676(d), the owner or operator shall record the measurements as required in §60.676(c) using the monitoring devices in §60.674 (a)(1) and (2) during each particulate matter run and shall determine the averages.
- (g) For performance tests involving only Method 9 (40 CFR part 60 Appendix A–4) testing, the owner or operator may reduce the 30-day advance notification of performance test in §60.7(a)(6) and 60.8(d) to a 7-day advance notification.
- (h) [Reserved]
- (i) If the initial performance test date for an affected facility falls during a seasonal shut down (as defined in §60.671 of this subpart) of the affected facility, then with approval from the permitting authority, the owner or operator may postpone the initial performance test until no later than 60 calendar days after resuming operation of the affected facility.

§ 60.676 Reporting and recordkeeping.

- (a) Each owner or operator seeking to comply with §60.670(d) shall submit to the Administrator the following information about the existing facility being replaced and the replacement piece of equipment.
 - (1) For a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station:
 - (i) The rated capacity in megagrams or tons per hour of the existing facility being replaced and
 - (ii) The rated capacity in tons per hour of the replacement equipment.
 - (2) For a screening operation:
 - (i) The total surface area of the top screen of the existing screening operation being replaced and
 - (ii) The total surface area of the top screen of the replacement screening operation.
 - (3) For a conveyor belt:
 - (i) The width of the existing belt being replaced and
 - (ii) The width of the replacement conveyor belt.

- (4) For a storage bin:
- (i) The rated capacity in megagrams or tons of the existing storage bin being replaced and
 - (ii) The rated capacity in megagrams or tons of replacement storage bins.
- (b) (1) Owners or operators of affected facilities (as defined in §§60.670 and 60.671) for which construction, modification, or reconstruction commenced on or after April 22, 2008, must record each periodic inspection required under §60.674(b) or (c), including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Administrator upon request.
- (2) For each bag leak detection system installed and operated according to §60.674(d), the owner or operator must keep the records specified in paragraphs (b)(2)(i) through (iii) of this section.
- (i) Records of the bag leak detection system output;
 - (ii) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and
 - (iii) The date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and whether the cause of the alarm was alleviated within 3 hours of the alarm.
- (3) The owner or operator of each affected facility demonstrating compliance according to §60.674(e) by following the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart AAAAA) must maintain records of visible emissions observations required by §63.7132(a)(3) and (b) of 40 CFR part 63, subpart AAAAA.
- (c) During the initial performance test of a wet scrubber, and daily thereafter, the owner or operator shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate.
- (d) After the initial performance test of a wet scrubber, the owner or operator shall submit semiannual reports to the Administrator of occurrences when the measurements of the scrubber pressure loss and liquid flow rate decrease by more than 30 percent from the average determined during the most recent performance test.
- (e) The reports required under paragraph (d) of this section shall be postmarked within 30 days following end of the second and fourth calendar quarters.
- (f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in §60.672 of this subpart, including reports of opacity observations made using Method 9 (40 CFR part 60, Appendix A-4) to demonstrate compliance with §60.672(b), (e) and (f).
- (g) The owner or operator of any wet material processing operation that processes saturated and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. At the time of such change, this screening operation, bucket elevator, or belt conveyor becomes subject to the applicable opacity limit in §60.672(b) and the emission test requirements of §60.11.
- (h) The subpart A requirement under §60.7(a)(1) for notification of the date construction or reconstruction commenced is waived for affected facilities under this subpart.
- (i) A notification of the actual date of initial startup of each affected facility shall be submitted to the Administrator.

- (1) For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the owner or operator to the Administrator. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available.
 - (2) For portable aggregate processing plants, the notification of the actual date of initial startup shall include both the home office and the current address or location of the portable plant.
- (j) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected facilities within the State will be relieved of the obligation to comply with the reporting requirements of this section, provided that they comply with requirements established by the State.
- (k) Notifications and reports required under this subpart and under subpart A of this part to demonstrate compliance with this subpart need only to be sent to the EPA Region or the State which has been delegated authority according to §60.4(b).

Table 1 to Subpart OOO—Exceptions to Applicability of Subpart A to Subpart OOO

Table 1 to Subpart OOO—Exceptions to Applicability of Subpart A to Subpart OOO

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

Table 2 to Subpart OOO—Stack Emission Limits for Affected Facilities With Capture Systems

Table 2 to Subpart OOO—Stack Emission Limits for Affected Facilities With Capture Systems

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

^aExceptions to the PM limit apply for individual enclosed storage bins and other equipment. See §60.672(d) through (f).

^bThe stack opacity limit and associated opacity testing requirements do not apply for affected facilities using wet scrubbers.

Table 3 to Subpart OOO—Fugitive Emission Limits

Table 3 to Subpart OOO—Fugitive Emission Limits

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

<http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=a40fb3f88784869fc8d6230a38ee7342&rgn=div6&view=text&node=40:6.0.1.1.1.80&idno=40>

Attachment C
Fugitive Dust Control Plan
for FESOP Renewal No.: 127-27125-05258
Walsh & Kelly, Inc.

- (a) Fugitive particulate matter emissions from paved roads, unpaved roads, and parking lots shall be controlled by one or more of the following methods:

Paved roads and parking lots:

- (1) power brooming while wet either from rain or application of water on an as needed basis.

Unpaved roads and parking lots:

- (1) paving with asphalt;
- (2) treating with emulsified asphalt on an as needed basis;
- (3) treating with water on an as needed basis; or
- (4) double chip and seal the road surface and maintained on an as needed basis.

- (b) Fugitive particulate matter emissions from aggregate stockpiles shall be controlled by one or more of the following methods on an as needed basis:

- (1) maintaining minimum size and number of stockpiles of aggregate;
- (2) treating around the stockpile area with emulsified asphalt;
- (3) treating around the stockpile area with water; or
- (4) treating the stockpiles with water.

- (c) Fugitive particulate matter emissions from outdoor conveying of aggregates shall be controlled by applying water at the feed and the intermediate points.

- (d) Fugitive particulate matter emissions from the transfer of aggregates shall be controlled by one of the following methods:

- (1) minimize the vehicular distance between transfer points;
- (2) enclose the transfer points; or
- (3) apply water on transfer points on an as needed basis.

- (e) Fugitive particulate matter emissions from transportation of aggregate by truck, front end loader, etc. shall be controlled by one of the following methods:

- (1) tarping the aggregate hauling vehicles;
- (2) maintain vehicle bodies in condition to prevent leakage;
- (3) spray the aggregates with water; or
- (4) maintain a 10 mph speed limit in the yard.

- (f) Fugitive particulate matter emissions from the loading and unloading of aggregate shall be controlled by one of the following methods:

- (1) reduce free fall distance to a minimum;
- (2) reduce the rate of discharge of the aggregate; or
- (3) spray the aggregate with water on an as needed basis.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a
Federally Enforceable State Operating Permit Renewal

Source Background and Description

Source Name:	Walsh & Kelly, Inc.
Curent Source Location:	3221 Bertholet Boulevard, Valparaiso, Indiana 46383
County:	Porter
SIC Code:	2951
Permit Renewal No.:	127-27125-05258
Permit Reviewer:	Sandra Carr

The Office of Air Quality (OAQ) has reviewed the permit renewal application from Walsh & Kelly, Inc. relating to the operation of a portable drum hot-mix asphalt plant that uses slag in their aggregate mix.

History

On November 7, 2008, Walsh & Kelly, Inc. submitted an application to the OAQ requesting to renew its operating permit. Walsh & Kelly, Inc. was issued a FESOP on August 6, 2004. In order to continue to maintain FESOP status in the future and to be allowed to operate in all counties except Lake, the source requests to limit their total emissions to less than one hundred (100) tons/yr for PM₁₀, PM_{2.5}, SO₂, NO_x, and CO, and to less than twenty-five (25) tons/yr for VOC.

There have been no new emission units added at this source since the issuance of FESOP No. 127-23594-05258 on November 12, 2006.

There have been no emission units removed from this source since the issuance of FESOP No. 127-23594-05258 on November 12, 2006.

Permitted Emission Units and Pollution Control Equipment

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

- (a) One (1) portable drum hot-mix asphalt plant, constructed in 2004, consisting the following:
 - (1) One (1) drum mixer, identified as #5, with a maximum capacity of 400 tons/hr, and one (1) aggregate dryer/burner, identified as #7, which has a maximum heat input rate of 100 MMBtu/hr, using slag in the aggregate mix, using recycled (waste) oil as the primary fuel, controlled by a baghouse, identified as #8, and exhausting through stack S-1. The backup fuels are Natural gas and No. 2 fuel oil.

Under NSPS Subpart I, the drum mixer (#5) and aggregate dryer/burner (#7) are considered an affected facility.

- (2) One (1) covered slat conveyor, identified as #3, with a maximum throughput rate of four hundred (400) tons/hr, with no emission controls, and exhausting to the atmosphere.

- (3) One (1) asphalt load-out process, identified as #LO1, with a maximum throughput rate of four hundred (400) tons/hr, with no emission controls, and exhausting to the atmosphere.
 - (4) Two (2) conveyors sending aggregate to the dryer, collectively identified as #21, with a maximum throughput rate of three hundred twenty (320) tons/hr and sixty (60) tons/hr, respectively, with no emission controls and exhausting to the atmosphere.
 - (5) Three (3) heated volatile liquid storage vessels, collectively identified as #10, #11, and #14, containing liquid asphalt cement, with #10 and #11 constructed in 2004, each with a maximum capacity of 20,000, and with #14 constructed in 2006, with a maximum capacity of 30,000 gallons. These three vessels are heated to a maximum of 290°F, have no emission controls and exhaust through vents V-3, V-4, and V-6.
 - (6) Seven (7) aggregate cold bins, collectively identified as #4, each with a maximum storage capacity of thirty (30) tons, constructed in 2004, with no emission controls and exhausting to the atmosphere.
 - (7) Three (3) asphalt binder surge bins, collectively identified as #2, each with a maximum capacity of 200 tons, constructed in 2004, with no emission controls and exhausting to the atmosphere.
- (b) One Recycled Asphalt Pavement (RAP) operation, constructed in 2004, consisting of the following:
- (1) One (1) RAP crushing and screening process, collectively identified as #6a, constructed in 2004, with a maximum capacity to process 300 tons/hr, with no emission controls and exhausting to the atmosphere.
- Under NSPS Subpart OOO, the RAP crusher, identified as #6a, is considered an affected source as part of an existing hot mix asphalt facility.
- (2) Two (2) RAP feed bins, collectively identified as #6b, constructed in 2004, with no emission controls and exhausting to the atmosphere.
- (c) One (1) natural gas-fired hot oil heater, identified as #13, with a maximum heat input capacity of two (2.0) million British thermal units per hour (MMBtu/hr) , constructed in 2004, with no emission controls and exhausting through stack S-2.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (d) Eleven (11) aggregate storage piles, identified as A1 - A11, respectively, with a total capacity of 30,500 tons, with a total throughput rate of 400 tons per hour, with no emission controls and exhausting to the atmosphere.
- (e) Two (2) petroleum fuel, other than gasoline, dispensing facilities, consisting of:
 - (1) One (1) volatile liquid storage vessel, identified as DT1, having a maximum storage capacity of 800 gallons, constructed in 2004, with no emission controls and exhausting to the atmosphere. This tank dispenses less than or equal to 10,000 gallons of No. 2 low-sulfur diesel fuel per year to the front-loader.

- (2) One (1) volatile liquid storage vessel, identified as #12, constructed in 2004, having a maximum storage capacity of 20,000 gallons, with no emission controls and exhausting through vent V-5. This tank has a peak usage rate of 560 gal/hr, and dispenses less than or equal to 300,000 gallons of recycled (waste) oil per year.
- (f) Degreasing operations using cleaners and solvents having a vapor pressure equal to or less than 15mm Hg or 0.3 psia measured at one hundred degrees Fahrenheit (100°F) or having a vapor pressure equal to or less than five (5) mm Hg or one-tenth (0.1) psia measured at sixty-eight degrees Fahrenheit (68°F). The usage of all cleaners and solvents combined does not exceed one hundred forty-five (145) gallons per twelve (12) consecutive month period, and is not subject to 326 IAC 20-6.
- (g) Closed loop heating and cooling systems.
- (h) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (i) Paved and unpaved roads and parking lots with public access.
- (j) Combustion source flame safety purging on startup.
- (k) A laboratory as defined in 326 IAC 2-7-1(21)(D)

Existing Approvals

Since the issuance of the FESOP (127-18870-05258) on August 6, 2004, the source has constructed or has been operating under the following approvals as well:

- (a) 1st Portable Source Relocation No. 127-22025-05258, issued on December 1, 2005.
- (b) 2nd Portable Source Relocation No. 127-22441-05258, issued on January 10, 2006.
- (c) 1st Administrative Amendment No. 127-22488-05258, issued on February 1, 2006.
- (d) 2nd Administrative Amendment No. 127-23594-05258, issued on October 12, 2006.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

The following terms and conditions from previous approvals have been determined no longer applicable; therefore, were not incorporated into this FESOP Renewal. The affected sections have been renumbered and the Table of Contents has been updated as necessary.

- (a) All construction conditions from all previously issued permits.

Reason not incorporated: All facilities previously permitted have already been constructed; therefore, the construction conditions are no longer necessary as part of the operating permit. Any facilities that were previously permitted but have not yet been constructed would need new pre-construction approval before beginning construction. Conditions removed include D.1.1 - D.1.4 of permit No. 127-23594-05258.

- (b) All occurrences of 326 IAC 6-1-2(a) (Nonattainment Area PM Limitations).

Reason not incorporated: This rule was applicable when permit number 127-18870-05258 was issued on August 6, 2004 but the rule was repealed August 10, 2005. As a result, Conditions D.1.4 and D.2.1 were removed and both sections were renumbered.

- (c) Baghouse Inspection Requirement (D.1.13) removed.

Reason not incorporated: Because the permit includes stack testing, visible emission notations, and parametric monitoring, IDEM has determined that baghouse inspections are redundant for determining continuing operation of a baghouse. Any necessary inspections should be performed in accordance with the preventative maintenance plan.

The following terms and conditions have been added or relocated in this FESOP Renewal:

- (d) In 2009, IDEM became aware that aggregate mixes that contain slag contribute significantly to SO₂ emissions from the mixer/dryer in asphalt plants. In conjunction with fuel limitations and in order for a source to remain compliant, the allowable weight percentage (wt%) of sulfur in slag and the allowable tonnage of slag are now limited according to the source-wide limit on SO₂ emissions. Due to this change, the source has requested that the limits for SO₂, PM₁₀, PM_{2.5}, NO_x, and CO revert to the limits required by 326 IAC 2-8-4, which is one hundred tons per year, each. The updated slag & fuel calculations have also resulted in the addition of limits for HCl and chlorine in recycled (waste) oil. These new limits and limit revisions have been incorporated into this FESOP renewal.

- (e) Conditions relating to NSPS Subpart I were relocated to Section E.1 *NSPS for Hot Mix Asphalt Facilities (40 CFR 60, Subpart I)*. The requirements of this NSPS had previously been evaluated as applicable to this portable hot-mix asphalt plant. New permit formatting guidelines suggest, for clarity, all applicable federal regulations be moved to individual sections of the permit document.

Conditions D.1.6 & D.1.7 were deleted and the rest of section D was renumbered. NSPS 40 CFR 60, Subpart I was reformatted as Section E.1 of this FESOP renewal. All previously applicable requirements of the NSPS for Hot Mix Asphalt Facilities (40 CFR 60, Subpart I) remain in effect for the affected facilities at this source.

- (f) NSPS 40 CFR Part 60 Subpart OOO was evaluated as applicable due to additional information provided by the source which described RAP crushing and screening operations.

The requirements of this NSPS which did not get incorporated into the original FESOP permit have been added in this proposed permit renewal. Since the proposed permit modification will not affect the NSPS previously determined as applicable for this source, 40 CFR 60, Subpart OOO will be incorporated into this FESOP Renewal, No.:127-27125-05258.

NSPS for Nonmetallic Mineral Processing Plants (40 CFR 60, Subpart OOO)
The provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: ..., crushers and grinding mills at hot-mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin.

NSPS 40 CFR Part 60 Subpart OOO is added as Section E.2.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A.1 and A.2 of this document for detailed emission calculations.

County Attainment Status

The source is currently located in Porter County.

Pollutant	Designation
SO ₂	Cannot be classified for the area bounded on the north by Lake Michigan; on the west by the Lake County and Porter County line; on the south by I-80 and I-90; and on the east by the LaPorte County and Porter County line. The remainder of Porter County is better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Nonattainment Subpart 2 Moderate effective June 15, 2004, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.

¹Nonattainment Severe 17 effective November 15, 1990, for the Chicago-Gary-Lake County area, including Porter County, for the 1-hour standard which was revoked effective June 15, 2005. Basic nonattainment designation effective federally April 5, 2005, for PM_{2.5}.

(Air Pollution Control Board; 326 IAC 1-4-65; filed Dec 26, 2007, 1:43 p.m.: 20080123-IR-326070308FRA)

(a) Ozone Standards

- (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, and St. Joseph as attainment for the 8-hour ozone standard.
- (3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.
- (4) 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.

(A) 1-hour ozone standard

On December 22, 2006 the United States Court of Appeals, District of Columbia issued a decision which served to partially vacate and remand the U.S. EPA's final rule for implementation of the eight-hour National Ambient Air quality Standard for ozone. *South Coast Air Quality Mgmt. Dist. v. EPA*, 472 F.3d 882 (D.C. Cir., December 22, 2006), *rehearing*

denied 2007 U.S. App. LEXIS 13748 (D.C. Cir., June 8, 2007). The U.S. EPA has instructed IDEM to issue permits in accordance with its interpretation of the *South Coast* decision as follows: Gary-Lake-Porter County was previously designated as a severe non-attainment area prior to revocation of the one-hour ozone standard, therefore, pursuant to the anti-backsliding provisions of the Clean Air Act, any new or existing source must be subject to the major source applicability cut-offs and offset ratios under the area's previous one-hour standard designation. This means that a source must achieve the Lowest Achievable Emission Rate (LAER) if it exceeds twenty-five (25) tons per year of VOC emissions and must offset any increase in VOC emissions by a decrease of 1.3 times that amount.

On January 26, 1996 in 40 CFR 52.777(i), the U.S. EPA granted a waiver of the requirements of Section 182(f) of the CAA for Lake and Porter Counties, including the lower NO_x threshold for nonattainment new source review. Therefore, VOC emissions alone are considered when evaluating the rule applicability relating to the 1-hour ozone standards. Therefore, VOC emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability for the source section.

(B) 8-hour ozone standard

VOC and NO_x emissions are considered when evaluating the rule applicability relating to the 8-hour ozone standard. Porter County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3. See the State Rule Applicability – Entire Source section.

(b) PM_{2.5}

The U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Porter County as nonattainment for PM_{2.5}. On March 7, 2005 the Indiana Attorney General's Office, on behalf of IDEM, filed a law suit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's New Source Review Rule for PM_{2.5} promulgated on May 8, 2008, and effective on July 15, 2008. Therefore, direct PM_{2.5} and SO₂ emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants

Porter County has been classified as nonattainment in Indiana for ozone and PM_{2.5}. Therefore, these emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

(d) Fugitive Emissions

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

Portable Source

- (a) **Current Location**
This is a portable source and its current location, at the time of this review for a FESOP renewal (June 2009), is in Porter County at 3221 Bertholet Boulevard, Valparaiso, Indiana 46383.
- (b) **PSD, Nonattainment New Source Review, and Emission Offset Requirements**
The emissions from this portable source were reviewed under the requirements of the 326 IAC 2-2 Prevention of Significant Deterioration (PSD) and 326 IAC 2-3 Emission Offset.

Unrestricted Potential Emissions

Appendix A.1 of this TSD reflects the unrestricted potential emissions of the source.

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM₁₀, PM_{2.5}, VOC, SO₂, CO, and NO_x is equal to or greater than one hundred (100) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7. However, the source has agreed to limit their PM₁₀, PM_{2.5}, VOC, SO₂, CO, and NO_x emissions to less than Title V levels, therefore the source will be issued a FESOP.
- (b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants are limited to less than one hundred (100) tons per year.
- (c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is limited to less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of any combination of HAP is limited to is less than twenty-five (25) tons per year.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2008 emission data submitted to the OAQ.

Pollutant	Actual Emissions (tons/year)
PM	13.03
PM ₁₀	7.63
PM _{2.5}	6.91
SO ₂	35.23
NO _x	5.83
VOC	4.13
CO	11.79
Single HAP	3.64 (hydrogen chloride)
Combined HAP	3.89

Potential to Emit After Issuance

The source has opted to remain a FESOP source. The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this FESOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit. See Appendix A.2 for the detailed calculations.

Process/Emission Unit	Potential To Emit (tons/year)								Individual HAP
	PM	PM ₁₀	PM _{2.5}	SO ₂	VOC	NO _x	CO	Total HAP	
Ducted Emissions									
Dryer Fuel Combustion (worst case)	25.60	20.45	20.45	29.40	0.89	30.88	13.65	5.91	5.28 (hydrogen chloride)
Drum Mixer/Dryer Burner (Process)	75.00	86.25	86.25	43.50	26.25	41.25	97.50	7.99	2.33 (formaldehyde)
Drum Mixer/Dryer Burner (Slag Processing)	0	0	0	96.20	0	0	0	0	0
Worst case	75.00⁽¹⁾	86.25⁽²⁾	86.25⁽²⁾	96.20⁽²⁾	26.25⁽²⁾	41.25⁽²⁾	97.50⁽²⁾	9.32	8.91 (hydrogen chloride)
Fugitive Emissions									
Hot Oil Heater (Fuel Combustion) (worst case)	0.08	0.12	0.12	2.66	0.05	0.88	0.74	0	0.016 (hexane)
Asphalt load out, silo, & yard	0.57	0.57	0.57	0	1.42	0	1.05	0.02	0.02 (formaldehyde)
Material Storage Piles	0.81	0.29	0.29	0	0	0	0	0	0
Material Processing & Handling	4.79	2.27	0.34	0	0	0	0	0	0
Material Crushing, screening & conveying	23.55	8.60	8.60	0	0	0	0	0	0
Paved & Unpaved roads	2.58	0.66	0.07	0	0	0	0	0	0
Cold Mix Asphalt Production	0	0	0	0	21.50	0	0	5.61	1.94 (xylenes)
Total Fugitives	32.39	12.51	9.99	2.66	22.97	0.88	1.79	5.65	1.94 (xylenes)
Total Emission	107.39	96.24	96.24	98.86	49.22	42.13	99.29	13.64	5.28 (hydrogen chloride)
Title V Major Source Thresholds	NA	100	100	100	25	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA
<p>* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM₁₀), not particulate matter (PM), is considered as a "regulated air pollutant". On May 8, 2008, the US EPA directed states to regulate PM₁₀ emissions as surrogate for PM_{2.5} emissions.</p> <p>Fugitive emissions from the volatile organic liquid storage vessels (#12, DT1) were calculated using the EPA Tanks 4.09d program and emissions of VOC were determined to be negligible.</p> <p>According to the American Petroleum Institute's report, "Robust Summary of Information on Asphalt" (2003), VOC emissions from asphalt cement storage vessels, such as #10, #11 & #14, are deemed negligible because the vapor pressure is less than 2 psi.</p> <p>(1) = Avoidance limit pursuant to 326 IAC 2-2 (PSD).</p> <p>(2) = Limits pursuant to 326 IAC 2-8 (FESOP).</p>									

- (a) This existing portable source is not major under Title V (326 IAC 2-7) nor PSD (326 IAC 2-2), because no attainment regulated pollutant is emitted at a rate of two hundred fifty (250) tons per year or more.
- (b) Pursuant to 326 IAC 2-3, this existing portable source is not major for Emission Offset because the emissions of the nonattainment pollutants, ozone and PM_{2.5}, are limited to less than one hundred (100) tons per year.
- (c) This existing portable source is still not a major source of HAP, as defined in 40 CFR 63.41, because the potential to emit HAP is limited to less than ten (10) tons per year for a single HAP and limited to less than twenty-five (25) tons per year of total HAP. Therefore, this source is an area source under Section 112 of the Clean Air Act and is subject to the provisions of 326 IAC 2-8 (FESOP).
- (d) Fugitive Emissions
 This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, however, there is an applicable New Source

Performance Standard (40 CFR 60.90 - 60.93, Subpart I) that was in effect on August 7, 1980, therefore fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Federal Rule Applicability

The following federal rules have been evaluated for applicability to this source:

(a) *NSPS for Hot Mix Asphalt Facilities (40 CFR 60.90 - 60.93, Subpart I)*

This portable drum hot-mix asphalt plant is still subject to this New Source Performance Standard, which is incorporated by reference as 326 IAC 12, because it meets the definition of a hot-mix asphalt facility pursuant to the rule and it was constructed after June 11, 1973, the applicability date for this rule. This rule limits particulate matter emissions to 0.04 grains per dry standard cubic foot (gr/dscf) and also limits visible emissions to 20% opacity.

The source will be able to comply with this rule by using the baghouse, identified as #8, to limit particulate matter emissions from the drum mixer (#5) & aggregate dryer/burner (#7) to less than 0.04 grains per dry standard cubic foot (gr/dscf).

The drum mixer (#5) & aggregate dryer/burner (#7) are subject to the following portions of 40 CFR 60, Subpart I:

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

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

The provisions of 40 CFR 60 Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the drum mixer (#5) & aggregate dryer/burner (#7) except when otherwise specified in 40 CFR 60 Subpart I.

(b) *NSPS for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after June 11, 1973 and prior to May 19, 1978 (40 CFR Part 60.110 - 60.113, Subpart K) (incorporated by reference to 326 IAC 12).*

Provisions of this New Source Performance Standard apply to storage vessels with a storage capacity greater than 39,890 gallons and constructed after June 11, 1973 and prior to May 19, 1978. This subpart still does not apply to this source because the five (5) volatile organic liquid storage vessels, identified as DT1, #10, #11, #12 and #14, were constructed after 1978 and all have storage capacities of less than 39,890 gallons.

(c) *NSPS for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced after May 18, 1978 and prior to July 23, 1984 (40 CFR Part 60.110a - 60.115a, Subpart Ka) (incorporated by reference to 326 IAC 12)*

Provisions of this New Source Performance Standard apply to vessels with storage capacity greater than 39,890 gallons, constructed after May 18, 1978 and prior to July 23, 1984. Subpart Ka still does not apply to the five (5) volatile organic liquid storage vessels, identified as DT1, #10, #11, #12 and #14, because they were constructed after 1984 and all have storage capacities of less than 39,890 gallons.

(d) *NSPS for Volatile Organic Liquid Storage Vessels (40 CFR 60.110b - 117b, Subpart Kb)*
Pursuant to the provisions of this New Source Performance Standard:

- (1) The volatile liquid storage vessel, identified as DT1, has a maximum capacity of 800 gallons and was constructed in 2004. Therefore, because this vessel has a maximum capacity of less than the 19,813 gallons (75 cubic meters) minimum specified in this rule, this vessel is still not subject to this New Source Performance Standards (40 CFR 60.110b - 117b, Subpart Kb) or to 326 IAC 12, which is incorporated by reference.
 - (2) The three volatile liquid storage vessels (#10, #11, #12), each with a maximum capacity of 20,000 gallons and the one volatile liquid storage vessel (#14), with a maximum capacity of 30,000 gallons, were all constructed after July 23, 1984 and all four store organic liquids which have vapor pressures of less than or equal to 2.18 psi (15 kPa). Therefore, although all four vessels have a maximum capacity of greater than the 19,813 gallon (75 cubic meters) minimum and less than the 39,890 gallon (151 cubic meters) maximum specified in the rule, these storage vessels are still not subject to this New Source Performance Standard (40 CFR 60.110b - 117b, Subpart Kb) or to 326 IAC 12, which is incorporated by reference.
- (e) *NSPS for Asphalt Processing and Asphalt Roofing Manufacture, 40 CFR 60, Subpart UU*
The requirements of this New Source Performance Standard, which is incorporated by reference as 326 IAC 12, are not included in the permit, since, pursuant to 40 CFR 60.471, the portable drum hot-mix asphalt plant is not an *asphalt processing plant* because it does not blow asphalt, or an *asphalt roofing plant* because it does not produce asphalt roofing products, and pursuant to 40 CFR 60.101(a) the portable drum hot-mix asphalt plant is not a *petroleum refinery* because it is not engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of petroleum or through redistillation, cracking or reforming of unfinished petroleum derivatives.
- (f) *NSPS for Nonmetallic Mineral Processing Plants (40 CFR 60, Subpart OOO)(326 IAC 12)*
The provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck and/or railcar loading station. Also, crushers and grinding mills at hot-mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin.

The requirements of this NSPS that did not get incorporated into the original FESOP permit have been added in this proposed permit renewal. Since the proposed permit modification will not affect the NSPS previously determined as applicable for this source, 40 CFR 60, Subpart OOO will be incorporated into this FESOP Renewal, No.:127-27125-05258.

The requirements of this New Source Performance Standard, which is incorporated by reference as 326 IAC 12, are included in the permit, since the Recycled Asphalt Pavement (RAP) system contains a crusher, identified as #6a.

- (1) The Recycled Asphalt Pavement (RAP) system contains a crusher (#6a) which is subject to the New Source Performance Standards for Nonmetallic Mineral Processing Plants 40 CFR 60, Subpart OOO.

Nonapplicable portions of the NSPS will not be included in the permit. The RAP crusher (#6a) is subject to the following portions of Subpart OOO.

- 40 CFR 60.670 (a)(1), (e),(f)
- 40 CFR 60.671
- 40 CFR 60.672 (a)(1)-(2),(b)
- 40 CFR 60.675 (a), (b)(1)-(2), (c)(1)(i)-(ii), (c)(3)(i)-(ii), (g)
- 40 CFR 60.676 (h)(i)(1), (j)

- (g) *NSPS for Calciners and Dryers in Mineral Industries, 40 CFR 60, Subpart UUU*
The requirements of this New Source Performance Standard, which is incorporated by reference as 326 IAC 12, are not included in the permit, since a portable drum hot-mix asphalt plant is not a *mineral processing plant*, meaning that it does not process or produce any of the following minerals, their concentrates or any mixture of which the majority (>50 percent) is composed of any of the following minerals or a combination of these minerals: alumina, ball clay, bentonite, diatomite, feldspar, fire clay, fuller's earth, gypsum, industrial sand, kaolin, lightweight aggregate, magnesium compounds, perlite, roofing granules, talc, titanium dioxide, and vermiculite.

There are no other New Source Performance Standards (NSPS)(40 CFR Part 60) included in the permit.

- (e) *NESHAP for: Asphalt Processing and Asphalt Roofing Manufacturing (40 CFR 63.8680 - 8779, Subpart LLLLLL)*

This portable drum hot-mix asphalt plant is still not subject to this National Emission Standards for Hazardous Air Pollutants (NESHAP) because this plant has taken limits to avoid being a major source of HAP, nor is it located at a major source of HAP, and does not engage in the preparation of asphalt flux or asphalt roofing materials.

- (f) *NESHAP for the Source Category Identified as: Gasoline Dispensing Facilities (GDF) 40 CFR 63.11110, Subpart CCCCCC*

The requirements of this National Emission Standards for Hazardous Air Pollutants (NESHAP) apply to owners or operators of gasoline dispensing facilities (GDF). This subpart establishes emission limitations and management practices for hazardous air pollutants (HAP) emitted from the loading of gasoline storage tanks at GDF. This Walsh & Kelly portable drum hot-mix asphalt plant has no gasoline dispensing facilities and is therefore not subject to subpart CCCCCC.

- (g) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in this permit renewal.

Compliance Assurance Monitoring (CAM)

- (h) 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

326 IAC 2-1.1-5 (Nonattainment NSR)

Because this source continues to accept a FESOP limit of less than twenty-five (25) tons/yr for VOC emissions and to limit all other criteria pollutants from this source to less than one hundred (100) tons/yr, this source may be relocated to any nonattainment county, except Lake, in Indiana. (See the discussion for FESOP limits below). In addition, this source is still considered minor under Nonattainment NSR.

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This existing source is not in 1 of 28 source categories defined in 326 IAC 2-2-1(gg)(1). The potential to emit PM from this source, before controls, is greater than two hundred fifty (250) tons per year.

- (a) In order to continue to render the requirements of 326 IAC 2-2 (PSD) not applicable, the source shall comply with the following limits:
- (1) Pursuant to 326 IAC 2-2, the amount of asphalt processed shall not exceed 1,500,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This is a revised requirement from 1,752,000 tons per year due to updated emission factors.
 - (2) PM emissions from the drum mixer (#5) & aggregate dryer/burner (#7) shall not exceed 0.100 pounds per ton of asphalt produced. This is a revised requirement.

Compliance with these limits, combined with the PM emissions from the other emission units and fugitives, the PM emissions from the entire source are limited to less than two hundred fifty (250) tons per twelve (12) consecutive month period. The use of baghouse #8 with the drum mixer (#5) & aggregate dryer/burner (#7) ensures compliance with this limit. This is a revised requirement.

The source also accepted FESOP requirements to limit the PM₁₀, PM_{2.5}, and SO₂ emissions from the entire source to less than one hundred (100) tons per twelve (12) consecutive month period (see the discussion of 326 IAC 2-8-4 below). Therefore, the requirements of 326 IAC 2-2 are not applicable.

326 IAC 2-4.1 (New Sources of Hazardous Air Pollutants)

The unlimited potential to emit of HAP from this entire source is greater than ten (10) tons per year for a single HAP and/or greater than twenty-five (25) tons per twelve (12) consecutive month period of a combination of HAP. However, the source shall continue to limit the source-wide potential to emit of HAP to less than ten (10) tons per twelve (12) consecutive month period for any single HAP and less than twenty-five (25) tons per twelve (12) consecutive month period of any combination of HAP.

- (1) Pursuant to 326 IAC 2-4.1, the chlorine content of the recycled (waste) oil used in the drum mixer (#5) and aggregate dryer/burner (#7) which exhaust through stack S-1 and all other fuel combustion equipment shall not exceed two-tenths of a percent (0.2%) by weight. This is a new requirement due to updated emission factors.
- (2) The HCl emissions from the drum mixer (#5) & aggregate dryer/burner (#7) which exhaust through stack S-1 shall be limited to less than 0.0132 pounds of HCl per gallon of recycled (waste) oil burned.

Compliance with these limits, combined with the HAP emissions from all other emission units at this source, will limit the source-wide HAP emissions to less than ten (10) tons per twelve (12) consecutive month period and combined HAP emissions to less than twenty-five tons per twelve (12) consecutive month period and render 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable. This is a new requirement.

See Appendix A.2 for the detailed calculations.

326 IAC 2-6 (Emission Reporting)

Although currently located in Porter County, this portable source is still not subject to 326 IAC 2-6-1, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), the potential to emit of VOC is limited to less than twenty-five (25) tons, and each criteria pollutant is limited to less than one hundred (100) tons per year. Therefore, 326 IAC 2-6-1(a) still does not apply.

However, pursuant to 326 IAC 2-6-1(b), all sources permitted by the department are subject to 326 IAC 2-6-5 which states that the department may request emissions and emission-related information about any regulated air pollutant as defined at 326 IAC 2-7-1(31) from any permitted source when needed for air quality planning, air quality modeling, or state implementation plan development.

326 IAC 2-8-4 (FESOP)

This source still has the potential to emit PM₁₀, PM_{2.5}, SO₂, VOC, and NO_x, before controls, of greater than one hundred (100) tons/yr. The source stated that this portable hot-mix asphalt plant might be collocated with another asphalt plant in the future. In order to make the requirements of 326 IAC 2-7 (Part 70 Program) not applicable, the Permittee has proposed the following FESOP requirements:

- (a) In order to limit PM₁₀ and PM_{2.5} emissions, the source shall continue to comply with the following:
 - (1) The asphalt production rate shall be limited to less than 1,500,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month. This is a revised requirement.
 - (2) PM₁₀ emissions from the drum mixer (#5) & aggregate dryer/burner (#7) which exhaust through stack S-1 shall not exceed 0.115 pounds per ton of asphalt produced. The continued use of baghouse #8 ensures compliance with this limit. This is a revised requirement.
 - (3) PM_{2.5} emissions from the drum mixer (#5) & aggregate dryer/burner (#7) which exhaust through stack S-1 shall not exceed 0.115 pounds per ton of asphalt produced. The use of baghouse #8 ensures compliance with this limit. This is a new requirement due to updated emission factors.

Compliance with these limits, combined with the potential to emit PM₁₀ and PM_{2.5} from all other emission units at this source, the PM₁₀ and PM_{2.5} emissions from the entire source are both still limited to less than one hundred (100) tons per twelve (12) consecutive month period with compliance determined at the end of each month. This is a revised requirement.

See Appendix A.2 for the detailed calculations.

- (b) In order to limit SO₂ and NO_x emissions from the drum mixer (#5) & aggregate dryer/burner (#7) and all other combustion sources, the source shall continue to comply with the following:
 - (1) The sulfur content of the recycled (waste) oil used shall not exceed five-tenths of a percent (0.5%) by weight. This is a revised requirement.
 - (2) The sulfur content of the No. 2 diesel fuel used shall not exceed five-tenths percent (0.50%) by weight. This is a revised requirement.

- (3) The sulfur content of the slag used in any aggregate mix shall not exceed one and five-tenths percent (1.5) by weight. This is a new requirement due to updated emission factors.
- (4) The use of slag shall be limited to a total of less than two hundred sixty thousand (260,000) tons per twelve (12) consecutive month period with compliance determined at the end of each month. This is a new requirement.
- (5) The recycled (waste) oil combusted shall be limited to less than eight hundred thousand (800,000 gallons (gal) per twelve (12) consecutive month period with compliance determined at the end of each month. This is a revised requirement.
- (6) The No. 2 diesel fuel combusted shall be limited to less than one hundred twenty-five thousand (125,000) gallons (gal) per twelve (12) consecutive month period with compliance determined at the end of each month. This is a revised requirement.
- (7) The natural gas combusted shall be limited to less than three hundred twenty-five (325) million cubic feet (MMCF) per twelve (12) consecutive month period with compliance determined at the end of each month. This is a revised requirement.
- (8) The fuel usage limits in (5) through (7) above shall be adjusted when an aggregate-slag mix and/or more than one type of fuel is used per twelve (12) consecutive month period. Compliance shall be determined at the end of each month.

The monthly SO₂ emissions shall be determined using the following equation:

$$\text{SO}_2 \text{ Emissions (tons/month)} = (73.5 X + 7.85 Y + 0.6 Z + 0.74 W) / (2000 \text{ lbs/ton})$$

Where

- X = Monthly Recycled (waste) Oil Usage in kgal/month
- Y = Monthly No. 2 Fuel Oil Usage in kgal/month
- Z = Monthly Natural Gas Usage in MMCF/month
- W = Monthly Slag Usage in tons/month

(NOTE: The leading coefficient for the variables X, Y, Z is the AP-42 emission factor for combustion of the specified fuel multiplied by the sulfur content of the fuel. The leading coefficient for the variable W is taken from the Reith-Riley stack test; see page 4 of Appendix A.2.)

Combined with the SO₂ emissions from all other activities, the emissions from the entire source are still limited to less than one hundred (100) tons per twelve (12) consecutive month period for SO₂.

- (9) The fuel usage limits in (5) through (7) above shall be adjusted when more than one type of fuel is used per twelve (12) consecutive month period. Compliance shall be determined at the end of each month.

The monthly NO_x emissions shall be determined using the following equation:

$$\text{NO}_x \text{ Emissions (tons/month)} = (19 X + 24 Y + 280 Z) / 2000$$

Where

- X = Monthly Recycled (waste) Oil Usage in kgal/month
- Y = Monthly No. 2 Fuel Oil Usage in kgal/month
- Z = Monthly Natural Gas Usage in MMCF/month

(NOTE: The leading coefficient for the variables X, Y, Z is the AP-42 emission factor for combustion of the specified fuel.)

Combined with the NO_x emissions from all other activities, the emissions from the entire source are still limited to less than one hundred (100) tons per twelve (12) consecutive month period for NO_x.

- (10) VOC emissions from the drum mixer (#5) & aggregate dryer/burner (#7) which exhaust through stack S-1 shall be limited to less than 0.035 pounds of VOC per ton of asphalt produced. This is a revised requirement.
- (c) The VOC emissions from the VOC solvents used in the liquid binders for the cold mix asphalt production process shall still be limited to less than twenty-one and five-tenths (21.5) tons per twelve (12) consecutive month period with compliance determined at the end of each month. This can be achieved by the following:

The total VOC usage for each liquid binder used in cold mix asphalt production shall be limited as follows:

- (1) Cutback asphalt rapid cure liquid binder usage shall not exceed 22.6 tons of VOC solvent per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (A) 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) Cutback asphalt medium cure liquid binder usage shall not exceed 30.7 tons of VOC solvent per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (A) 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) Cutback asphalt slow cure liquid binder usage shall not exceed 86.0 tons of VOC solvent per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (A) 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 liquid binder usage shall not exceed 46.3 tons of VOC solvent per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (A) 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 liquid binder shall not exceed 860 tons of VOC solvent per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (A) 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
- (6) The VOC solvent allotments in c(1) through c(5) above shall be adjusted when more than one type of binder is used and the monthly VOC emissions for each type of binder shall be determined by the following formula:

$$\text{VOC Emissions (tons/month)} = \frac{\text{VOC solvent contained in binder (tons/month)}}{\text{Adjustment ratio}} \times 95\%$$

Type of Binders	Adjustment Ratio
Cutback Asphalt Rapid Cure	1.05
Cutback Asphalt Medium Cure	1.43
Cutback Asphalt Slow Cure	4.00
Emulsified Asphalt	2.16
Other Asphalt	40.0

Compliance with these limits, combined with the VOC emissions from the combustion of recycled (waste) oil, will limit the VOC emissions from the entire source to less than fifty (50) tons per twelve (12) consecutive month period. This is a revised requirement.

See Appendix A.2 for the detailed calculations.

- (d) Pursuant to 326 IAC 2-8-4, the following additional limits shall apply to the source:
 - (1) CO emissions from the drum mixer (#5) & aggregate dryer/burner (#7) which exhaust through stack S-1 shall be limited to less than 0.130 pounds of CO per ton of asphalt produced. This is a new requirement.

Compliance with this limit, combined with the CO emissions from all other emission units at this source, will limit the source-wide CO emissions, to less than one hundred (100) tons per twelve (12) consecutive month period, and render 326 IAC 2-7 (Part 70 Permit Program), 326 IAC 2-2 (PSD) , and 326 IAC 2-3 (Emission Offset) not applicable.

See Appendix A.2 for the detailed calculations.

Compliance with the FESOP limits above will limit the emissions from the entire source to less than one hundred (100) tons/yr for PM₁₀, PM_{2.5}, CO, SO₂, and NO_x and to less than fifty (50) tons/yr for VOC. Therefore, the requirements of 326 IAC 2-7 (Part 70 Program), 326 IAC 2-2 (PSD), and 326 IAC 2-1.1-5 (Nonattainment NSR) are still not applicable.

326 IAC 2-14-4 (Relocation of Portable Sources)

- (a) Pursuant to 2-14-4 (Relocation), a portable source, operation, process, or emissions unit that has been issued a valid operating permit under this article may be issued an approval letter for relocation that authorizes operation of the source, operation, process, or emissions unit as follows:
 - (1) The source submits a notification at least thirty (30) days prior to relocation.

- (2) The commissioner shall approve or deny the relocation within thirty (30) days of receipt of the notification of the proposed relocation.
- (3) The application submitted for a permit revision in accordance with 326 IAC 2-6.1-6, 326 IAC 2-7-12, or 326 IAC 2-8-11.1 shall satisfy the notification requirements of this section.

The commissioner shall not approve a relocation of a portable source, operation, process, or emissions unit, if the following applies:

- (1) The relocation would allow a violation of the national ambient air quality standards (NAAQS).
 - (2) The relocation would allow a violation of a prevention of significant deterioration (PSD) maximum allowable increase.
 - (3) The source is not in compliance with all applicable air pollution control rules.
 - (4) The relocation would adversely affect the public health.
- (b) This permit is still approved for operation all areas in Indiana. This determination is based on the requirements of Prevention of Significant Deterioration in 326 IAC 2-2, and Emission Offset requirements in 326 IAC 2-3. Prior to locating in any severe nonattainment area, the Permittee must submit a request and obtain a permit revision.
- (c) A request to relocate shall be submitted to IDEM, OAQ at least thirty (30) days prior to the intended date of relocation. This submittal shall include the following:
- (1) A list of governmental officials entitled to receive notice of application to relocate. IC 13-15-3-1
 - (2) A list of adjacent landowners that the Permittee will send written notice to not more than ten (10) days after submission of the request to relocate. IC 13-15-8
 - (3) The new location address of the portable source.
 - (4) Whether or not this portable source will be relocated to another source.
 - (5) If relocating to another source:
 - (A) Name, location address, and permit number of the source this portable source is relocating to.
 - (B) Whether or not the sources will be considered as one source. See Non Rule Policy (NRP) Air-005 and Air-006.
 - (6) If the sources will be considered as one source, whether or not the source to be relocated to has received the necessary approvals from IDEM to allow the relocation.

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

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

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

This is a revised requirement.

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 Exemptions), opacity shall meet the following, unless otherwise stated in the permit:

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

326 IAC 6-4 (Fugitive Dust Emissions)

The source is subject to the requirements of 326 IAC 6-4, because the asphalt Load-Out processes (LO1), Hot Oil Heater (#13), Aggregate Conveyers (#21), Aggregate Storage Piles (#A1-#A11), Aggregate cold bins(#4), and unpaved Roads each have the potential to emit fugitive particulate emissions. 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 Emissions Limitations)

The source is subject to the requirements of 326 IAC 6-5, because the Load-Out processes (LO1), Hot Oil Heater (#13), Aggregate Conveyers (#21), Aggregate Storage Piles (#A1-#A11), Aggregate cold bins(#4), and unpaved Roads have the combined potential fugitive particulate emissions greater than twenty-five (25) tons per year. Pursuant to 326 IAC 6-5, fugitive particulate matter emissions shall be controlled according to the Fugitive Dust Control Plan, submitted on May 19, 2004.

326 IAC 6-6 (Source Specific and Facility Emission Limitations for TSP to Porter County)

This rule applies to sources and facilities specifically listed in 326 IAC 6-6-4 and 326 IAC 6-6-5. Although this source is currently located in Porter County, this source is not one of those listed and is therefore, not subject to the emission limitations contained in 326 IAC 6-6.

326 IAC 6.8-8 (Lake County: Continuous Compliance Plan)

Pursuant to 326 IAC 6.8-8-1(21)(C), when relocating to Lake County, the Permittee shall submit to IDEM, and maintain at the source, a copy of the Continuous Compliance Plan. The Permittee shall perform the inspections, monitoring, and record keeping requirements as specified in 326 IAC 6.8-8-7. The Permittee shall update the CCP (as needed), retain a copy on site, and make the updated CCP available for inspection as specified in 326 IAC 6.8-8-8.

326 IAC 6.8-10 (Lake County Fugitive Particulate Matter)

- (a) Pursuant to 326 IAC 6.8-10 (Lake County Fugitive Particulate Matter), when located in Lake County, 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 average instantaneous opacity of fugitive particulate emissions from batch transfer shall not exceed ten percent (10%).
- (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 in plant transportation of material by truck or rail at any time.
- (7) The opacity of fugitive particulate emissions from the in plant transportation of material by front end loaders and skip hoists shall not exceed ten percent (10%).
- (8) 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.
- (9) 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.
- (10) The opacity of particulate emissions from dust handling equipment shall not exceed ten percent (10%).
- (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.
- (12) PM10 emissions from each material processing stack shall not exceed 0.022 grains per dry standard cubic foot and ten percent (10%) opacity.
- (13) Fugitive particulate matter from the material processing facilities shall not exceed ten percent (10%) opacity.
- (14) 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).

Material processing facilities include crushers, screens, grinders, mixers, dryers, belt conveyors, bucket elevators, bagging operations, storage bins, and truck or railroad car loading stations.

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

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

Although the source is located in Porter County, it is not a stationary source and its actual VOC emissions are less than five (5) tons per year. Therefore, pursuant to 326 IAC 8-7-2(a)(1)(D), the requirements of this rule do not apply to this source.

326 IAC 20 (Hazardous Air Pollutants)

There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit See Federal Rule Applicability Section of this TSD.

State Rule Applicability – Portable Asphalt Plant
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326 IAC 1-6-3 (Preventive Maintenance Plan)

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this portable hot-mix asphalt plant and its' control devices.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Particulate emissions from this hot-mix asphalt plant are still subject to the requirements of 40 CFR 60, Subpart I. Therefore, pursuant to 326 IAC 6-3-1(c)(5), the PM emissions from this portable hot-mix asphalt plant are still exempt, and the requirements of 326 IAC 6-3 are not applicable.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)

Pursuant to 326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the mixer/dryer shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf) of exhaust air when the source is located in Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo, or Wayne Counties. This is a new requirement.

326 IAC 6.8 (Particulate Matter Limitations For Lake County)

Pursuant to 326 IAC 6.8-1-2 (Particulate Matter Limitations for Lake County), when the source is located in Lake County, particulate matter (PM) emissions from the mixer/dryer shall not exceed 0.03 grain per dry standard cubic foot (gr/dscf) of exhaust air. Should this source relocate to Lake County, the limit specified in 326 IAC 6.8-1-2 shall apply. Since this source is currently located in Porter County, at this time this source is not subject to 326 IAC 6.8-1-2.

326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations)

The potential to emit SO₂ from the drum mixer (#5) & aggregate dryer/burner (#7), which both exhaust through stack S-1, is greater than twenty-five (25) tons/yr. Therefore, the drum mixer (#5) & aggregate dryer/burner (#7) at this source are subject to the requirements of 326 IAC 7-1.1-2. Pursuant to 326 IAC 7-1.1-2, the SO₂ emissions from the drum mixer (#5) & aggregate dryer/burner (#7) exhausting through stack S-1 shall not exceed the following:

- (1) 1.6 lbs/MMBtu while burning residual oil.
- (2) 0.5 lbs/MMBtu while burning distillate oil.

The 2.0 MMBtu/hr hot oil heater is not subject to the requirements of this rule because potential SO₂ emissions are less than twenty-five (25) tons per year.

326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements)

Pursuant to 326 IAC 7-2-1, 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 the OAQ upon request.

326 IAC 8-1-6 (New Facilities; General Reduction Requirement)

The potential to emit VOC from the drum mixer (#5) & aggregate dryer/burner (#7) is still limited to less than fifty (50) tons/yr. This source is subject to 326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving), therefore it is not subject to the requirements of this 326 IAC 8-1-6.

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

Pursuant to 326 IAC 8-4-1 (Applicability) and 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities), all petroleum liquid storage vessels with capacities greater than thirty-nine thousand (39,000) gallons (150,000 liters), containing VOC whose true vapor pressure is greater than 1.52 psi (10.5 kPa) shall comply with the requirements for external fixed and floating roof tanks and the specified record keeping and reporting requirements. All petroleum liquid storage vessels at this source, identified as DT1, #10, #11, #12, and #14, have a maximum capacity less than 39,000 gallons. Therefore, the requirements of this rule are not applicable to this facility and are not included in this permit.

326 IAC 8-5-2 (Asphalt Paving)

Any paving application made after January 1, 1980, is subject to the requirements of 326 IAC 8-5-2. Pursuant to 326 IAC 8-5-2 (Asphalt Paving), no person shall cause or allow the use of cutback asphalt or asphalt emulsion containing more than seven percent (7%) oil distillate by volume of emulsion of any paving application except:

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

The owner or operator shall continue not to process emulsified or cutback asphalt at this source unless proper approval has been obtained from IDEM, OAQ. Therefore, this source can comply with this rule.

326 IAC 9-1 (Carbon Monoxide Emission)

This portable hot-mix asphalt plant is still not one of the source types listed in 326 IAC 9-1-2. Therefore, the requirements of 326 IAC 9-1 are still not applicable to the drum mixer (#5) & aggregate dryer/burner (#7).

326 IAC 10-1 (Nitrogen Oxides Control in Clark and Floyd Counties)

This portable hot-mix asphalt plant is still subject to the requirements of 40 CFR 60, Subpart I. Should this source relocate to Clark or Floyd Counties, the limits specified in 326 IAC 10-1 shall apply. Since this source is currently located in Porter County, at this time this source is not subject to 326 IAC 10-1.

326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category)

This source does not operate a Portland cement kiln or a blast furnace gas boiler with a heat input greater than two hundred fifty million (250,000,000) British thermal units per hour (MMBtu/hr). The one (1) 100 MMBtu/hr dryer/burner (#7) is not subject to this rule, therefore the requirements of 326 IAC 10-3 are not included in the permit for this source.

326 IAC 12-1 (New Source Performance Standards)

The hot-mix asphalt plant shall continue to comply with the requirements of 40 CFR 60.90, Subpart I, Standards of Performance for Hot Mix Asphalt Facilities, as described in the "Federal Rule Applicability" section of this TSD.

State Rule Applicability – Hot Oil Heater

326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations)

The potential to emit SO₂ from the hot oil heater (#13) are still less than twenty-five (25) tons per year, therefore, this hot oil heater (#13) is still not subject to the requirement of 326 IAC 7-1.1-2.

State Rule Applicability - Degreasing Operation

326 IAC 8-3-2 (Cold Cleaner Operation)

Any degreaser using VOC containing solvents is considered a cold cleaning operation. The degreasing operation at this source was constructed after January 1, 1980 and is subject to 326 IAC 8-3-2. Pursuant to 326 IAC 8-3-2, for cold cleaning operations constructed after January 1, 1980, the Permittee shall still:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

The degreasing operation at this source was constructed after July 1, 1990 and is not equipped with remote solvent reservoirs; therefore, this degreasing operation is still subject to 326 IAC 8-3-5 and has the following requirements:

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility shall still ensure that the following control equipment requirements are met:
 - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
 - (A) the solvent volatility is greater than fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch (psia) measured at one hundred degrees Fahrenheit (100°F);
 - (B) the solvent is agitated; or
 - (C) the solvent is heated.
 - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than thirty-two (32) millimeters of mercury or six-tenths (0.6)

pounds per square inch (psia) measured at one hundred degrees Fahrenheit (100°F), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
 - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
 - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch (psia) measured at one hundred degrees Fahrenheit (100°F), or if the solvent is heated to a temperature greater than one hundred twenty degrees Fahrenheit (120°F):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent used is insoluble in, and heavier than, water.
 - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5 (b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall still ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
 - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
 - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

State Rule Applicability – Volatile Organic Liquid Storage Vessels

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

Since this source might still be relocated to Clark or Floyd County, the volatile organic liquid storage vessels, identified as #10, #11, #12, #14 and DT1, all of which have capacities less than 39,000 gallons, are still subject to the reporting and record keeping provisions of 326 IAC 8-9-6(a) and (b), which have the following requirements:

- (a) The owner or operator of each vessel shall maintain records for the life of the vessel for the following information:
 - (1) The vessel identification number.
 - (2) The vessel dimensions.
 - (3) The vessel capacity.

- (b) A report containing the information described in (a) shall be submitted to IDEM, Office of Air Quality, Compliance and Enforcement Branch.

Compliance Determination, Monitoring and Testing Requirements

- (a) The drum mixer (#5) & aggregate dryer/burner (#7) which both exhaust through stack S-1 have applicable compliance determination conditions as specified below:

Emission Units	Control Device	Timeframe for Testing	Pollutant	Frequency of Testing	Limit or Requirement
#5 & #7	#8	*	PM	Once every five (5) years	0.60 lb PM/ton of asphalt
#5 & #7	#8	180 days after publication of revised test method	PM _{2.5} PM ₁₀	Once every five (5) years	0.115 lb PM _{2.5} /ton of asphalt & 0.115 lb PM ₁₀ /ton of asphalt
#5 & #7	#8	within 180 days after issuance of permit	SO ₂	Once every five (5) years	0.74 pounds SO ₂ per ton of slag processed

* The date of the last valid compliance stack test for particulates was 2004.

- (b) The drum mixer (#5) & aggregate dryer/burner (#7) which both exhaust through stack S-1, and the conveying, screening, and material transfer points have applicable compliance monitoring conditions as specified below:

Control	Parameter	Frequency	Range	Excursions and Exceedances
Conveyors, screening, material transfer points and stack (S1)	Visible Emissions	Daily	Normal-Abnormal	Response Steps
Baghouse #8 (mixer/dryer)	Water Pressure Drop	Daily	1.0 to 8.0 inches	Response Steps

These monitoring conditions are necessary because the Load-Out processes (LO1), Aggregate Conveyers (#21), Aggregate cold bins(#4), and the baghouse (#8) must operate properly to ensure compliance with 40 CFR 60, Subpart I, 326 IAC 2-8 (FESOP), and the limits that render 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70 Permit Program) not applicable.

Recommendation

The staff recommends to the Commissioner that the FESOP Renewal be approved. This recommendation is based on the following facts and conditions:

An application for the purposes of this review was received on November 7, 2008. Additional information was received on April 30, 2009.

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

Conclusion

The operation of this portable hot-mix asphalt plant shall be subject to the conditions of the attached FESOP Renewal No. 127-27125-05258.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Sandra Carr at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5372 or toll free at 1-800-451-6027 extension 45372.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Appendix A.1: Emissions Calculations Unlimited Emission Summary

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Reviewer: Sandra Carr

Asphalt Plant Maximum Capacity

Maximum Hourly Asphalt Production =	400	ton/hr								
Maximum Annual Asphalt Production =	3,504,000	ton/yr								
Maximum Annual Slag Usage =	1,471,680	ton/yr	1.50	% sulfur						
Maximum Dryer Fuel Input Rate =	100	MMBtu/hr								
Natural Gas Usage =	876	MMCF/yr								
No. 2 Fuel Oil Usage =	6,257,143	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Usage =	[REDACTED]	gal/yr, and		% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage =	[REDACTED]	gal/yr, and		% sulfur						
Propane Usage =	[REDACTED]	gal/yr, and		gr/100 ft ³ sulfur						
Butane Usage =	[REDACTED]	gal/yr, and		gr/100 ft ³ sulfur						
Used/Waste Oil Usage =	6,257,143	gal/yr, and	1.00	% sulfur	0.50	% ash	0.200	% chlorine,	0.010	% lead
Diesel Engine Oil Usage =	[REDACTED]	gal/yr, and								
Unlimited PM Dryer/Mixer Emission Factor =	28.0	lb/ton of asphalt production								
Unlimited PM ₁₀ Dryer/Mixer Emission Factor =	6.5	lb/ton of asphalt production								
Unlimited PM _{2.5} 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 Slag SO ₂ Dryer/Mixer Emission Factor =	0.74	lb/ton of slag processed								

Unlimited/Uncontrolled Emissions

Process Description	Unlimited/Uncontrolled Potential to Emit (tons/year)								
	Criteria Pollutants						Hazardous Air Pollutants		
	PM	PM ₁₀	PM _{2.5}	SO ₂	NOx	VOC	CO	Total HAP	Worst Case HAP
Ducted Emissions									
Dryer Fuel Combustion (worst case)	100.11	79.78	79.78	459.90	83.22	3.13	36.79	44.84	41.30 (hydrogen chloride)
Dryer/Mixer (Process)	49056.00	11388.00	2628.00	101.62	96.36	56.06	227.76	18.68	5.43 (formaldehyde)
Dryer/Mixer Slag Processing	0	0	0	544.52	0	0	0	0	0
Hot Oil Heater Fuel Combustion (worst case)	0.13	0.21	0.21	4.44	1.25	0.05	0.74	0.020	0.016 (hexane)
Worst Case Emissions*	49,056.13	11,388.21	2,628.21	1,008.86	97.61	56.11	228.50	44.86	41.30 (hydrogen chloride)
Fugitive Emissions									
Asphalt Load-Out, Silo Filling, On-Site Yard	1.33	1.33	1.33	0	0	13.53	2.46	0.22	0.07 (formaldehyde)
Material Storage Piles	0.81	0.29	0.29	0	0	0	0	0	0
Material Processing and Handling	11.20	5.30	0.80	0	0	0	0	0	0
Material Crushing, Screening, and Conveying	55.01	20.09	20.09	0	0	0	0	0	0
Unpaved and Paved Roads (worst case)	47.15	12.02	1.20	0	0	0	0	0	0
Cold Mix Asphalt Production	0	0	0	0	0	50531.18	0	13180	4548 (xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0	0	0	0 (xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	negl	0
Total Fugitive Emissions	115.50	39.02	23.71	0	0.00	50544.71	2.46	13180.63	4547.81 (xylenes)
Totals Unlimited/Uncontrolled PTE	49,171.63	11,427.23	2,651.92	1,008.86	97.61	50,600.82	230.95	13,225.49	4,547.81 (xylenes)

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

Fuel component percentages provided by the source.

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

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Reviewer: Sandra Carr

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

Maximum Capacity

Maximum Hourly Asphalt Production =	400	ton/hr																	
Maximum Annual Asphalt Production =	3,504,000	ton/yr																	
Maximum Fuel Input Rate =	100	MMBtu/hr																	
Natural Gas Usage =	876	MMCF/yr																	
No. 2 Fuel Oil Usage =	6,257,143	gal/yr, and	0.50	% sulfur															
No. 4 Fuel Oil Usage =		gal/yr, and		% sulfur															
Residual (No. 5 or No. 6) Fuel Oil Usage =		gal/yr, and		% sulfur															
Propane Usage =		gal/yr, and		gr/100 ft3 sulfur															
Butane Usage =		gal/yr, and		gr/100 ft3 sulfur															
Used/Waste Oil Usage =	6,257,143	gal/yr, and	1.00	% sulfur	0.50	% ash	0.200	% chlorine,	0.010	% lead									
Diesel Engine Oil Usage =		gal/yr, and																	

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units)								Unlimited/Uncontrolled Potential to Emit (tons/yr)							
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/Waste Oil (lb/kgal)	Diesel Engine (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/Waste Oil (tons/yr)	Diesel Engine (tons/yr)
PM	1.9	2.0					32.0	0.83	6.26					100.11		100.11
PM ₁₀ /PM _{2.5}	7.6	3.3					25.5	3.33	10.32					79.78		79.78
SO ₂	0.6	78.5					147.0	0.26	245.59					459.90		459.90
NOx	190	24.0					19.0	83.22	75.09					59.44		83.22
VOC	5.5	0.20					1.0	2.41	0.63					3.13		3.13
CO	84	5.0					5.0	36.792	15.64					15.64		36.79
Hazardous Air Pollutant																
HCl							13.2							41.30		41.30
Antimony							negl									0
Arsenic	2.0E-04	5.6E-04					1.1E-01	8.8E-05	1.75E-03					3.44E-01		0.344
Beryllium	1.2E-05	4.2E-04					negl	5.3E-06	1.31E-03					negl		0.001
Cadmium	1.1E-03	4.2E-04					9.3E-03	4.8E-04	1.31E-03					2.91E-02		0.029
Chromium	1.4E-03	4.2E-04					2.0E-02	6.1E-04	1.31E-03					6.26E-02		0.063
Cobalt	8.4E-05						2.1E-04	3.7E-05						6.57E-04		6.6E-04
Lead	5.0E-04	1.3E-03					0.55	2.2E-04	3.94E-03					1.7E+00		1.72
Manganese	3.8E-04	8.4E-04					6.8E-02	1.7E-04	2.63E-03					2.13E-01		0.21
Mercury	2.6E-04	4.2E-04						1.1E-04	1.31E-03							0.001
Nickel	2.1E-03	4.2E-04					1.1E-02	9.2E-04	1.31E-03					3.44E-02		0.034
Selenium	2.4E-05	2.1E-03					negl	1.1E-05	6.57E-03					negl		0.007
1,1,1-Trichloroethane																0
1,3-Butadiene																0
Acetaldehyde																0
Acrolein																0
Benzene	2.1E-03							9.2E-04								9.2E-04
Bis(2-ethylhexyl)phthalate							2.2E-03							6.88E-03		0.007
Dichlorobenzene	1.2E-03						8.0E-07	5.3E-04						2.50E-06		5.3E-04
Ethylbenzene																0
Formaldehyde	7.5E-02	6.10E-02						3.3E-02	1.91E-01							0.191
Hexane	1.8E+00							0.79								0.788
Phenol							2.4E-03							7.51E-03		0.008
Toluene	3.4E-03							1.5E-03								0.001
Total PAH Haps	negl						3.9E-02	negl						1.22E-01		0.122
Polycyclic Organic Matter		3.30E-03							1.03E-02							0.010
Xylene																0
Total HAP								0.83	0.22	0	0	0	0	43.84	0	44.84

Methodology

Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
 Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
 Propane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0905 MMBtu]
 Butane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0974 MMBtu]
 Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
 All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]

Abbreviations

PM = Particulate Matter
 PM₁₀ = Particulate Matter (≤10 μm)
 PM_{2.5} = Particulate Matter (≤2.5 μm)
 SO₂ = Sulfur Dioxide
 NOx = Nitrous Oxides
 VOC = Volatile Organic Compounds
 CO = Carbon Monoxide
 HAP = Hazardous Air Pollutant
 HCl = Hydrogen Chloride
 PAH = Polyaromatic Hydrocarbon

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 9/98), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11
 Propane and Butane: AP-42 Chapter 1.5 (dated 7/08), Tables 1.5-1 (assuming PM = PM10)
 Waste Oil: AP-42 Chapter 1.11 (dated 10/96), Tables 1.11-1, 1.11-2, 1.11-3, 1.11-4, and 1.11-5
 Diesel Engine Oil: AP-42 Chapter 3.3 (dated 10/96), Tables 3.3-1 and 3.3-2

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

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

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Reviewer: Sandra Carr

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

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

Criteria Pollutant	Uncontrolled Emission Factors (lb/ton)			Unlimited/Uncontrolled Potential to Emit (tons/yr)			Worse Case PTE
	Drum-Mix Plant (dryer/mixer)			Drum-Mix Plant (dryer/mixer)			
	Natural Gas	No. 2 Fuel Oil	Waste Oil	Natural Gas	No. 2 Fuel Oil	Waste Oil	
PM*	28	28	28	49056	49056	49056	49,056
PM ₁₀ *	6.5	6.5	6.5	11388	11388	11388	11,388
PM _{2.5} *	1.5	1.5	1.5	2628	2628	2628	2,628
SO ₂ **	0.0034	0.011	0.058	6.0	19.3	101.6	101.6
NO _x **	0.026	0.055	0.055	45.6	96.4	96.4	96.4
VOC**	0.032	0.032	0.032	56.1	56.1	56.1	56.1
CO***	0.13	0.13	0.13	227.8	227.8	227.8	227.8
Hazardous Air Pollutant							
HCl			2.10E-04			3.68E-01	0.368
Antimony	1.80E-07	1.80E-07	1.80E-07	3.15E-04	3.15E-04	3.15E-04	3.15E-04
Arsenic	5.60E-07	5.60E-07	5.60E-07	9.81E-04	9.81E-04	9.81E-04	9.81E-04
Beryllium	negl	negl	negl	negl	negl	negl	0
Cadmium	4.10E-07	4.10E-07	4.10E-07	7.18E-04	7.18E-04	7.18E-04	7.18E-04
Chromium	5.50E-06	5.50E-06	5.50E-06	9.64E-03	9.64E-03	9.64E-03	0.01
Cobalt	2.60E-08	2.60E-08	2.60E-08	4.56E-05	4.56E-05	4.56E-05	4.56E-05
Lead	6.20E-07	1.50E-05	1.50E-05	1.09E-03	2.63E-02	2.63E-02	0.026
Manganese	7.70E-06	7.70E-06	7.70E-06	1.35E-02	1.35E-02	1.35E-02	0.013
Mercury	2.40E-07	2.60E-06	2.60E-06	4.20E-04	4.56E-03	4.56E-03	0.005
Nickel	6.30E-05	6.30E-05	6.30E-05	0.11	0.11	0.11	0.11
Selenium	3.50E-07	3.50E-07	3.50E-07	6.13E-04	6.13E-04	6.13E-04	6.13E-04
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	0.07	0.07	0.07	0.07
Acetaldehyde			1.30E-03			2.28	2.28
Acrolein			2.60E-05			4.56E-02	0.05
Benzene	3.90E-04	3.90E-04	3.90E-04	0.68	0.68	0.68	0.68
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0.42	0.42	0.42	0.42
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	5.43	5.43	5.43	5.43
Hexane	9.20E-04	9.20E-04	9.20E-04	1.61	1.61	1.61	1.61
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0.08	0.08	0.08	0.08
MEK			2.00E-05			0.04	0.04
Propionaldehyde			1.30E-04			0.23	0.23
Quinone			1.60E-04			0.28	0.28
Toluene	1.50E-04	2.90E-03	2.90E-03	0.26	5.08	5.08	5.08
Total PAH Haps	1.90E-04	8.80E-04	8.80E-04	0.33	1.54	1.54	1.54
Xylene	2.00E-04	2.00E-04	2.00E-04	0.35	0.35	0.35	0.35

Total HAP = 18.68
Worst Single HAP = 5.43 (formaldehyde)

Methodology

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

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

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

* PM, PM₁₀, and PM_{2.5} 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 PM_{2.5} emissions.

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

develop single CO emission factor.

Abbreviations

VOC - Volatile Organic Compounds

HCl = Hydrogen Chloride

SO₂ = Sulfur Dioxide

HAP = Hazardous Air Pollutant

PAH = Polyaromatic Hydrocarbon

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

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Reviewer: Sandra Carr

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

Maximum Annual Slag Usage* = ton/yr % sulfur

	Emission Factor (lb/ton)**	Unlimited Potential to Emit (tons/yr)
Criteria Pollutant	Slag Processing	Slag Processing
SO ₂	0.74	544.5

Methodology

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

** Testing results for 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 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%.

Unlimited Potential to Emit SO₂ from Slag (tons/yr) =

$$[(\text{Maximum Annual Slag Usage (ton/yr)}) * (\text{Emission Factor (lb/ton)}) * (\text{ton}/2000 \text{ lbs})]$$

Abbreviations

SO₂ = Sulfur Dioxide

**Appendix A.1: Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions
Unlimited Emissions**

**Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Reviewer: Sandra Carr**

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

Asphalt Temperature, T =	290	F
Asphalt Volatility Factor, V =	-0.5	
Maximum Annual Asphalt Production =	3,504,000	tons/yr

Pollutant	Emission Factor (lb/ton asphalt)			Unlimited/Uncontrolled Potential to Emit (tons/yr)			
	Load-Out	Silo Filling	On-Site Yard	Load-Out	Silo Filling	On-Site Yard	Total
Total PM*	3.2E-04	4.4E-04	NA	0.57	0.77	NA	1.33
Organic PM	1.4E-04	1.1E-04	NA	0.25	0.185	NA	0.43
TOC	0.002	0.005	0.001	3.03	8.87	1.927	13.8
CO	0.001	0.000	3.5E-04	0.98	0.859	0.617	2.46

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

PM/HAP	0.018	0.021	0	0.038
VOC/HAP	0.045	0.113	0.028	0.186
non-VOC/HAP	2.3E-04	2.4E-05	1.5E-04	4.1E-04
non-VOC/non-HAP	0.22	0.13	0.14	0.48

Total VOCs	2.85	8.87	1.8	13.5
Total HAP	0.06	0.13	0.029	0.22
Worst Single HAP				0.066
				(formaldehyde)

Methodology

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

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

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

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

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

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

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

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

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

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

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

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

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

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

*No emission factors available for PM₁₀ or PM_{2.5}, therefore IDEM assumes PM₁₀ and PM_{2.5} are equivalent to Total PM.

Abbreviations

PM = Particulate Matter

PM₁₀ = Particulate Matter (<10 μm)

PM_{2.5} = Particulate Matter (<2.5 μm)

HAP = Hazardous Air Pollutant

TOC = Total Organic Compounds

CO = Carbon Monoxide

VOC = Volatile Organic Compound

Appendix A.1: Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)
Unlimited Emissions

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Reviewer: Sandra Carr

Organic Particulate-Based Compounds (Table 11.1-15)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Unlimited/Uncontrolled Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of Total Organic PM)	Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)	Load-out	Silo Filling	Onsite Yard	Total
PAH HAPs										
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	0.47%	6.5E-04	8.7E-04	NA	1.5E-03
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	6.9E-05	2.6E-05	NA	9.5E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	1.7E-04	2.4E-04	NA	4.1E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	4.7E-05	1.0E-04	NA	1.5E-04
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	1.9E-05	0	NA	1.9E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	5.5E-06	0	NA	5.5E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	4.7E-06	0	NA	4.7E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	5.7E-06	0	NA	5.7E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	1.9E-05	1.8E-05	NA	3.7E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	2.6E-04	3.9E-04	NA	6.4E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	9.2E-07	0	NA	9.2E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	1.2E-04		NA	1.2E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	1.9E-03	1.9E-03	NA	3.8E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	1.2E-06	0	NA	1.2E-06
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	5.9E-03	9.7E-03	NA	0.016
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	3.1E-03	3.4E-03	NA	6.5E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	5.5E-05	5.5E-05	NA	1.1E-04
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	2.0E-03	3.3E-03	NA	5.3E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	3.7E-04	8.1E-04	NA	1.2E-03
Total PAH HAPs							0.015	0.021	NA	0.036
Other semi-volatile HAPs										
Phenol		PM/HAP	---	Organic PM	1.18%	0	2.9E-03	0	0	0.003

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

Methodology

Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Speciation Profile (%)] * [Organic PM (tons/yr)]
Speciation Profiles from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-15 and 11.1-16

Abbreviations

PM = Particulate Matter
HAP = Hazardous Air Pollutant
POM = Polycyclic Organic Matter

Appendix A.1: Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)
Unlimited Emissions

Organic Volatile-Based Compounds (Table 11.1-16)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Unlimited/Uncontrolled Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of TOC)	Silo Filling and Asphalt Storage Tank (% by weight of TOC)	Load-out	Silo Filling	Onsite Yard	Total
VOC		VOC	---	TOC	94%	100%	2.85	8.87	1.81	13.53
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	2.0E-01	2.3E-02	1.3E-01	0.345
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	1.4E-03	4.9E-03	8.9E-04	0.007
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	2.1E-02	9.8E-02	1.4E-02	0.133
Total non-VOC/non-HAPS					7.30%	1.40%	0.221	0.124	0.141	0.49
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	1.6E-03	2.8E-03	1.0E-03	5.4E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	2.9E-04	4.3E-04	1.9E-04	9.1E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	1.5E-03	3.5E-03	9.4E-04	5.9E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	3.9E-04	1.4E-03	2.5E-04	2.1E-03
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	6.4E-06	3.5E-04	4.0E-06	3.7E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	4.5E-04	2.0E-03	2.9E-04	2.8E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	3.3E-03	0	2.1E-03	5.4E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	8.5E-03	3.4E-03	5.4E-03	0.017
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	2.7E-03	6.1E-02	1.7E-03	0.066
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	4.5E-03	8.9E-03	2.9E-03	0.016
Isocotane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	5.4E-05	2.7E-05	3.5E-05	1.2E-04
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	2.4E-05	0	2.4E-05
MTBE	1634-04-4	VOC/HAP	---	TOC	0	0	0	0	0	0
Styrene	100-42-5	VOC/HAP	---	TOC	0.0073%	0.0054%	2.2E-04	4.8E-04	1.4E-04	8.4E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	2.3E-04	0	1.5E-04	3.8E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	6.4E-03	5.5E-03	4.0E-03	0.016
1,1,1-Trichloroethane	71-55-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichloroethene	79-01-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichlorofluoromethane	75-69-4	VOC/HAP	---	TOC	0.0013%	0	3.9E-05	0	2.5E-05	6.4E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	1.2E-02	1.8E-02	7.9E-03	0.038
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	2.4E-03	5.1E-03	1.5E-03	9.0E-03
Total volatile organic HAPs					1.50%	1.30%	0.045	0.115	0.029	0.190

Methodology

Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Speciation Profile (%)] * [TOC (tons/yr)]
Speciation Profiles from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-15 and 11.1-16

Abbreviations

TOC = Total Organic Compounds
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound
MTBE = Methyl tert butyl ether

Appendix A.1: Emissions Calculations
Material Storage Piles
Unlimited Emissions

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Reviewer: Sandra Carr

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

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

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

125

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

15

 % of wind greater than or equal to 12 mph

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM ₁₀ /PM _{2.5} (tons/yr)
Limestone	1.6	1.85	0.67	0.226	0.079
Gravel (Crushed Concrete)	1.6	1.85	0.15	0.051	0.018
Slag	3.8	4.40	0.67	0.538	0.188
Totals =			1.49	0.81	0.29

Methodology

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

PTE of PM₁₀/PM_{2.5} (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%

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

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

Abbreviations

PM = Particulate Matter

PM₁₀ = Particulate Matter (<10 µm)

PM_{2.5} = Particulate Matter (<2.5 µm)

PM_{2.5} = PM₁₀

PTE = Potential to Emit

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

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Reviewer: Sandra Carr

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

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

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

where: E_f = Emission factor (lb/ton)

k (PM) =	0.74	= particle size multiplier (0.74 assumed for aerodynamic diameter $\leq 100 \mu\text{m}$)
k (PM ₁₀) =	0.35	= particle size multiplier (0.35 assumed for aerodynamic diameter $\leq 10 \mu\text{m}$)
k (PM _{2.5}) =	0.053	= particle size multiplier (0.053 assumed for aerodynamic diameter $\leq 2.5 \mu\text{m}$)
U =	10.2	= worst case annual mean wind speed (Source: NOAA, 2006*)
M =	4.0	= material % moisture content of aggregate (Source: AP-42 Section 11.1.1.1)
E_f (PM) =	2.27E-03	lb PM/ton of material handled
E_f (PM ₁₀) =	1.07E-03	lb PM ₁₀ /ton of material handled
E_f (PM _{2.5}) =	1.62E-04	lb PM _{2.5} /ton of material handled

Maximum Annual Asphalt Production =	3,504,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	6.0%	
Maximum Material Handling Throughput =	3,293,760	tons/yr

Type of Activity	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM ₁₀ (tons/yr)	Unlimited/Uncontrolled PTE of PM _{2.5} (tons/yr)
Truck unloading of materials into storage piles	3.73	1.77	0.27
Front-end loader dumping of materials into feeder bins	3.73	1.77	0.27
Conveyor dropping material into dryer/mixer or batch tower	3.73	1.77	0.27
Total (tons/yr)	11.20	5.30	0.80

Methodology

The percent asphalt cement/binder provided by the source.

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

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

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

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

Material Screening and Conveying (AP-42 Section 11.19.2)

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

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM ₁₀ (lbs/ton)*	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM ₁₀ /PM _{2.5} (tons/yr)**
Crushing	0.0054	0.0024	8.89	3.95
Screening	0.025	0.0087	41.17	14.33
Conveying	0.003	0.0011	4.94	1.81
Unlimited Potential to Emit (tons/yr) =			55.01	20.09

Abbreviations

PM = Particulate Matter

PM₁₀ = Particulate Matter (<10 μm)

PM_{2.5} = Particulate Matter (<2.5 μm)

PTE = Potential to Emit

Methodology

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

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

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

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

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

**Assumes PM₁₀ = PM_{2.5}

Appendix A.1: Emissions Calculations
Unpaved Roads
Unlimited Emissions

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Reviewer: Sandra Carr

Unpaved Roads at Industrial Site

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

Maximum Annual Asphalt Production =	3,504,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	6.0%	
Maximum Material Handling Throughput =	3,293,760	tons/yr
Maximum Asphalt Cement/Binder Throughput =	210,240	tons/yr
Maximum No. 2 Fuel Oil Usage =	6,257,143	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	14.0	26.0	40.00	8.1E+03	3.2E+05	422	0.080	646.9
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	14.0	0	14.00	8.1E+03	1.1E+05	422	0.080	646.9
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	25	37.00	8.5E+02	3.1E+04	422	0.080	67.7
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	8.5E+02	1.0E+04	422	0.080	67.7
Aggregate/RAP Loader Full	Front-end loader (3 CY)	48.0	13.0	61.00	2.5E+05	1.5E+07	158	0.030	7601.0
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	48.0	0	48.00	2.5E+05	1.2E+07	158	0.030	7601.0
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	13.0	20.0	33.00	1.8E+05	5.8E+06	264	0.050	8760.0
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	13.0	0	13.00	1.8E+05	2.3E+06	264	0.050	8760.0
Total					8.7E+05	3.6E+07			3.4E+04

Average Vehicle Weight Per Trip =	41.3	tons/trip
Average Miles Per Trip =	0.039	miles/trip

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

	PM	PM ₁₀	PM _{2.5}	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2) Sand/Gravel Processing Plant Road
W =	41.3	41.3	41.3	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

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

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

	PM	PM ₁₀	PM _{2.5}	
Unmitigated Emission Factor, $E_f =$	8.40	2.14	0.21	lb/mile
Mitigated Emission Factor, $E_{ext} =$	5.52	1.41	0.14	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM ₁₀ (tons/yr)	Unmitigated PTE of PM _{2.5} (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM ₁₀ (tons/yr)	Mitigated PTE of PM _{2.5} (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM ₁₀ (tons/yr)	Controlled PTE of PM _{2.5} (tons/yr)
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	2.716	0.692	0.07	1.786	0.455	0.05	0.893	0.228	0.02
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	2.716	0.692	0.07	1.786	0.455	0.05	0.893	0.228	0.02
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.284	0.072	0.01	0.187	0.048	0.00	0.093	0.024	0.00
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.284	0.072	0.01	0.187	0.048	0.00	0.093	0.024	0.00
Aggregate/RAP Loader Full	Front-end loader (3 CY)	31.92	8.13	0.81	20.99	5.35	0.53	10.49	2.67	0.27
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	31.92	8.13	0.81	20.99	5.35	0.53	10.49	2.67	0.27
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	36.79	9.38	0.94	24.19	6.16	0.62	12.09	3.08	0.31
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	36.79	9.38	0.94	24.19	6.16	0.62	12.09	3.08	0.31
Totals		143.41	36.55	3.65	94.30	24.03	2.40	47.15	12.02	1.20

Methodology

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

Abbreviations

PM = Particulate Matter
 PM₁₀ = Particulate Matter (<10 μm)
 PM_{2.5} = Particulate Matter (<2.5 μm)
 PM_{2.5} = PM₁₀
 PTE = Potential to Emit

Appendix A.1: Emissions Calculations

**Paved Roads
Unlimited Emissions**

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Reviewer: Sandra Carr

Paved Roads at Industrial Site

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

Maximum Annual Asphalt Production =	3,504,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	6.0%	
Maximum Material Handling Throughput =	3,293,760	tons/yr
Maximum Asphalt Cement/Binder Throughput =	210,240	tons/yr
Maximum No. 2 Fuel Oil Usage =	6,257,143	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per day (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	14.0	26.0	40.00	8.1E+03	3.2E+05	300	0.057	459.4
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	14.0	0	14.00	8.1E+03	1.1E+05	300	0.057	459.4
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	25	37.00	8.5E+02	3.1E+04	300	0.057	48.1
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	8.5E+02	1.0E+04	300	0.057	48.1
Aggregate/RAP Loader Full	Front-end loader (3 CY)	48.0	13.0	61.00	2.5E+05	1.5E+07	300	0.057	14395.8
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	48.0	0	48.00	2.5E+05	1.2E+07	300	0.057	14395.8
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	13.0	20.0	33.00	1.8E+05	5.8E+06	300	0.057	9954.5
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	13.0	0	13.00	1.8E+05	2.3E+06	300	0.057	9954.5
Total					8.7E+05	3.6E+07			5.0E+04

Average Vehicle Weight Per Trip =	41.3	tons/trip
Average Miles Per Trip =	0.057	miles/trip

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

	PM	PM ₁₀	PM _{2.5}	
where k =	0.082	0.016	0.0024	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	41.3	41.3	41.3	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	0.00036	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)
sL =	0.6	0.6	0.6	g/m ² = Ubiquitous Baseline Silt Loading Values of paved roads

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, E_{ext} = E * [1 - (p/4N)] (Table 13.2.1-3 for summer months)

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

	PM	PM ₁₀	PM _{2.5}	
Unmitigated Emission Factor, Ef =	1.92	0.37	0.06	lb/mile
Mitigated Emission Factor, E _{ext} =	1.75	0.34	0.05	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM ₁₀ (tons/yr)	Unmitigated PTE of PM _{2.5} (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM ₁₀ (tons/yr)	Mitigated PTE of PM _{2.5} (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM ₁₀ (tons/yr)	Controlled PTE of PM _{2.5} (tons/yr)
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.440	0.086	1.3E-02	0.402	0.078	1.2E-02	0.201	3.9E-02	5.9E-03
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.440	0.086	1.3E-02	0.402	0.078	1.2E-02	0.201	3.9E-02	5.9E-03
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	4.6E-02	9.0E-03	1.3E-03	4.2E-02	8.2E-03	1.2E-03	2.1E-02	4.1E-03	6.1E-04
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	4.6E-02	9.0E-03	1.3E-03	4.2E-02	8.2E-03	1.2E-03	2.1E-02	4.1E-03	6.1E-04
Aggregate/RAP Loader Full	Front-end loader (3 CY)	13.79	2.69	0.40	12.61	2.46	0.37	6.31	1.23	0.18
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	13.79	2.69	0.40	12.61	2.46	0.37	6.31	1.23	0.18
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	9.54	1.86	0.28	8.72	1.70	0.25	4.36	0.85	0.13
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	9.54	1.86	0.28	8.72	1.70	0.25	4.36	0.85	0.13
Totals		47.63	9.28	1.39	43.55	8.49	1.27	21.77	4.24	0.63

Methodology

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

Abbreviations

PM = Particulate Matter
 PM₁₀ = Particulate Matter (<10 μm)
 PM_{2.5} = Particulate Matter (<2.5 μm)
 PM_{2.5} = PM₁₀
 PTE = Potential to Emit

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

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Reviewer: Sandra Carr

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 %) =	6.0%	
Maximum Asphalt Cement/Binder Throughput =	210,240	tons/yr

Volatile Organic Compounds

	Maximum weight % of VOC solvent in binder*	Weight % VOC solvent in binder that evaporates	Maximum VOC Solvent Usage (tons/yr)	PTE of VOC (tons/yr)
Cut back asphalt rapid cure (assuming gasoline or naphtha solvent)	25.3%	95.0%	53190.7	50531.2
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	60128.6	42090.0
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	42048.0	10512.0
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	31536.0	14632.7
Other asphalt with solvent binder	25.9%	2.5%	54452.2	1361.3
Worst Case PTE of VOC =				50531.2

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0% Xylenes
PTE of Total HAP (tons/yr) =	13,180.40
PTE of Single HAP (tons/yr) =	4,547.81 Xylenes

Hazardous Air Pollutant (HAP) Content (% by weight) For Various Petroleum Solvents¹

	CAS#	Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents				
		Gasoline	Kerosene	Diesel (#2) Fuel Oil	No. 2 Fuel Oil	No. 6 Fuel Oil
Volatile Organic HAP						
1,3-Butadiene	106-99-0	3.70E-5%				
2,2,4-Trimethylpentane	540-84-1	2.40%				
Acenaphthene	83-32-9		4.70E-5%		1.80E-4%	
Acenaphthylene	208-96-8		4.50E-5%		6.00E-5%	
Anthracene	120-12-7		1.20E-6%	5.80E-5%	2.80E-5%	5.00E-5%
Benzene	71-43-2	1.90%		2.90E-4%		
Benzo(a)anthracene	56-55-3			9.60E-7%	4.50E-7%	5.50E-4%
Benzo(a)pyrene	50-32-8			2.20E-6%	2.10E-7%	4.40E-5%
Benzo(g,h,i)perylene	191-24-2			1.20E-7%	5.70E-8%	
Biphenyl	92-52-4			6.30E-4%	7.20E-5%	
Chrysene	218-01-9			4.50E-7%	1.40E-6%	6.90E-4%
Ethylbenzene	100-41-4	1.70%		0.07%	3.40E-4%	
Fluoranthene	206-44-0		7.10E-6%	5.90E-5%	1.40E-5%	2.40E-4%
Fluorene	86-73-7		4.20E-5%	8.60E-4%	1.90E-4%	
Indeno(1,2,3-cd)pyrene	193-39-5			1.60E-7%		1.00E-4%
Methyl-tert-butylether	1634-04-4	0.33%				
Naphthalene	91-20-3	0.25%	0.31%	0.26%	0.22%	4.20E-5%
n-Hexane	110-54-3	2.40%				
Phenanthrene	85-01-8		8.60E-6%	8.80E-4%	7.90E-4%	2.10E-4%
Pyrene	129-00-0		2.40E-6%	4.60E-5%	2.90E-5%	2.30E-5%
Toluene	108-88-3	8.10%		0.18%	6.20E-4%	
Total Xylenes	1330-20-7	9.00%		0.50%	0.23%	
Total Organic HAP =		26.08%	0.33%	1.29%	0.68%	0.19%
Worst Single HAP =		9.00%	0.31%	0.50%	0.23%	0.07%
		Xylenes	Naphthalene	Xylenes	Xylenes	Chrysene

Methodology

Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]
Maximum VOC Solvent Usage (tons/yr) = [Maximum Asphalt Cement/Binder Throughput (tons/yr)] * [Maximum Weight % of VOC Solvent in Binder]
PTE of VOC (tons/yr) = [Weight % VOC solvent in binder that evaporates] * [Maximum VOC Solvent Usage (tons/yr)]
PTE of Total HAP (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)]
¹Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Composition of Petroleum Mixtures. The Association for Environmental Health and Science. Available on the Internet at: <http://www.aehs.com/publications/catalog/contents/tph.htm>

Abbreviations

VOC = Volatile Organic Compounds
PTE = Potential to Emit

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

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Reviewer: Sandra Carr

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

$$\begin{aligned} \text{Gasoline Throughput} &= \frac{0}{1} \text{ gallons/day} \\ &= 0.0 \text{ kgal/yr} \end{aligned}$$

Volatile Organic Compounds

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

Hazardous Air Pollutants

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

Methodology

The gasoline throughput was provided by the source.

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

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

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

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

*Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Composition of Petroleum Mixtures. The Association for Environmental Health and Science. Available on the Internet at: <http://www.aehs.com/publications/catalog/contents/tph.htm>

Abbreviations

VOC = Volatile Organic Compounds

PTE = Potential to Emit

Appendix A.2: Emissions Calculations
2008 Limited Emission Summary

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Reviewer: Sandra Carr

Asphalt Plant Actual Production

Maximum Hourly Asphalt Production =	400	ton/hr								
Annual Asphalt Production =	166,314	ton/yr								
Slag Usage =	55,800	ton/yr	1.00	% sulfur						
Natural Gas Usage =	4.98	MMCF/yr								
No. 2 Fuel Oil Usage =	17,431	gal/yr, and	0.05	% sulfur						
No. 4 Fuel Oil Limitation =		gal/yr, and		% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Limitation =		gal/yr, and		% sulfur						
Propane Limitation =		gal/yr, and		gr/100 ft ³ sulfur						
Butane Limitation =		gal/yr, and		gr/100 ft ³ sulfur						
Used/Waste Oil Usage =	275,988	gal/yr, and	0.50	% sulfur	0.75	% ash	0.400	% chlorine,	0.010	% lead
Diesel Engine Oil Limitation =		gal/yr, and								
PM Dryer/Mixer Limitation =	0.023	lb/ton of asphalt production								
PM ₁₀ Dryer/Mixer Limitation =	0.023	lb/ton of asphalt production								
PM _{2.5} Dryer/Mixer Limitation =	0.023	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								
Slag SO ₂ Dryer/Mixer Limitation =	0.740	lb/ton of slag processed								
Cold Mix Asphalt VOC Usage Limitation =	0.0	tons/yr								

Actual Emissions (Limited/Controlled)

Process Description	Limited/Controlled Potential Emissions (tons/year)								
	Criteria Pollutants						Hazardous Air Pollutants		
	PM	PM ₁₀	PM _{2.5}	SO ₂	NOx	VOC	CO	Total HAP	Worst Case HAP
Ducted Emissions									
Dryer Fuel Combustion (worst case)	6.62	5.28	5.28	10.14	2.62	0.14	0.69	3.76	3.64 (hydrogen chloride)
Dryer/Mixer (Process)	1.91	1.91	1.91	4.82	4.57	2.66	10.81	0.89	0.26 (formaldehyde)
Dryer/Mixer Slag Processing	0	0	0	20.65	0	0	0	0	0
Hot Oil Heater Fuel Combustion (worst case)	0.13	0.21	0.21	4.44	1.25	0.05	0.74	0.02	0.016 (hexane)
Worst Case Emissions*	6.75	5.48	5.48	35.23	5.83	2.71	11.55	3.78	3.64 (hydrogen chloride)
Fugitive Emissions									
Asphalt Load-Out, Silo Filling, On-Site Yard	0.09	0.09	0.09	0	0	1.42	0.24	0.02	0.01 (formaldehyde)
Material Storage Piles	0.81	0.29	0.29	0	0	0	0	0	0
Material Processing and Handling	0.53	0.25	0.04	0	0	0	0	0	0
Material Crushing, Screening, and Conveying	2.61	0.95	0.95	0	0	0	0	0	0
Unpaved and Paved Roads (worst case)	2.23	0.57	0.06	0	0	0	0	0	0
Cold Mix Asphalt Production	0	0	0	0	0	0	0	0	0 (xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0	0	0	0 (xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	negl	negl
Total Fugitive Emissions	6.28	2.15	1.43	0	0	1.42	0.24	0.02	0.00 (xylenes)
Actual Emission Totals	13.03	7.63	6.91	35.23	5.83	4.13	11.79	3.80	3.64 (xylenes)

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
Fuel component percentages provided by the source.

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

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Application Date: May 23, 2009
Reviewer: Sandra Carr

Asphalt Plant Limitations										
Maximum Hourly Asphalt Production =	400	ton/hr								
Annual Asphalt Production Limitation =	1,500,000	ton/yr								
Slag Usage Limitation =	260,000	ton/yr	1.50	% sulfur						
Natural Gas Limitation =	325	MMCF/yr								
No. 2 Fuel Oil Limitation =	125,000	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Limitation =		gal/yr, and		% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Limitation =		gal/yr, and		% sulfur						
Propane Limitation =		gal/yr, and		gr/100 ft ³ sulfur						
Butane Limitation =		gal/yr, and		gr/100 ft ³ sulfur						
Used/Waste Oil Limitation =	800,000	gal/yr, and	0.50	% sulfur	1.00	% ash	0.200	% chlorine,	0.010	% lead
Diesel Engine Oil Limitation =		gal/yr, and								
PM Dryer/Mixer Limitation =	0.100	lb/ton of asphalt production								
PM ₁₀ Dryer/Mixer Limitation =	0.115	lb/ton of asphalt production								
PM _{2.5} Dryer/Mixer Limitation =	0.115	lb/ton of asphalt production								
CO Dryer/Mixer Limitation =	0.130	lb/ton of asphalt production								
VOC Dryer/Mixer Limitation =	0.035	lb/ton of asphalt production								
Slag SO ₂ Dryer/Mixer Limitation =	0.740	lb/ton of slag processed								
Cold Mix Asphalt VOC Usage Limitation =	21.5	tons/yr								

Limited/Controlled Emissions	Limited/Controlled Potential Emissions (tons/year)									
	Criteria Pollutants							Hazardous Air Pollutants		
	PM	PM ₁₀	PM _{2.5}	SO ₂	NOx	VOC	CO	Total HAP	Worst Case HAP	
Ducted Emissions										
Dryer Fuel Combustion (worst case)	25.60	20.40	20.40	29.40	30.88	0.89	13.65	5.91	5.28	(hydrogen chloride)
Dryer/Mixer (Process)	75.00	86.25	86.25	43.50	41.25	26.25	97.50	7.99	2.33	(formaldehyde)
Dryer/Mixer - Slag Processing	0	0	0	96.20	0	0	0	0	0	
Worst Case Emissions*	75.00	86.25	86.25	96.20	41.25	26.25	97.50	7.99	5.28	(hydrogen chloride)
Fugitive Emissions										
Hot Oil Heater Fuel Combustion (worst case)	0.08	0.12	0.12	2.66	0.88	0.05	0.74	0	0.016	(hexane)
Asphalt Load-Out and On-Site Yard	0.57	0.57	0.57	0	0	1.42	1.05	0.02	0.02	(formaldehyde)
Material Storage Piles	0.81	0.29	0.29	0	0	0	0	0	0	
Material Processing and Handling	4.79	2.27	0.34	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	23.55	8.60	8.60	0	0	0	0	0	0	
Unpaved and Paved Roads (worst case)	2.58	0.66	0.07	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	0	21.50	0	5.61	1.94	(xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	negl	negl	
Total Fugitive Emissions	32.39	12.51	9.99	2.66	0.88	22.97	1.79	5.65	1.94	(xylenes)
Totals Limited/Controlled Emissions	107.39	98.76	96.24	98.86	42.13	49.22	99.29	13.64	5.28	(hydrogen chloride)

negl = negligible

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

*Worst Case Emissions (tons/yr) = Worst Case Emissions from Dryer Fuel Combustion and Dryer/Mixer + Dryer/Mixer Slag Processing + Worst Case Emissions from Hot Oil Heater Fuel Combustion

Fuel component percentages provided by the source.

Appendix A.2: Emissions Calculations
Dryer/Burner Fuel Combustion with Maximum Capacity ≥ 100 MMBtu/hr
Limited Emissions

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Application Date: November 7, 2008
Reviewer: Sandra Carr

The following calculations determine the limited emissions created from the combustion of natural gas, No.2 low-sulfur diesel fuel, or recycled (waste) oil in the mixer/dryer and all other fuel combustion sources at the source.

Production and Fuel Limitations	
Maximum Hourly Asphalt Production =	400 ton/hr
Annual Asphalt Production Limitation =	1,500,000 ton/yr
Natural Gas Limitation =	325 MMCF/yr
No. 2 Fuel Oil Limitation =	125,000 gal/yr, and 0.50 % sulfur
No. 4 Fuel Oil Limitation =	gal/yr, and % sulfur
Residual (No. 5 or No. 6) Fuel Oil Limitation =	gal/yr, and % sulfur
Propane Limitation =	gal/yr, and gr/100 ft ³ sulfur
Butane Limitation =	gal/yr, and gr/100 ft ³ sulfur
Used/Waste Oil Limitation =	800,000 gal/yr, and 0.50 % sulfur 1.00 % ash 0.200 % chlorine, 0.010 % lead
Diesel Engine Oil Limitation =	gal/yr, and

Limited Emissions	Emission Factor (units)									Limited Potential to Emit (tons/yr)								
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/Waste Oil (lb/kgal)	Diesel Engine (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/Waste Oil (tons/yr)	Diesel Engine (tons/yr)	Worse Case Fuel (tons/yr)	
Criteria Pollutant																		
PM	1.9	2				64			0.31	0.13				25.60			25.60	
PM ₁₀ /PM _{2.5}	7.6	3.3				51			1.24	0.21				20.40			20.40	
SO ₂	0.6	78.5				73.50			0.10	4.91				29.40			29.40	
NOx	190	24.0				19.0			30.88	1.50				7.60			30.88	
VOC	5.5	0.20				1.0			0.89	0.01				0.40			0.89	
CO	84	5.0				5.0			13.65	0.31				2.00			13.65	
Hazardous Air Pollutant																		
HCl						13.20								5.28			5.28	
Antimony						negl								negl			0	
Arsenic	2.0E-04	5.6E-04				1.1E-01			3.3E-05	3.50E-05				0.04			0.044	
Beryllium	1.2E-05	4.2E-04				negl			2.0E-06	2.63E-05				negl			2.6E-05	
Cadmium	1.1E-03	4.2E-04				9.3E-03			1.8E-04	2.63E-05				3.72E-03			0.004	
Chromium	1.4E-03	4.2E-04				2.0E-02			2.3E-04	2.63E-05				8.00E-03			0.008	
Cobalt	8.4E-05					2.1E-04			1.4E-05					8.40E-05			8.4E-05	
Lead	5.0E-04	1.3E-03				0.55			8.1E-05	7.88E-05				0.22			0.22	
Manganese	3.8E-04	8.4E-04				6.8E-02			6.2E-05	5.25E-05				0.03			0.03	
Mercury	2.6E-04	4.2E-04							4.2E-05	2.63E-05							4.2E-05	
Nickel	2.1E-03	4.2E-04				1.1E-02			3.4E-04	2.63E-05				4.40E-03			0.004	
Selenium	2.4E-05	2.1E-03				negl			3.9E-06	1.31E-04				negl			0.000	
1,1,1-Trichloroethane																	0	
1,3-Butadiene																	0	
Acetaldehyde																	0	
Acrolein																	0	
Benzene	2.1E-03								3.4E-04								0	
Bis(2-ethylhexyl)phthalate							2.2E-03							8.80E-04			8.8E-04	
Dichlorobenzene	1.2E-03						8.0E-07		2.0E-04					3.20E-07			2.0E-04	
Ethylbenzene																	0	
Formaldehyde	7.5E-02	6.10E-02							1.2E-02	3.81E-03							0.012	
Hexane	1.8E+00								0.29								0.293	
Phenol							2.4E-03							9.60E-04			9.6E-04	
Toluene	3.4E-03								5.5E-04								5.5E-04	
Total PAH Haps	negl						3.9E-02		negl					0.02			0.016	
Polycyclic Organic Matter		3.30E-03								2.06E-04							0.000	
Xylene																	0	
Total HAP =									0.31	0.00	0	0	0	0	0	5.60	5.91	

Abbreviations

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

PM = Particulate Matter
 PM₁₀ = Particulate Matter (≤10 μm)
 PM_{2.5} = Particulate Matter (≤2.5 μm)
 SO₂ = Sulfur Dioxide
 NOx = Nitrous Oxides
 CO = Carbon Monoxide
 HCl = Hydrogen Chloride
 PAH = Polyaromatic Hydrocarbon
 HAP = Hazardous Air Pollutant
 VOC = Volatile Organic Compounds

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 9/98), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11
 Propane and Butane: AP-42 Chapter 1.5 (dated 7/08), Tables 1.5-1 (assuming PM = PM₁₀)
 Recycled (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
 Diesel Engine Oil: AP-42 Chapter 3.3 (dated 10/96), Tables 3.3-1 and 3.3-2

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

Appendix A.2: Emissions Calculations
Dryer/Mixer
Limited Process Emissions

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Application Date: November 7, 2008
Reviewer: Sandra Carr

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

Maximum Hourly Asphalt Production =	400	ton/hr
Annual Asphalt Production Limitation =	1,500,000	ton/yr
PM Dryer/Mixer Limitation =	0.100	lb/ton of asphalt production
PM ₁₀ Dryer/Mixer Limitation =	0.115	lb/ton of asphalt production
PM _{2.5} Dryer/Mixer Limitation =	0.115	lb/ton of asphalt production
CO Dryer/Mixer Limitation =	0.130	lb/ton of asphalt production
VOC Dryer/Mixer Limitation =	0.035	lb/ton of asphalt production

Criteria Pollutants	Emission Factor or Limitation (lb/ton)			Limited/Controlled Potential to Emit (tons/yr)			Worse Case PTE
	Drum-Mix Plant (dryer/mixer, controlled by fabric filter)			Drum-Mix Plant (dryer/mixer, controlled by fabric filter)			
	Natural Gas	No. 2 Fuel Oil	Waste Oil	Natural Gas	No. 2 Fuel Oil	Waste Oil	
PM*	0.100	0.100	0.100	75.0	75.0	75.0	75.0
PM ₁₀ *	0.115	0.115	0.115	86.3	86.3	86.3	86.3
PM _{2.5} *	0.115	0.115	0.115	86.3	86.3	86.3	86.3
SO ₂ **	0.003	0.011	0.058	2.6	8.3	43.5	43.5
NOx**	0.026	0.055	0.055	19.5	41.3	41.3	41.3
VOC**	0.035	0.035	0.035	26.3	26.3	26.3	26.3
CO***	0.130	0.130	0.130	97.5	97.5	97.5	97.5
Hazardous Air Pollutants							
HCl			2.10E-04			0.16	0.16
Antimony	1.80E-07	1.80E-07	1.80E-07	1.35E-04	1.35E-04	1.35E-04	1.35E-04
Arsenic	5.60E-07	5.60E-07	5.60E-07	4.20E-04	4.20E-04	4.20E-04	4.20E-04
Beryllium	negl	negl	negl	negl	negl	negl	0.00E+00
Cadmium	4.10E-07	4.10E-07	4.10E-07	3.08E-04	3.08E-04	3.08E-04	3.08E-04
Chromium	5.50E-06	5.50E-06	5.50E-06	4.13E-03	4.13E-03	4.13E-03	4.13E-03
Cobalt	2.60E-08	2.60E-08	2.60E-08	1.95E-05	1.95E-05	1.95E-05	1.95E-05
Lead	6.20E-07	1.50E-05	1.50E-05	4.65E-04	1.13E-02	1.13E-02	1.13E-02
Manganese	7.70E-06	7.70E-06	7.70E-06	5.78E-03	5.78E-03	5.78E-03	5.78E-03
Mercury	2.40E-07	2.60E-06	2.60E-06	1.80E-04	1.95E-03	1.95E-03	1.95E-03
Nickel	6.30E-05	6.30E-05	6.30E-05	4.73E-02	4.73E-02	4.73E-02	0.05
Selenium	3.50E-07	3.50E-07	3.50E-07	2.63E-04	2.63E-04	2.63E-04	2.63E-04
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	4.00E-05	3.00E-02	3.00E-02	3.00E-02	0.03
Acetaldehyde			1.30E-03			0.98	0.98
Acrolein			2.60E-05			1.95E-02	1.95E-02
Benzene	3.90E-04	3.90E-04	3.90E-04	0.29	0.29	0.29	0.29
Ethylbenzene	2.40E-04	2.40E-04	2.40E-04	0.18	0.18	0.18	0.18
Formaldehyde	3.10E-03	3.10E-03	3.10E-03	2.33	2.33	2.33	2.33
Hexane	9.20E-04	9.20E-04	9.20E-04	0.69	0.69	0.69	0.69
Methyl chloroform	4.80E-05	4.80E-05	4.80E-05	0.04	0.04	0.04	0.04
MEK			2.00E-05			0.02	0.02
Propionaldehyde			1.30E-04			0.10	0.10
Quinone			1.60E-04			0.12	0.12
Toluene	1.50E-04	2.90E-03	2.90E-03	0.11	2.18	2.18	2.18
Total PAH Hap	1.90E-04	8.80E-04	8.80E-04	0.14	0.66	0.66	0.66
Xylene	2.00E-04	2.00E-04	2.00E-04	0.15	0.15	0.15	0.15
Total HAPs							7.99
Worst Single HAP							2.33 (formaldehyde)

Methodology

Limited/Controlled Potential to Emit (tons/yr) = (Annual Asphalt Production Limitation (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-3, 11.1-4, 11.1-7, 11.1-8, 11.1-10, and 11.1-12

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

* PM, PM₁₀, and PM_{2.5} 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 PM_{2.5} emissions.

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

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

Abbreviations

VOC - Volatile Organic Compounds

HCl = Hydrogen Chloride

SO₂ = Sulfur Dioxide

HAP = Hazardous Air Pollutant

PAH = Polyaromatic Hydrocarbon

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

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Application Date: November 7, 2008
Reviewer: Sandra Carr

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

Slag Usage Limitation =

260,000

 ton/yr
SO₂ Slag Limitation =

0.740

 lb/ton of slag processed

1.50

 % sulfur

	Emission Factor or Limitation (lb/ton)*	Limited Potential to Emit (tons/yr)
Criteria Pollutant	Slag Processing	Slag Processing
SO ₂	0.740	96.2

Methodology

* Testing results for 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 slag containing 1.10% sulfur content. Rieth-Riley requested a safety factor of 0.20 lb/ton be added to the tested value ... to allow for a sulfur content up to 1.5%.

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

Abbreviations

SO₂ = Sulfur Dioxide

Appendix A.2: Emissions Calculations
Hot Oil Heater
Fuel Combustion with Maximum Capacity < 100 MMBtu/hr
Limited Emissions

Company Name: Walsh & Kelly, Inc.
Source Location: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Application Date: November 7, 2008
Reviewer: Sandra Carr

Maximum Hot Oil Heater Fuel Input Rate = 2.00 MMBtu/hr
Natural Gas Usage = 17.52 MMCF/yr
No. 2 Fuel Oil Usage = 75,000 gal/yr, and 0.50 % sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		Totals
	Hot Oil Heater		Hot Oil Heater		
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	Worse Case Fuel (tons/yr)
PM	1.9	2.0	0.017	0.075	0.08
PM ₁₀ /PM _{2.5}	7.6	3.3	0.067	0.124	0.12
SO ₂	0.6	71.0	0.005	2.663	2.66
NO _x	100	20.0	0.876	0.750	0.88
VOC	5.5	0.20	0.048	0.008	0.05
CO	84	5.0	0.736	0.188	0.74
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	1.8E-06	2.10E-05	2.1E-05
Beryllium	1.2E-05	4.2E-04	1.1E-07	1.58E-05	1.6E-05
Cadmium	1.1E-03	4.2E-04	9.6E-06	1.58E-05	1.6E-05
Chromium	1.4E-03	4.2E-04	1.2E-05	1.58E-05	1.6E-05
Cobalt	8.4E-05		7.4E-07	0.00E+00	0
Lead	5.0E-04	1.3E-03	4.4E-06	4.73E-05	4.7E-05
Manganese	3.8E-04	8.4E-04	3.3E-06	3.15E-05	3.2E-05
Mercury	2.6E-04	4.2E-04	2.3E-06	1.58E-05	1.6E-05
Nickel	2.1E-03	4.2E-04	1.8E-05	1.58E-05	1.8E-05
Selenium	2.4E-05	2.1E-03	2.1E-07	7.88E-05	7.9E-05
Benzene	2.1E-03		1.8E-05		0
Dichlorobenzene	1.2E-03		1.1E-05		0
Ethylbenzene					0
Formaldehyde	7.5E-02	6.10E-02	6.6E-04	2.29E-03	0.002
Hexane	1.8E+00		0.02		0
Phenol					0
Toluene	3.4E-03		3.0E-05		2.98E-05
Total PAH Haps	negl		negl		negl
Polycyclic Organic Matter		3.30E-03		1.24E-04	1.2E-04
Total HAP =			1.7E-02	2.7E-03	0.018

Methodology

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

Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]

Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) =

[Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]

All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) =

[Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]

Sources of AP-42 Emission Factors for fuel combustion:

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

AP-42 Chapter 1.3 (dated 9/98), Tables 1.3-1, 1.3-2, 1.3-3, 1.3-8, 1.3-9, 1.3-10, and 1.3-11

Abbreviations

PM = Particulate Matter

PM₁₀ = Particulate Matter (<10 µm)

PM_{2.5} = Particulate Matter (<2.5 µm)

SO₂ = Sulfur Dioxide

NO_x = Nitrous Oxides

CO = Carbon Monoxide

HAP = Hazardous Air Pollutant

HCl = Hydrogen Chloride

PAH = Polyaromatic Hydrocarbon

VOC - Volatile Organic Compounds

Appendix A.2: Limited Emissions
Asphalt Load-Out, Silo Filling, and Yard Emissions
Limited Emissions

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Application Date: November 7, 2008
Reviewer: Sandra Carr

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 =	290	F
Asphalt Volatility Factor, V =	-0.5	
Annual Asphalt Production Limitation =	1,500,000	tons/yr

Pollutant	Emission Factor (lb/ton asphalt)			Limited Potential to Emit (tons/yr)			
	Load-Out	Silo Filling	On-Site Yard	Load-Out	Silo Filling	On-Site Yard	Total
Total PM*	3.2E-04	4.4E-04	NA	0.24	0.33	NA	0.57
Organic PM	1.4E-04	1.1E-04	NA	0.11	0.079	NA	0.19
TOC	0.002	0.005	0.001	1.30	3.80	0.825	5.9
CO	0.001	0.000	3.5E-04	0.42	0.368	0.264	1.05

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

PM/HAP	0.002	0.002	0	0.004
VOC/HAP	0.005	0.013	0.001	0.019
non-VOC/HAP	2.7E-05	2.7E-06	7.0E-06	3.6E-05
non-VOC/non-HAP	0.03	0.01	0.01	0.05

Total VOCs	0.33	1.01	0.1	1.42
Total HAP	0.01	0.02	0.001	0.02
Worst Single HAP =				0.020
				(formaldehyde)

Methodology

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

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

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

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

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

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

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

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

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

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

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

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

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

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

*No emission factors available for PM₁₀ or PM_{2.5}, therefore IDEM assumes PM₁₀ and PM_{2.5} are equivalent to Total PM.

Abbreviations

CO = Carbon Monoxide

PM = Particulate Matter

PM₁₀ = Particulate Matter (<10 µm)

PM_{2.5} = Particulate Matter (<2.5 µm)

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

TOC = Total Organic Compounds

Appendix A.2: Emissions Calculations
Material Storage Piles
Limited Emissions

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Application Date: November 7, 2008
Reviewer: Sandra Carr

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

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

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

125

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

15

 % of wind greater than or equal to 12 mph

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM ₁₀ /PM _{2.5} (tons/yr)
Limestone	1.6	1.85	0.67	0.226	0.079
Gravel (Crushed Concrete)	1.6	1.85	0.15	0.051	0.018
Slag	3.8	4.40	0.67	0.538	0.188
Totals =			1.49	0.81	0.29

Methodology

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

PTE of PM₁₀/PM_{2.5} (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.

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

Abbreviations

PM = Particulate Matter

PM₁₀ = Particulate Matter (<10 μm)

PM_{2.5} = Particulate Matter (<2.5 μm)

PM_{2.5} = PM₁₀

PTE = Potential to Emit

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

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Application Date: November 7, 2008
Reviewer: Sandra Carr

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

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

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

where: E_f = Emission factor (lb/ton)

k (PM) =	0.74	= particle size multiplier (0.74 assumed for aerodynamic diameter $\leq 100 \mu\text{m}$)
k (PM ₁₀) =	0.35	= particle size multiplier (0.35 assumed for aerodynamic diameter $\leq 10 \mu\text{m}$)
k (PM _{2.5}) =	0.053	= particle size multiplier (0.053 assumed for aerodynamic diameter $\leq 2.5 \mu\text{m}$)
U =	10.2	= worst case annual mean wind speed (Source: NOAA, 2006*)
M =	4.0	= material % moisture content of aggregate (Source: AP-42 Section 11.1.1.1)
E_f (PM) =	2.27E-03	lb PM/ton of material handled
E_f (PM ₁₀) =	1.07E-03	lb PM ₁₀ /ton of material handled
E_f (PM _{2.5}) =	1.62E-04	lb PM _{2.5} /ton of material handled

Annual Asphalt Production Limitation =	1,500,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	6.0%	
Maximum Material Handling Throughput =	1,410,000	tons/yr

Type of Activity	Limited PTE of PM (tons/yr)	Limited PTE of PM ₁₀ (tons/yr)	Limited PTE of PM _{2.5} (tons/yr)
Truck unloading of materials into storage piles	1.60	0.76	0.11
Front-end loader dumping of materials into feeder bins	1.60	0.76	0.11
Conveyor dropping material into dryer/mixer or batch tower	1.60	0.76	0.11
Total (tons/yr)	4.79	2.27	0.34

Methodology

The percent asphalt cement/binder provided by the source.

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

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

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

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

Material Screening and Conveying (AP-42 Section 19.2.2)

To estimate potential fugitive dust emissions from raw material crushing, screening, and conveying, AP-42 emission factors for Crushed Stone Processing Operations, Section 19.2.2 (dated 8/04) are utilized.

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM ₁₀ (lbs/ton)*	Limited PTE of PM (tons/yr)	Limited PTE of PM ₁₀ /PM _{2.5} (tons/yr)**
Crushing	0.0054	0.0024	3.81	1.69
Screening	0.025	0.0087	17.63	6.13
Conveying	0.003	0.0011	2.12	0.78
Limited Potential to Emit (tons/yr) =			23.55	8.60

Abbreviations

PM = Particulate Matter
PM₁₀ = Particulate Matter (<10 μm)
PM_{2.5} = Particulate Matter (<2.5 μm)
PTE = Potential to Emit

Methodology

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

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

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

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

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

**Assumes PM₁₀ = PM_{2.5}

**Appendix A.2 Emissions Calculations
Unpaved Roads
Limited Emissions**

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Application Date: November 7, 2008
Reviewer: Sandra Carr

Unpaved Roads at Industrial Site

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

Annual Asphalt Production Limitation =	1,500,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	6.0%	
Maximum Material Handling Throughput =	1,410,000	tons/yr
Maximum Asphalt Cement/Binder Throughput =	90,000	tons/yr
No. 2 Fuel Oil Limitation =	125,000	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	14.0	26.0	40.00	3.5E+03	1.4E+05	422	0.080	276.9
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	14.0	0	14.00	3.5E+03	4.8E+04	422	0.080	276.9
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	25	37.00	3.6E+03	1.3E+05	422	0.080	288.0
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	3.6E+03	4.3E+04	422	0.080	288.0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	48.0	13.0	61.00	6.9E+03	4.2E+05	158	0.030	207.7
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	48.0	0	48.00	6.9E+03	3.3E+05	158	0.030	207.7
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	13.0	20.0	33.00	4.5E+03	1.5E+05	264	0.050	225.0
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	13.0	0	13.00	4.5E+03	5.9E+04	264	0.050	225.0
Total					36,969.2	1,324,938.5			1,995.2

Average Vehicle Weight Per Trip =	35.8	tons/trip
Average Miles Per Trip =	0.054	miles/trip

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

	PM	PM ₁₀	PM _{2.5}	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2) Processing Plant Road
W =	35.8	35.8	35.8	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

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

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

	PM	PM ₁₀	PM _{2.5}	
Unmitigated Emission Factor, $E_f =$	7.88	2.01	0.20	lb/mile
Mitigated Emission Factor, $E_{ext} =$	5.18	1.32	0.13	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM ₁₀ (tons/yr)	Unmitigated PTE of PM _{2.5} (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM ₁₀ (tons/yr)	Mitigated PTE of PM _{2.5} (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM ₁₀ (tons/yr)	Controlled PTE of PM _{2.5} (tons/yr)
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	1.091	0.278	0.03	0.717	0.183	1.8E-02	0.359	0.091	9.1E-03
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	1.091	0.278	0.03	0.717	0.183	1.8E-02	0.359	0.091	9.1E-03
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	1.134	0.289	2.9E-02	0.746	0.190	1.9E-02	0.373	0.095	9.5E-03
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	1.134	0.289	2.9E-02	0.746	0.190	1.9E-02	0.373	0.095	9.5E-03
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0.82	0.21	0.02	0.54	0.14	0.01	0.27	0.07	0.01
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0.82	0.21	0.02	0.54	0.14	0.01	0.27	0.07	0.01
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.89	0.23	0.02	0.58	0.15	0.01	0.29	0.07	0.01
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.89	0.23	0.02	0.58	0.15	0.01	0.29	0.07	0.01
Totals		7.86	2.00	0.20	5.17	1.32	0.13	2.58	0.66	0.07

Methodology

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

Abbreviations

PM = Particulate Matter
 PM₁₀ = Particulate Matter (<10 μm)
 PM_{2.5} = Particulate Matter (<2.5 μm)
 PM_{2.5} = PM₁₀
 PTE = Potential to Emit

Appendix A.2 Emissions Calculations
Paved Roads
Limited Emissions

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Application Date: November 7, 2008
Reviewer: Sandra Carr

Paved Roads at Industrial Site

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

Annual Asphalt Production Limitation =	1,500,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	6.0%	
Maximum Material Handling Throughput =	1,410,000	tons/yr
Maximum Asphalt Cement/Binder Throughput =	90,000	tons/yr
No. 2 Fuel Oil Limitation =	125,000	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per day (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	14.0	26.0	40.00	3.5E+03	1.4E+05	422	0.080	276.9
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	14.0	0	14.00	3.5E+03	4.8E+04	422	0.080	276.9
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	25	37.00	3.6E+03	1.3E+05	422	0.080	288.0
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	3.6E+03	4.3E+04	422	0.080	288.0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	48.0	13.0	61.00	6.9E+03	4.2E+05	158	0.030	207.7
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	48.0	0	48.00	6.9E+03	3.3E+05	158	0.030	207.7
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	13.0	20.0	33.00	4.5E+03	1.5E+05	264	0.050	225.0
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	13.0	0	13.00	4.5E+03	5.9E+04	264	0.050	225.0
Total					36,969.2	1,324,938.5			1,995.2

Average Vehicle Weight Per Trip =	35.8	tons/trip
Average Miles Per Trip =	0.054	miles/trip

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

where k =	PM	PM ₁₀	PM _{2.5}	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	35.8	35.8	35.8	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	0.00036	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)
sL =	0.6	0.6	0.6	g/m ² = Ubiquitous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months)

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

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

Unmitigated Emission Factor, $E_f =$	PM	PM ₁₀	PM _{2.5}	lb/mile
Mitigated Emission Factor, $E_{ext} =$	1.55	0.30	0.04	lb/mile
Dust Control Efficiency =	1.42	0.28	0.04	lb/mile
	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM ₁₀ (tons/yr)	Unmitigated PTE of PM _{2.5} (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM ₁₀ (tons/yr)	Mitigated PTE of PM _{2.5} (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM ₁₀ (tons/yr)	Controlled PTE of PM _{2.5} (tons/yr)
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.2143	0.0418	0.0062	0.1959	0.0382	0.0057	0.0980	0.0191	0.0028
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.2143	0.0418	0.0062	0.1959	0.0382	0.0057	0.0980	0.0191	0.0028
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.2229	0.0434	0.0065	0.2038	0.0397	0.0059	0.1019	0.0199	0.0030
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.2229	0.0434	0.0065	0.2038	0.0397	0.0059	0.1019	0.0199	0.0030
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0.1607	0.0313	0.0047	0.1470	0.0286	0.0043	0.0735	0.0143	0.0021
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0.1607	0.0313	0.0047	0.1470	0.0286	0.0043	0.0735	0.0143	0.0021
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.1741	0.0339	0.0051	0.1592	0.0310	0.0046	0.0796	0.0155	0.0023
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.1741	0.0339	0.0051	0.1592	0.0310	0.0046	0.0796	0.0155	0.0023
Totals		1.54	0.30	0.04	1.41	0.28	0.04	0.71	0.14	0.02

Methodology

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

Abbreviations

PM = Particulate Matter
 PM₁₀ = Particulate Matter (<10 μm)
 PM_{2.5} = Particulate Matter (<2.5 μm)
 PM_{2.5} = PM₁₀
 PTE = Potential to Emit

**Appendix A.2: Emissions Calculations
Cold Mix Asphalt Production and Stockpiles
Limited Emissions**

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Application Date: November 7, 2008
Reviewer: Sandra Carr

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

Cold Mix Asphalt VOC Usage Limitation = tons/yr

Volatile Organic Compounds

	Maximum weight % of VOC solvent in binder	Weight % VOC solvent in binder that evaporates	VOC Solvent Usage Limitation (tons/yr)	Limited PTE of VOC (tons/yr)	Liquid Binder Adjustment Ratio
Cut back asphalt rapid cure (assuming gasoline or naphtha solvent)	25.3%	95.0%	22.6	21.5	1.053
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	30.7	21.5	1.429
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	86.0	21.5	4.000
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	46.3	21.5	2.155
Other asphalt with solvent binder	25.9%	2.5%	860.0	21.5	40.0
Worst Case Limited PTE of VOC =				21.5	

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0% Xylenes
Limited PTE of Total HAP (tons/yr) = 5.61	
Limited PTE of Single HAP (tons/yr) = 1.94 Xylenes	

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

	CAS#	Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents				
		Gasoline	Kerosene	Diesel (#2) Fuel Oil	No. 2 Fuel Oil	No. 6 Fuel Oil
Volatile Organic HAP						
1,3-Butadiene	106-99-0	3.70E-5%				
2,2,4-Trimethylpentane	540-84-1	2.40%				
Acenaphthene	83-32-9		4.70E-5%		1.80E-4%	
Acenaphthylene	208-96-8		4.50E-5%		6.00E-5%	
Anthracene	120-12-7		1.20E-6%	5.80E-5%	2.80E-5%	5.00E-5%
Benzene	71-43-2	1.90%		2.90E-4%		
Benzo(a)anthracene	56-55-3			9.60E-7%	4.50E-7%	5.50E-4%
Benzo(a)pyrene	50-32-8			2.20E-6%	2.10E-7%	4.40E-5%
Benzo(g,h,i)perylene	191-24-2			1.20E-7%	5.70E-8%	
Biphenyl	92-52-4			6.30E-4%	7.20E-5%	
Chrysene	218-01-9			4.50E-7%	1.40E-6%	6.90E-4%
Ethylbenzene	100-41-4	1.70%		0.07%	3.40E-4%	
Fluoranthene	206-44-0		7.10E-6%	5.90E-5%	1.40E-5%	2.40E-4%
Fluorene	86-73-7		4.20E-5%	8.60E-4%	1.90E-4%	
Indeno(1,2,3-cd)pyrene	193-39-5			1.60E-7%		1.00E-4%
Methyl-tert-butylether	1634-04-4	0.33%				
Naphthalene	91-20-3	0.25%	0.31%	0.26%	0.22%	4.20E-5%
n-Hexane	110-54-3	2.40%				
Phenanthrene	85-01-8		8.60E-6%	8.80E-4%	7.90E-4%	2.10E-4%
Pyrene	129-00-0		2.40E-6%	4.60E-5%	2.90E-5%	2.30E-5%
Toluene	108-88-3	8.10%		0.18%	6.20E-4%	
Total Xylenes	1330-20-7	9.00%		0.50%	0.23%	
Total Organic HAP =		26.08%	0.33%	1.29%	0.68%	0.19%
Worst Single HAP =		9.00%	0.31%	0.50%	0.23%	0.07%
		Xylenes	Naphthalene	Xylenes	Xylenes	Chrysene

Methodology

Limited PTE of VOC (tons/yr) = [Weight % VOC solvent in binder that evaporates] * [VOC Solvent Usage Limitation (tons/yr)]

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

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

*Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2.

Composition of Petroleum Mixtures. The Association for Environmental Health and Science. Available on the Internet at:

<http://www.aehs.com/publications/catalog/contents/tph.htm>

Abbreviations

VOC = Volatile Organic Compounds

PTE = Potential to Emit

Appendix A.2: Emissions Calculations
Particulate Compliance
Limited Emissions

Company Name: Walsh & Kelly , Inc.
Address City IN Zip: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Application Date: November 7, 2008
Reviewer: Sandra Carr

	flow (acfm)	time (min/hr)	grain loading (gr/dscf)	conversion (1 lb/7000 gr)	conversion (8760 hr/2000 lbs)	PM Rate (lb/hr)	PM Emissions (lb/ton)	Annual PM (ton/yr)
STACK	60299	60	0.0025	7000	4.38	1.29	0.003	5.66
						PTE		PTE
LIMIT	60299	60	0.04	7000	4.38	20.67	0.05	90.55
LIMIT	60299	60	0.03	7000	4.38	15.51	0.04	67.91

METHODLOGY:

PM Rate (lb/hr) = (Flow (acfm) x Grain Loading (gr/dscf) x (60 min/hour))/(1 lb/7000 gr)

Annual PM Emissions (tons/yr) = PM Rate (lbs/hr) x (8,760 hr/2,000 lbs)

NOTE:

Results from Nov. 2004 stack test.

Appendix A.2: Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)
Limited Emissions

Company Name: Walsh & Kelly, Inc.
Source Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Application Date: November 7, 2008
Reviewer: Sandra Carr

Organic Particulate-Based Compounds (Table 11.1-15)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Limited Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of Total Organic PM)	Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)	Load-out	Silo Filling	Onsite Yard	Total
PAH HAPs										
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	0.47%	2.8E-04	3.7E-04	NA	6.5E-04
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	3.0E-05	1.1E-05	NA	4.1E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	7.4E-05	1.0E-04	NA	1.8E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	2.0E-05	4.4E-05	NA	6.4E-05
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	8.1E-06	0	NA	8.1E-06
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	2.3E-06	0	NA	2.3E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	2.0E-06	0	NA	2.0E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	2.4E-06	0	NA	2.4E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	8.3E-06	7.5E-06	NA	1.6E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	1.1E-04	1.7E-04	NA	2.8E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	3.9E-07	0	NA	3.9E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	5.3E-05	1.2E-04	NA	1.7E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	8.2E-04	8.0E-04	NA	1.6E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	5.0E-07	0	NA	5.0E-07
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	2.5E-03	4.2E-03	NA	0.007
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	1.3E-03	1.4E-03	NA	2.8E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	2.3E-05	2.4E-05	NA	4.7E-05
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	8.6E-04	1.4E-03	NA	2.3E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	1.6E-04	3.5E-04	NA	5.1E-04
Total PAH HAPs							0.006	0.009	NA	0.015
Other semi-volatile HAPs										
Phenol		PM/HAP	---	Organic PM	1.18%	0	3.3E-04	0	0	0.000

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

Methodology

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

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

Abbreviations

PM = Particulate Matter

HAP = Hazardous Air Pollutant

POM = Polycyclic Organic Matter

Appendix A.2: Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)
Limited Emissions

Organic Volatile-Based Compounds (Table 11.1-16)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Limited Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of TOC)	Silo Filling and Asphalt Storage Tank (% by weight of TOC)	Load-out	Silo Filling	Onsite Yard	Total
VOC		VOC	---	TOC	94%	100%	0.33	1.01	0.09	1.42
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	2.2E-02	2.6E-03	5.9E-03	0.031
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	1.6E-04	5.6E-04	4.2E-05	0.001
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	2.5E-03	1.1E-02	6.5E-04	0.014
Total non-VOC/non-HAPS					7.30%	1.40%	0.025	0.014	0.007	0.05
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	1.8E-04	3.2E-04	4.8E-05	5.5E-04
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	3.3E-05	5.0E-05	8.8E-06	9.2E-05
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	1.7E-04	4.0E-04	4.5E-05	6.1E-04
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	4.5E-05	1.6E-04	1.2E-05	2.2E-04
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	7.3E-07	4.1E-05	1.9E-07	4.1E-05
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	5.2E-05	2.3E-04	1.4E-05	3.0E-04
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	3.8E-04	0	1.0E-04	4.8E-04
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	9.7E-04	3.9E-04	2.6E-04	0.002
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	3.0E-04	7.0E-03	8.0E-05	0.007
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	5.2E-04	1.0E-03	1.4E-04	0.002
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	6.2E-06	3.1E-06	1.6E-06	1.1E-05
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	2.7E-06	0	2.7E-06
MTBE	1634-04-4	VOC/HAP	---	TOC	0	0	0	0	0	0
Styrene	100-42-5	VOC/HAP	---	TOC	0.0073%	0.0054%	2.5E-05	5.5E-05	6.7E-06	8.7E-05
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	2.7E-05	0	7.0E-06	3.4E-05
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	7.3E-04	6.3E-04	1.9E-04	0.002
1,1,1-Trichloroethane	71-55-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichloroethene	79-01-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichlorofluoromethane	75-69-4	VOC/HAP	---	TOC	0.0013%	0	4.5E-06	0	1.2E-06	5.7E-06
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	1.4E-03	2.0E-03	3.8E-04	0.004
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	2.8E-04	5.8E-04	7.3E-05	9.3E-04
Total volatile organic HAPs					1.50%	1.30%	0.005	0.013	0.001	0.020

Methodology

Limited Potential to Emit (tons/yr) = [Speciation Profile (%)] * [TOC (tons/yr)]
Speciation Profiles from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-15 and 11.1-16

Abbreviations

TOC = Total Organic Compounds
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound
MTBE = Methyl tert butyl ether

**Appendix A.2: Emission Calculations
VOC Emissions from Storage Tanks**

Company Name: Walsh & Kelly, Inc.
Address: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit No.: F127-27125-05258
Application Date: November 7, 2008
Reviewer: Sandra Carr

Tanks

[m3] = 3.785412 x [10 ³ gal]	[kPa] = 6.894757 [PSI]
---	------------------------

ID	Capacity, 10 ³ gal	Capacity, m ³	Product Stored	Vapor Pressure		Potential to Emit VOC		
				PSI	kPa	(lbs/yr)*	(tons/yr)	
DT1	0.8	3	Fuel Oil #2	0.29	ambient	2.0	36.3	1.82E-02
10	20	75.7	Liquid Asphalt	0.00000029	@290F	2.00E-06	20.7	1.04E-02
11	20	75.7	Liquid Asphalt	0.00000029	@290F	2.00E-06	15.6	7.80E-03
12	20	75.7	Waste Oil	0.29	ambient	0.4	31.2	1.56E-02
14	30	113.6	Liquid Asphalt	0.00000029	@290F	2.00E-06	14.5	7.25E-03
						Total	118	0.059

* The Potential to Emit VOC in lbs/yr was calculated using TANKS 4.09 for each of the tanks using waste oil as the worst case fuel

**Appendix A.2 : Emissions Calculations
Fuel Equivalency Calculations
Fuel Combustion Units with Maximum Capacity > 100 MMBtu/hr**

**Company Name: Walsh & Kelly , Inc.
Address City IN Zip: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Application Date: November 7, 2008
Reviewer: Sandra Carr**

*Note: these equivalencies are related back to Waste Oil (assumed to be the predominant fuel used at this source).

Fuel Type	SO2 Equivalency						NOx Equivalency			
	Limited Sulfur Content	Limited Sulfur Content Units	AP-42 Emission Factor	Emission Factor Units	Fuel Equivalency	Fuel Equivalency Units	AP-42 Emission Factor	Emission Factor Units	Fuel Equivalency	Fuel Equivalency Units
Natural Gas	NA	NA	0.6	lb/MMCF	122.5	MMCF natural gas / 1000 gal waste oil	280	lb/MMCF	0.068	MMCF natural gas / 1000 gal waste oil
No. 2 Fuel Oil	0.05	% by weight	7.85	lb/kgal	9.36	gal No. 2 fuel oil / gal waste oil	24.0	lb/kgal	0.792	gal No. 2 fuel oil / gal waste oil
No. 4 Fuel Oil	0.50	% by weight	75.00	lb/kgal	0.98	gal No. 4 fuel oil / gal waste oil	47.0	lb/kgal	0.404	gal No. 4 fuel oil / gal waste oil
Residual (No. 5 or No. 6) Fuel Oil	0.50	% by weight	78.50	lb/kgal	0.94	gal residual (No. 5 or No. 6) fuel oil / gal waste oil	47.0	lb/kgal	0.404	gal residual (No. 5 or No. 6) fuel oil / gal waste oil
Propane	0.20	gr/100 ft ³ sulfur	0.020	lb/kgal	3675	gal propane / gal waste oil	19.0	lb/kgal	1.00	gal propane / gal waste oil
Butane	0.22	gr/100 ft ³ sulfur	0.0198	lb/kgal	3712	gal butane / gal waste oil	21.0	lb/kgal	0.905	gal butane / gal waste oil
Waste Oil	0.50	% by weight	73.50	lb/kgal	1.00	gal waste oil / gal waste oil	19.0	lb/kgal	1.00	gal waste oil / gal waste oil
Diesel Engine Oil	NA	NA	40.6	lb/kgal	1.81	gal diesel engine oil / gal waste oil	617.4	lb/kgal	0.031	gal diesel engine oil / gal waste oil

Methodology

Fuel Equivalency = [AP-42 Emission Factor for waste oil (lb/kgal)] / [AP-42 Emission Factor for any fuel type (lb/kgal or lb/MMCF)]

Sources of AP-42 Emission Factors for fuel combustion:

Natural Gas (boiler > 100 MMBtu/hr): AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1 and 1.4-2

No. 2, No.4, and residual fuel oil (industrial boiler > 100 MMBtu/hr): AP-42 Chapter 1.3 (dated 9/98), Table 1.3-1

Propane and Butane (industrial boiler 10 to 100 MMBtu/hr): AP-42 Chapter 1.5 (dated 10/96), Table 1.5-1

Waste Oil (small boiler): AP-42 Chapter 1.11 (dated 10/96), Table 1.11-2

Diesel Engine Oil: AP-42 Chapter 3.3 (dated 10/96), Table 3.3-1

NOTE: Source reports waste oil is limited to low sulfur (<500 ppm S) type.

Appendix A.2: Emission Calculations 326 IAC 6-2-4 PM Limit Calculations

Company Name: Walsh & Kelly , Inc.
Address City IN Zip: 3221 Bertholet Boulevard, Valparaiso, IN 46383
Permit Number: F127-27125-05258
Application Date: November 7, 2008
Reviewer: Sandra Carr

Year the hot oil heater was installed:

Pursuant to 326 IAC 6-2-1(d), for indirect heating units constructed after September 21, 1983, calculate the limit using the following equation:

$$Pt = (1.09) / (Q^{0.26})$$

C =	50	micrograms per cubic meter (maximum ground level concentration of PM with respect to distance from the point source at the "critical" wind speed for level terrain)
Q =	2	total heat input capacity of source (MMBtu/hr)
N =	1	number of stacks
a =	0.67	plume rise factor (use 0.67 for Q less than 1000 MMBtu/hr and 0.8 for Q greater than 1000 MMBtu/hr)
h =	15	ft --- stack height (if more than one stack, use a weighted average of stack heights according to PM emissions)

Pt = lb PM emitted/MMBtu heat input

Pursuant to 326 IAC 6-2-4(a), for a $Q \leq 10$ MMBtu/hr, the limit shall be 0.6 lb/MMBtu or for a $Q \geq 10,000$ MMBtu/hr, the limit shall be 0.2 lb/MMBtu.

Insert the calculated PM limit from above or, if the calculated limit exceeds the appropriate maximum limit listed in 326 IAC 6-2-4, insert the maximum limit instead.

lb/MMBtu 2 MMBtu/hr lbs/hr = tons/yr

Therefore, since 0.13 tons/yr < 5.26 tons/yr, this source can comply with the limit specified in 326 IAC 6-2-3 without the use of a control device.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

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

TO: Roger Knip
Walsh & Kelly, Inc
24358 SR 23
South Bend, IN 46614

DATE: July 24, 2009

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

SUBJECT: Final Decision
FESOP - Renewal
127-27125-05258

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07



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July 24, 2009

TO: Porter County Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Walsh & Kelly, Inc
Permit Number: 127-27125-05258

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 11/30/07

Mail Code 61-53

IDEM Staff	MIDENNEY 7/24/2009 Walsh & Kelly, Inc. 127-27125-05258 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING	
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: CERTIFICATE OF MAILING ONLY	

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5		Porter County Health Department 155 Indiana Ave, Suite 104 Valparaiso IN 46383-5502 (Health Department)										
6		Shawn Sobocinski 3229 E. Atlanta Court Portage IN 46368 (Affected Party)										
7		Mr. Ed Dybel 2440 Schrage Avenue Whiting IN 46394 (Affected Party)										
8		Ms. Carolyn Marsh Lake Michigan Calumet Advisory Council 1804 Oliver St Whiting IN 46394-1725 (Affected Party)										
9		Mr. Dee Morse National Park Service 12795 W Alameda Pky, P.O. Box 25287 Denver CO 80225-0287 (Affected Party)										
10		Valparaiso City Council and Mayors Office 166 Lincolnway Valparaiso IN 46383-5524 (Local Official)										
11		Mr. Joseph Virgil 128 Kinsale Avenue Valparaiso IN 46385 (Affected Party)										
12		Mark Coleman 9 Locust Place Ogden Dunes IN 46368 (Affected Party)										
13		Mr. Chris Hernandez Pipefitters Association, Local Union 597 8762 Louisiana St., Suite G Merrillville IN 46410 (Affected Party)										
14		Eric & Sharon Haussman 57 Shore Drive Ogden Dunes IN 46368 (Affected Party)										
15		Joseph Hero 11723 S Oakridge Drive St. John IN 46373 (Affected Party)										

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