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: August 24, 2011

RE: Meshberger Brothers Stone Corporation / 135-29992-03158

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

Meshberger Brothers Stone Corporation
1972 West State Road 28
Ridgeville, Indiana 47380

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

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-8-11.1, applicable to those conditions

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

Operation Permit No.: F135-29992-03158	
Issued by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: August 24, 2011 Expiration Date: August 24, 2021

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Attachment D: ...NESHAP Subpart JJJJJJ - Industrial, Commercial, and Institutional Boilers Area Sources

SECTION A SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary batch-mix, hot-mix, asphalt plant and cold-mix production operation.

Source Address:	1972 West State Road 28, Ridgeville, Indiana 47380
General Source Phone Number:	(765) 857-2493
SIC Code:	2951 (Asphalt Paving Mixtures and Blocks)
County Location:	Randolph
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

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

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

(a) One (1) stationary, batch-mix, hot-mix asphalt plant, consisting of the following

(1) One (1) batch mixer, identified as EU#10, constructed in 2002, with a maximum throughput capacity of two hundred (200) tons of raw material per hour, using one (1) cyclone, identified as EU#16, and one (1) baghouse, identified as EU#19, to control particulate emissions, and exhausting to Stack SV#1. This source does not use blast furnace slag, electric arc furnace steel mill slag, or recycled asphalt shingles (RAS), asbestos-free or otherwise, in their aggregate mix;

(2) one (1) aggregate dryer, identified as EU#4, equipped with one (1) burner, identified as EU#5, constructed in 2002 and modified in 2006, having a maximum heat input capacity of eighty-five (85.0) million British thermal units per hour and firing natural gas, No. 2 fuel oil, or waste oil, using one (1) cyclone, identified as EU#16, and one (1) baghouse, identified as EU#19, to control particulate emissions, and exhausting to Stack SV#1,

(3) Material handling, screening, and conveying operations, constructed in 2002, uncontrolled and exhausting to the outside atmosphere, and consisting of the following:

(A) One (1) cold feed system, constructed prior to 2002, with a maximum throughput capacity of two hundred fifty (250) tons of asphalt per hour, and consisting of:

(i) Six (6) cold feed bins, identified as EU#1;

(ii) One (1) conveyor to the dryer, identified as EU#3;

(iii) One screen deck, identified as EU#7;

(iv) Hot aggregate storage bins, identified as EU#8; and

(v) One (1) aggregate weigh hopper, identified as EU#9;

(B) One (1) hot asphalt storage and conveyor system, having a maximum throughput capacity of two hundred (200) tons of asphalt per hour, and consisting of:

(i) One (1) drag-slat conveyor, identified as EU#11; and

(ii) Two (2) hot asphalt storage bins, identified as EU#35 and EU#36, constructed in 1985; and

(iii) one (1) hot asphalt storage bin, identified as EU#12, constructed in 1996.

Note: This source obtains its aggregate from the quarry where it is located, therefore no storage piles, aside from the RAP, are included in the source description, or emission calculations, since they are already accounted for in the quarry's operating permit.

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

(4) One (1) Recycled asphalt pavement (RAP) system, constructed in 2006, with a maximum throughput capacity of thirty (30) tons per hour, uncontrolled and exhausting to the outside atmosphere, and consisting of:

(1) One (1) feed bin, identified as EU#37;

(2) One (1) lump breaker, identified as EU#38;

(3) One (1) conveyor, identified as EU#39; and

(4) Recycled asphalt pavement (RAP) storage piles, having a maximum height of twelve (12) feet and a maximum storage capacity of one and twenty-eight hundredths (1.28) tons.

Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.

(b) One (1) cold-mix cutback asphalt production operation, identified as EU#11, constructed in 2002, using one (1) cyclone, identified as EU#16, and one (1) baghouse, identified as EU#19, to control particulate emissions, exhausting to Stack SV#1, and including:

(1) cold-mix (stockpile mix) asphalt storage piles;

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

This stationary source also includes the following insignificant activities:

(a) One (1) liquid asphalt cement hot oil heating system, including the following:

(1) One (1) hot oil heater, identified as EU#13A, constructed in 1995, with a maximum heat input capacity of seven hundred thousandths (0.700) million British thermal units per hour (MMBtu/hr), firing natural gas or No. 2 fuel oil, uncontrolled and exhausting to Stack SV2; [326 IAC 6-2]

Under 40 CFR 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, this is considered an affected facility.

(2) One (1) 30,000 gallon liquid asphalt storage tank, identified as EU#13B, constructed in 1995, uncontrolled and exhausting to Stack SV2.

(b) One (1) hot asphalt storage and slat conveyor transfer heater, identified as EU#33, with a maximum heat input capacity of five hundred thousandths (0.500) million British thermal units per hour (MMBtu/hr), firing natural gas or No. 2 fuel oil, uncontrolled and exhausting to Stack SV4; [326 IAC 6-2]

Under 40 CFR 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, this is considered an affected facility.

(c) One (1) 20,000 gallon liquid asphalt storage tank, identified as EU#34, constructed in 1985, equipped with an electric hot oil heater, uncontrolled and exhausting to Stack SV3;

(d) One (1) 8,000 gallon No. 2 fuel oil storage tank, identified as EU#32, constructed in 1985, uncontrolled and exhausting to the outside atmosphere;

(e) Miscellaneous VOC and HAP Storage tanks, each with capacities less than or equal to 1,000 gallons, and annual throughputs of less than 12,000 gallons, uncontrolled and exhausting to the atmosphere;

(f) Vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids;

(g) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;

(h) Natural gas pressure regulator vents, excluding venting at oil and gas production facilities;

(i) A laboratory as defined in 326 IAC 2-7-1(21)(D); and

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

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

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

SECTION B GENERAL CONDITIONS

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

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

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

(a) This permit, F135-29992-03158, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(1) it contains a certification by an "authorized individual", as defined by 326 IAC 2-1.1-1(1), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

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

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

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

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

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

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

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

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

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

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

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly

signed, contemporaneous operating logs or other relevant evidence that describe the following:

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

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

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

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

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865

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

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

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

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

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

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

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

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

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

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

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

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

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

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

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

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

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

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

(a) All terms and conditions of permits established prior to F135-29992-03158 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

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

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

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

B.15 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)][326 IAC 2-8-7(a)][326 IAC 2-8-8]

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

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

(1) That this permit contains a material mistake.

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

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

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

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

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

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(21) and 326 IAC 2-7-1(40). The renewal application does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

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

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

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-8-3(g), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

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

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

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

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

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

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

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) 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.19 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.20 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

(a) Pursuant to 326 IAC 2-8:

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

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

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

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

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

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

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

C.3 Opacity [326 IAC 5-1]

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

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

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

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

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

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

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

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

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

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

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

C.8 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least two hundred sixty (260) linear feet on pipes or one hundred sixty (160) square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

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

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

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

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

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

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

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

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

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

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

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

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

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(1) initial inspection and evaluation;

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

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

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

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

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

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

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

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

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

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

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

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

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

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

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

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

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

(b) The address for report submittal is:

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

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

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

Stratospheric Ozone Protection

C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Hot-Mix Asphalt Plant and Recycled Asphalt Pavement (RAP) System

(a) One (1) stationary batch-mix, hot-mix asphalt plant, consisting of the following

(1) One (1) batch mixer, identified as EU#10, constructed in 2002, with a maximum throughput capacity of two hundred (200) tons of raw material per hour, using one (1) cyclone, identified as EU#16, and one (1) baghouse, identified as EU#19, to control particulate emissions, and exhausting to Stack SV#1. This source does not use blast furnace slag, electric arc furnace steel mill slag, or recycled asphalt shingles (RAS), asbestos-free or otherwise, in their aggregate mix;

(2) one (1) aggregate dryer, identified as EU#4, equipped with one (1) burner, identified as EU#5, constructed in 2002 and modified in 2006, having a maximum heat input capacity of eighty-five (85.0) million British thermal units per hour and firing natural gas, No. 2 fuel oil, or waste oil, using one (1) cyclone, identified as EU#16, and one (1) baghouse, identified as EU#19, to control particulate emissions, and exhausting to Stack SV#1,

(3) Material handling, screening, and conveying operations, constructed in 2002, uncontrolled and exhausting to the outside atmosphere, and consisting of the following:

(A) One (1) cold feed system, constructed prior to 2002, with a maximum throughput capacity of two hundred fifty (250) tons of asphalt per hour, and consisting of:

(i) Six (6) cold feed bins, identified as EU#1;

(ii) One (1) conveyor to the dryer, identified as EU#3;

(iii) One screen deck, identified as EU#7;

(iv) Hot aggregate storage bins, identified as EU#8; and

(v) One (1) aggregate weigh hopper, identified as EU#9;

(B) One (1) hot asphalt storage and conveyor system, having a maximum throughput capacity of two hundred (200) tons of asphalt per hour, and consisting of:

(i) One (1) drag-slat conveyor, identified as EU#11; and

(ii) Two (2) hot asphalt storage bins, identified as EU#35 and EU#36, constructed in 1985; and

(iii) one (1) hot asphalt storage bin, identified as EU#12, constructed in 1996.

Note: This source obtains its aggregate from the quarry where it is located, therefore no storage piles, aside from the RAP, are included in the source description, or emission calculations, since they are already accounted for in the quarry's operating permit.

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

(4) One (1) Recycled asphalt pavement (RAP) system, constructed in 2006, with a maximum throughput capacity of thirty (30) tons per hour, uncontrolled and exhausting to the outside atmosphere, and consisting of:

(1) One (1) feed bin, identified as EU#37;

(2) One (1) lump breaker, identified as EU#38;

(3) One (1) conveyor, identified as EU#39; and

(4) Recycled asphalt pavement (RAP) storage piles, having a maximum height of twelve (12) feet and a maximum storage capacity of one and twenty-eight hundredths (1.28) tons.

Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.

Insignificant Activities: Boilers

(a) One (1) liquid asphalt cement hot oil heating system, including the following:

(1) One (1) hot oil heater, identified as EU#13A, constructed in 1995, with a maximum heat input capacity of seven hundred thousandths (0.700) million British thermal units per hour (MMBtu/hr), firing natural gas or No. 2 fuel oil, uncontrolled and exhausting to Stack SV2; [326 IAC 6-2]

Under 40 CFR 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, this is considered an affected facility.

(b) One (1) hot asphalt storage and slat conveyor transfer heater, identified as EU#33, with a maximum heat input capacity of five hundred thousandths (0.500) million British thermal units per hour (MMBtu/hr), firing natural gas or No. 2 fuel oil, uncontrolled and exhausting to Stack SV4; [326 IAC 6-2]

Under 40 CFR 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, this is considered an affected facility.

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

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

D.1.1 PSD Minor Limits: PM [326 IAC 2-2]

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

(a) The hot-mix asphalt production rate shall not exceed 492,792 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) PM emissions from the dryer/mixer shall not exceed eight hundred eighty-nine thousandths (0.889) pounds of PM per ton of asphalt produced.

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

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

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

(a) The hot-mix asphalt production rate shall not exceed 492,792 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) PM10 emissions from the dryer/mixer shall not exceed three hundred sixty-five thousandths (0.365) pounds of PM10 per ton of asphalt produced.

(c) PM2.5 emissions from the dryer/mixer shall not exceed three hundred eighty-six thousandths (0.386) pounds of PM2.5 per ton of asphalt produced.

(d) NOx emissions from the dryer/mixer shall not exceed one hundred and twenty thousandths (0.120) pounds of NOx per ton of asphalt produced.

(e) VOC emissions from the dryer/mixer shall not exceed thirty-six thousandths (0.036) pounds of VOC per ton of asphalt produced.

(f) CO emissions from the dryer/mixer shall not exceed forty hundredths (0.40) pounds of CO per ton of asphalt produced.

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

Additionally, compliance with the limit in condition D.1.2(e) shall limit the VOC emissions from the dryer/mixer to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities) not applicable.

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

Pursuant to 326 IAC 2-8-4, and in order to render 326 IAC 2-2 and 326 IAC 2-4.1 not applicable, the Permittee shall comply with the following:

(a) Fuel Specifications

(1) The sulfur content of the No. 2 distillate fuel oil shall not exceed five tenths percent (0.5%) by weight;

(2) The sulfur content of the waste oil shall not exceed fifty hundredths percent (0.50%) by weight;

(3) The chlorine content of the waste oil shall not exceed ten hundredths percent (0.10%) by weight;

(4) HCl emissions from the dryer/mixer shall not exceed sixty-six ten-thousandths (0.0066) pounds of HCl per gallon of waste oil burned;

(b) Single Fuel Usage Limitation

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

(1) Natural gas usage shall not exceed 745 million cubic feet per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) No. 2 distillate fuel oil usage shall not exceed 2,713,647 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(3) Waste oil usage shall not exceed 2,621,346 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(c) Multiple Fuel Usage Limitations
When combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, emissions from the dryer/mixer shall be limited as follows:

(1) Sulfur dioxide (SO2) emissions from the dryer/mixer burner shall not exceed ninety-six and thirty-three (96.33) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) Slag Usage Limitation
Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall not use slag as an aggregate additive in the hot-mix asphalt operations.

(e) Asphalt Shingle Usage Limitation
Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAPs)) not applicable, the Permittee shall not use asphalt shingles as an aggregate additive in its hot-mix asphalt operations.

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

D.1.4 Particulate Emission Limits [326 IAC 6-2]

Pursuant to 326 IAC 6-2-3, the particulate emissions from the hot oil heater, identified as EU#13A, and the hot asphalt storage and slat conveyor transfer heater, identified as EU#33, each, shall not exceed six tenths (0.6) pounds of particulate matter per MMBtu heat input.

D.1.5 Particulate Emission Limits [326 IAC 6-3]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the recycled asphalt pavement (RAP) system shall not exceed forty and four hundredths (40.04) pounds per hour when operating at a process weight rate of thirty (30) tons (or 60,000 pounds) per hour.

The pound per hour limitation was calculated using the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

D.1.6 Sulfur Dioxide (SO2) Limits [326 IAC 7-1.1-1][326 IAC 7-2-1]

(a) Pursuant to 326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations), the Permittee shall comply with the following:

(1) The sulfur dioxide (SO2) emissions from the dryer/mixer burner shall not exceed five tenths (0.5) pounds per MMBtu when using distillate oil.

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

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

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

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

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

Compliance Determination Requirements

D.1.8 Particulate Matter (PM, PM10, and PM2.5) Control

(a) In order to comply with Conditions D.1.1, and D.1.2, baghouse (EU#19), and cyclone (EU#16), for particulate control shall be in operation and control emissions from the dryer/mixer at all times when the dryer/mixer is in operation.

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

(b) In order to comply with Condition D.1.6, the Permittee shall implement the fugitive particulate matter emissions control plan, included as Attachment A.

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

(a) In order to demonstrate compliance with Condition D.1.1(b), the Permittee shall perform PM testing of the dryer/mixer not later than five (5) years from the most recent valid compliance demonstration, utilizing methods approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition.

(b) In order to demonstrate compliance with Conditions D.1.2(b) and D.1.2(c), the Permittee shall perform PM10 and PM2.5 testing of the dryer/mixer not later than five (5) years from the most recent valid compliance demonstration, utilizing methods approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable PM.

D.1.10 Multiple Fuel Usage / Sulfur Dioxide (SO2) Emissions

Compliance with the multiple fuel usage, and SO2 emission limitations established in Conditions D.1.3(a),(b) and (c) shall be determined using the following equations:

(a) Sulfur Dioxide Emission Calculation

$$S = \frac{G(E_G) + O(E_O) + W(E_W)}{2{,}000 \text{ lbs/ton}}$$

Where:

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

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

O = gallons of No. 2 distillate fuel oil used in last 12 months with less than or equal to 0.5% sulfur content

W = gallons of waste oil used in last 12 months with less than or equal to 0.50% sulfur

E_G = 0.60 lbs/million cubic feet of natural gas

E_O = 0.071 lbs/gallon of No. 2 distillate fuel oil

E_W = 0.0735 lbs/gallon of waste oil

D.1.11 Sulfur Dioxide Emissions and Sulfur Content

(a) Compliance with the fuel limitations established in Conditions D.1.7(a)(1) and (2) shall be determined utilizing one of the following options.

(1) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five tenths (0.5) pounds per million British thermal units heat input when combusting No. 2 distillate fuel oil, or one and six tenths (1.6) pounds per million British thermal units heat input when combusting waste oil, by:

(A) Providing vendor analysis of heat content and sulfur content of the 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 tank immediately after the fuel tank is filled and before any fuel 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 seventy-five (75) MMBtu per hour dryer burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

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

D.1.12 Chlorine Content

The Permittee shall demonstrate compliance with the waste oil chlorine content limit established in Condition D.1.3(a)(3), by providing a vendor analysis of each fuel delivery accompanied by a vendor certification.

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

D.1.13 Visible Emissions Notations

(a) Visible emission notations from the conveyors, screens, material transfer points, crusher, and dryer/mixer stack (SV#1) exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

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

D.1.14 Parametric Monitoring

The Permittee shall record the pressure drop across the baghouse used in conjunction with the dryer/mixer, at least once per day when the dryer/mixer is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of two (2.0) and six (6.0) inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps. Section C - Response to Excursions or Exceedances contains the Permittee’s obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above-mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

D.1.15 Broken or Failed Bag Detection

In the event that bag failure has been observed:

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

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

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

D.1.16 Cyclone Failure Detection

In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.17 Record Keeping Requirements

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

(b) To document the compliance status with Conditions D.1.3 and D.1.7, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) below shall be taken monthly and shall be complete and sufficient to establish compliance with the limits established in Conditions D.1.3 and D.1.7.

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

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

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

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

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

(i) Fuel supplier certifications;

(ii) The name of the fuel supplier; and

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

(d) To document the compliance status with Condition D.1.13, the Permittee shall maintain records of visible emission notations of the dryer/mixer stack (SV#1) exhaust once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

(e) To document the compliance status with Condition D.1.14, the Permittee shall maintain records once per day of the pressure drop during normal operation. The Permittee shall include in its daily record when the pressure drop reading is not taken and the reason for the lack of a pressure drop reading (e.g., the process did not operate that day).

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

D.1.18 Reporting Requirements

(a) A quarterly summary of the information to document compliance status with Conditions D.1.1(a), D.1.2(a), D.1.3(b), and D.1.3(c), shall be submitted using the reporting forms located at the end of this permit, or their equivalent, not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee’s obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1)by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Cold-mix Asphalt Production & Storage

(b) One (1) cold-mix cutback asphalt production operation, identified as EU#11, constructed in 2002, using one (1) cyclone, identified as EU#16, and one (1) baghouse, identified as EU#19, to control particulate emissions, exhausting to Stack SV#1, and including:

(1) cold-mix (stockpile mix) asphalt storage piles;

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

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

D.2.1 Volatile Organic Compounds (VOC) [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:

(a) Penetrating prime coating

(b) Stockpile storage

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

D.2.2 Volatile Organic Compounds (VOC) [326 IAC 2-8-4] [326 IAC 2-2]

(a) Pursuant to 326 IAC 2-8-4, the VOC emissions from the sum of the binders shall not exceed fifty-four and ninety-seven hundredths (54.97) tons per twelve (12) consecutive month period with compliance determined at the end of each month.

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

(1) Cut back asphalt rapid cure, containing a maximum of twenty-five and three tenths percent (25.3%) of the liquid binder by weight of VOC solvent and ninety-five percent (95.0%) by weight of VOC solvent evaporating;

(2) Cut back asphalt medium cure, containing a maximum of twenty-eight and six tenths percent (28.6%) of the liquid binder by weight of VOC solvent and seventy percent (70.0%) by weight of VOC solvent evaporating;

(3) Cut back asphalt slow cure, containing a maximum of twenty percent (20.0%) of the liquid binder by weight of VOC solvent and twenty-five percent (25.0%) by weight of VOC solvent evaporating;

(4) Emulsified asphalt with solvent, containing a maximum of fifteen percent (15.0%) of liquid binder by weight of VOC solvent and forty-six and four tenths percent (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 seven percent (7%) or less of the total emulsion by volume; and

(5) Other asphalt with solvent binder, containing a maximum twenty-five and nine tenths percent (25.9%) of the liquid binder of VOC solvent and two and five tenths percent (2.5%) by weight of the VOC solvent evaporating.

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

(1) The amount of VOC solvent used in rapid cure cutback asphalt shall not exceed fifty-seven and eighty-six hundredths (57.86) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(2) The amount of VOC solvent used in medium cure cutback asphalt shall not exceed seventy-eight and fifty-three hundredths (78.53) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(3) The amount of VOC solvent used in slow cure cutback asphalt shall not exceed two hundred nineteen and eighty-eight hundredths (219.88) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(4) The amount of VOC solvent used in emulsified asphalt shall not exceed one hundred eighteen and forty-seven hundredths (118.47) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(5) The amount of VOC solvent used in all other asphalt shall not exceed two thousand one hundred ninety-eight and seventy-eight hundredths (2,198.78) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

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

$$\text{VOC emitted (tons/yr)} = \frac{\text{VOC solvent used for each binder (tons/yr)}}{\text{Adjustment factor}}$$

Type of binder	adjustment factor
cutback asphalt rapid cure	1.053
cutback asphalt medium cure	1.429
cutback asphalt slow cure	4.0
emulsified asphalt	2.155
other asphalt	40.0

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

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

D.2.3 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.2(c)(1) through (5), the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained

shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.2.2(c)(1) through (5).

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

(2) Cutback asphalt binder usage in the production of cold mix asphalt since the last compliance determination period;

(3) VOC solvent content by weight of the cutback asphalt binder used in the production of cold mix asphalt since the last compliance determination period; and

(4) Amount of VOC solvent used in the production of cold mix asphalt, and the amount of VOC emitted since the last compliance determination period.

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

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

D.2.4 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.2.2 shall be submitted no later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION E.1 NSPS REQUIREMENTS

Emissions Unit Description: Hot-Mix Asphalt Plant

(a) One (1) stationary batch-mix, hot-mix asphalt plant, consisting of the following

(1) One (1) batch mixer, identified as EU#10, constructed in 2002, with a maximum throughput capacity of two hundred (200) tons of raw material per hour, using one (1) cyclone, identified as EU#16, and one (1) baghouse, identified as EU#19, to control particulate emissions, and exhausting to Stack SV#1. This source does not use blast furnace slag, electric arc furnace steel mill slag, or recycled asphalt shingles (RAS), asbestos-free or otherwise, in their aggregate mix;

(2) one (1) aggregate dryer, identified as EU#4, equipped with one (1) burner, identified as EU#5, constructed in 2002 and modified in 2006, having a maximum heat input capacity of eighty-five (85.0) million British thermal units per hour and firing natural gas, No. 2 fuel oil, or waste oil, using one (1) cyclone, identified as EU#16, and one (1) baghouse, identified as EU#19, to control particulate emissions, and exhausting to Stack SV#1,

(3) Material handling, screening, and conveying operations, constructed in 2002, uncontrolled and exhausting to the outside atmosphere, and consisting of the following:

(A) One (1) cold feed system, constructed prior to 2002, with a maximum throughput capacity of two hundred fifty (250) tons of asphalt per hour, and consisting of:

(i) Six (6) cold feed bins, identified as EU#1;

(ii) One (1) conveyor to the dryer, identified as EU#3;

(iii) One screen deck, identified as EU#7;

(iv) Hot aggregate storage bins, identified as EU#8; and

(v) One (1) aggregate weigh hopper, identified as EU#9;

(B) One (1) hot asphalt storage and conveyor system, having a maximum throughput capacity of two hundred (200) tons of asphalt per hour, and consisting of:

(i) One (1) drag-slat conveyor, identified as EU#11; and

(ii) Two (2) hot asphalt storage bins, identified as EU#35 and EU#36, constructed in 1985; and

(iii) one (1) hot asphalt storage bin, identified as EU#12, constructed in 1996.

Note: This source obtains its aggregate from the quarry where it is located, therefore no storage piles, aside from the RAP, are included in the source description, or emission calculations, since they are already accounted for in the quarry's operating permit.

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

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

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

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

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

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

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

E.1.2 New Source Performance Standards (NSPS) for Hot Mix Asphalt Facilities [40 CFR Part 60, Subpart I] [326 IAC 12]

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

(a) 40 CFR 60.90

(b) 40 CFR 60.91

(c) 40 CFR 60.92

(d) 40 CFR 60.93

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

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

SECTION E.2 NSPS REQUIREMENTS

Emissions Unit Description: Recycled Asphalt Pavement (RAP) System

(4) One (1) Recycled asphalt pavement (RAP) system, constructed in 2006, with a maximum throughput capacity of thirty (30) tons per hour, uncontrolled and exhausting to the outside atmosphere, and consisting of:

(1) One (1) feed bin, identified as EU#37;

(2) One (1) lump breaker, identified as EU#38;

(3) One (1) conveyor, identified as EU#39; and

(4) Recycled asphalt pavement (RAP) storage piles, having a maximum height of twelve (12) feet and a maximum storage capacity of one and twenty-eight hundredths (1.28) tons.

Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.

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

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

E.2.1 General Provisions Relating to NSPS [326 IAC 12-1] [40 CFR 60, Subpart A]

(a) Pursuant to 40 CFR 60.1, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A - General Provisions, which are incorporated by reference as 326 IAC 12-1, except as otherwise specified in 40 CFR 60, Subpart 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 Requirements - Standards of Performance for Nonmetallic Mineral Processing Plants [40 CFR Part 60, Subpart OOO] [326 IAC 12-1]

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

(1) 40 CFR 60.670

(2) 40 CFR 60.671

(3) 40 CFR 60.672

(4) 40 CFR 60.673

(5) 40 CFR 60.674

(6) 40 CFR 60.675

(7) 40 CFR 60.676

E.2.3 Testing Requirements [40 CFR Part 60, Subpart I] [326 IAC 12-1] [326 IAC 2-8-5(a)(1),(4)] [326 IAC 2-1.1-11]

In order to demonstrate compliance with Condition E.2.2, the Permittee shall perform stack testing as required under NSPS 40 CFR 60, Subpart OOO, not later than five (5) years from the most recent valid compliance demonstration, utilizing methods approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

SECTION E.3 NESHAP REQUIREMENTS

Emissions Unit Description: Boilers

(a) One (1) liquid asphalt cement hot oil heating system, including the following:

(1) One (1) hot oil heater, identified as EU#13A, constructed in 1995, with a maximum heat input capacity of seven hundred thousandths (0.700) million British thermal units per hour (MMBtu/hr), firing natural gas or No. 2 fuel oil, uncontrolled and exhausting to Stack SV2; [326 IAC 6-2]

Under 40 CFR 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, this is considered an affected facility.

(b) One (1) hot asphalt storage and slat conveyor transfer heater, identified as EU#33, with a maximum heat input capacity of five hundred thousandths (0.500) million British thermal units per hour (MMBtu/hr), firing natural gas or No. 2 fuel oil, uncontrolled and exhausting to Stack SV4; [326 IAC 6-2]

Under 40 CFR 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, this is considered an affected facility.

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

National Emission Standards for Hazardous Air Pollutants (NESHAPs) Requirements [326 IAC 2-8-4(1)]

E.3.1 General Provisions Relating to the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources (40 CFR 63, Subpart JJJJJJ) [326 IAC 20-1] [40 CFR Part 63, Subpart A]

Pursuant to §63.11130, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, as specified in Table 8 of 40 CFR Part 63, Subpart JJJJJJ, and in accordance with the schedule in 40 CFR 63 Subpart JJJJJJ.

E.3.2 National Emission Standards for Hazardous Air Pollutants (NESHAPs): Area Source Standards for Industrial, Commercial, and Institutional Boilers Area Sources [40 CFR 63, Subpart JJJJJJ] [326 IAC 20]

Pursuant to 40 CFR § 63.11112(a), the emission sources to which this subpart applies are each new, reconstructed, or existing industrial, commercial, and/or institutional boiler within a subcategory (coal, biomass, oil), as listed in §63.11200 and defined in §63.11237, located at an area source.

The one (1) hot oil heater, identified as EU#13A, is therefore subject to the following portions of Subpart JJJJJJ (6J) (included as Attachment D of this permit):

(A) 40 CFR 63.11193;
(B) 40 CFR 63.11194(a)(1),(b),(e);
(C) 40 CFR 63.11196(a)(1);
(D) 40 CFR 63.11200;
(E) 40 CFR 63.11201(b),(d);
(F) 40 CFR 63.11205(a);
(G) 40 CFR 63.11210(c);
(H) 40 CFR 63.11214(b);
(I) 40 CFR 63.11223(a),(b)(1) - (7);
(J) 40 CFR 63.11225(a),(b),(c),(d),(g);
(K) 40 CFR 63.11235
(L) 40 CFR 63.11236
(M) 40 CFR 63.11237
(N) Table 2
(O) Table 8

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

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
FESOP Permit No.: F135-29992-03158

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

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify)_____

☐ Report (specify)_____

☐ Notification (specify)_____

☐ Affidavit (specify)_____

☐ Other (specify)_____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Signature:
Printed Name:
Title/Position:
Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) EMERGENCY OCCURRENCE REPORT

Source Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
FESOP Permit No.: F135-29992-03158

This form consists of 2 pages **Page 1 of 2**

☐ This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16

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

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

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:_____

Title / Position:_____

Date:_____

Phone: _____

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

FESOP Quarterly Report

Source Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
FESOP Permit No.: F135-29992-03158
Facility: Dryer/Mixer
Parameter: **Hot-mix Asphalt Production**
Limit: The asphalt production rate shall not exceed 492,792 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	Hot Mix Asphalt Produced This Month (tons)	**Hot Mix Asphalt Produced Previous 11 Months (tons)**	**12 Month Total Hot Mix Asphalt Produced (tons)**
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this quarter.

☐ Deviation/s occurred in this quarter.
Deviation has been reported on:_____

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

FESOP Quarterly Report

Source Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
FESOP Permit No.: F135-29992-03158
Facility: Dryer/mixer burner

Parameter: Single Fuel Usage / Sulfur dioxide (SO2) emissions

Limit: Sulfur Dioxide (SO2) emissions from the dryer/mixer shall not exceed ninety-six and thirty-three (96.33) tons per twelve (12) consecutive month period. Additionally, Hydrogen Chloride (HCl) emissions shall not exceed ten (10) tons per twelve (12) consecutive month period, and any combination of HAPs shall not exceed twenty-five (25) tons per twelve (12) consecutive month period. When combusting only one type of fuel in the dryer/mixer burner, the usage of fuel shall be limited as follows:

Fuel Type (units)	Fuel Usage Limit (per 12 consecutive month period)
Natural Gas (million cubic feet)	745
No. 2 Distillate Fuel Oil ≤ 0.5 wt% sulfur (gallons)	2,713,647
No. 4 Residual Fuel Oil ≤ 0.50 wt% sulfur (gallons)	2,621,346

QUARTER:_____ YEAR: _____

The following fuel was the only fuel combusted over the previous 12-month period:_____

(combustion of more than one fuel requires the use of the "Multiple Fuel Quarterly Report" form)

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

☐ No deviation occurred in this reporting period.

☐ Deviation/s occurred in this reporting period. Deviation has been reported on:_____

Submitted by: _____ Date: _____

Title / Position:_____ Phone: _____

Signature: _____

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

FESOP Quarterly Report

Page 1 of 2

Source Name:	Meshberger Brothers Stone Corporation
Source Address:	1972 West State Road 28, Ridgeville, Indiana 47380
FESOP Permit No.:	F135-29992-03158
Facility:	Dryer/Mixer
Parameter:	**Multiple fuel Usage / Sulfur dioxide (SO2) emissions**
Limit:	SO2 emissions from the dryer/mixer shall not exceed ninety-six and thirty-three (96.33) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Sulfur dioxide (SO2) emissions shall be determined using the following equation:

$$S = \frac{G(E_G) + O(E_O) + W(E_W)}{2{,}000 \text{ lbs/ton}}$$

Where:

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

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

O = gallons of No. 2 distillate fuel oil used in last 12 months with less than or equal to 0.5% sulfur content

W = gallons of waste oil used in last 12 months with less than or equal to 0.50% sulfur

E_G = 0.60 lbs/million cubic feet of natural gas

E_O = 0.071 lbs/gallon of No. 2 distillate fuel oil

E_W = 0.0735 lbs/gallon of waste oil

FESOP Quarterly Report **Multiple fuel Usage / Sulfur dioxide (SO2) emissions** **Page 2 of 2**

QUARTER: _____ YEAR:_____

Month	Fuel Types (units)	Column 1	Column 2	Column 1 + Column 2	Equation Results	
		Usage This Month	Usage Previous 11 Months	Usage 12 Month Total	Emissions (tons per 12 months) SO2	NOx
Month 1	Natural Gas (million cubic feet)					
	No. 2 Fuel Oil (gallons)					
	Waste Fuel Oil (gallons)					
Month 2	Natural Gas (million cubic feet)					
	No. 2 Fuel Oil (gallons)					
	Waste Fuel Oil (gallons)					
Month 3	Natural Gas (million cubic feet)					
	No. 2 Fuel Oil (gallons)					
	Waste Fuel Oil (gallons)					

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

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

Deviation has been reported on:_____ Signature:_____

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

FESOP Quarterly Report

Source Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
FESOP Permit No.: F135-29992-03158
Facility: Cold-mix (stockpile mix) asphalt manufacturing operations and storage piles

Parameter: Single Liquid Binder Solvent Usage / VOC Emissions

Limit: Volatile Organic Compound (VOC) emissions from the use of liquid binders, containing VOC solvents as diluents, in the cold-mix asphalt manufacturing operations and storage piles shall not exceed fifty-four and ninety-seven hundredths (54.97) tons per twelve (12) consecutive month period. When using only one type of binder, the total VOC solvent usage shall be limited as follows:

Type of Binder	Binder VOC Limits (tons per 12 consecutive month period)
Cutback Asphalt Rapid Cure	57.86
Cutback Asphalt Medium Cure	78.53
Cutback Asphalt Slow Cure	219.88
Emulsified Asphalt	118.47
Other Asphalt	2,198.78

QUARTER:_____ YEAR: _____

The following liquid binder solvent was the only liquid binder solvent used over the previous 12 month period: _____ Limit applicable:_____

(use of more than one binder requires the use of the "Multiple Liquid Binder Solvents" report form)

Month	Column 1	Column 2	Column 1 + Column 2
	Liquid Binder Usage This Month (tons)	Liquid Binder Usage Previous 11 Months (tons)	Liquid Binder Usage 12 Month Total (tons)
Month 1			
Month 2			
Month 3			

☐ No deviation occurred in this reporting period.

☐ Deviation/s occurred in this reporting period. Deviation has been reported on: _____

Submitted by: _____ Date:_____

Title / Position: _____ Phone: _____

Signature: _____

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

FESOP Quarterly Report

Source Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
FESOP Permit No.: F135-29992-03158
Facility: Cold-mix (stockpile mix) asphalt manufacturing operations and storage piles
Parameter: **Multiple Liquid Binder Solvent Usage / VOC Emissions**
Limit: Volatile Organic Compound (VOC) emissions from the use of liquid binders, containing VOC solvents as diluents, in the cold-mix asphalt manufacturing operations and storage piles shall not exceed sixty-eight and eighty-nine hundredths (68.89) tons per twelve (12) consecutive month period. When using more than one type of binder, the Permittee shall limit VOC solvent usage as follows:

Type of Binder	Binder VOC Limits (tons per 12 consecutive month period)
Cutback Asphalt Rapid Cure	57.86
Cutback Asphalt Medium Cure	78.53
Cutback Asphalt Slow Cure	219.88
Emulsified Asphalt	118.47
Other Asphalt	2,198.78

The tons of VOC emitted per each type of binder, shall be determined using the following equation:

$$\text{VOC Emitted (tons/day)} = \frac{\text{VOC solvent used for each binder (tons/day)}}{\text{Adjustment factor}}$$

Where:

Type of Binder	Adjustment Factor
Cutback Asphalt Rapid Cure	1.053
Cutback Asphalt Medium Cure	1.429
Cutback Asphalt Slow Cure	4.0
Emulsified Asphalt	2.155
Other Asphalt	40.0

FESOP Quarterly Report **Multiple Liquid Binder Solvent Usage / VOC Emissions** **Page 2 of 2**

QUARTER: _____ YEAR: _____

Month	Fuel Types (units)	Column 1 Usage This Month	Column 2 Usage Previous 11 Months	Column 1 + Column 2 Usage 12 Month Total	Equation Results VOC Emissions (tons per 12 months)
Month 1	Cutback asphalt rapid cure liquid binder (million cubic feet)				
	Cutback asphalt medium cure liquid binder (gallons)				
	Cutback asphalt slow cure liquid binder (gallons)				
	Emulsified asphalt with solvent liquid binder				
	Other asphalt with solvent liquid binder				
Month 2	Cutback asphalt rapid cure liquid binder (million cubic feet)				
	Cutback asphalt medium cure liquid binder (gallons)				
	Cutback asphalt slow cure liquid binder (gallons)				
	Emulsified asphalt with solvent liquid binder				
	Other asphalt with solvent liquid binder				
Month 3	Cutback asphalt rapid cure liquid binder (million cubic feet)				
	Cutback asphalt medium cure liquid binder (gallons)				
	Cutback asphalt slow cure liquid binder (gallons)				
	Emulsified asphalt with solvent liquid binder				
	Other asphalt with solvent liquid binder				

☐ No deviation occurred in this reporting period.

☐ Deviation/s occurred in this reporting period.

Deviation has been reported on: _____

Submitted by: _____ Date: _____

Title / Position: _____ Phone: _____

Signature: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
FESOP Permit No.: F135-29992-03158

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

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Page 2 of 2

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

Form Completed by:_____

Title / Position:_____

Date:_____

Phone: _____

FEDERALLY ENFORCEABLE
STATE OPERATING PERMIT RENEWAL
OFFICE OF AIR QUALITY

Meshberger Brothers Stone Corporation
1972 West State Road 28
Ridgeville, Indiana 47380

Attachment A

HOT-MIX ASPHALT CONCRETE PLANT

FUGITIVE PARTICULATE MATTER EMISSIONS CONTROL PLAN

F135-29992-03158

MESHBERGER BROTHERS STONE CORPORATION
ASPHALT PLANT SITE FUGITIVE DUST CONTROL PLAN

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

   A. Paved roads and parking lots:

      (1) cleaning by vacuum sweeping on an as-needed basis

      (2) power-brooming while wet either from rain or application of water.

   B. Unpaved roads and parking lots:

      (1) paving with asphalt;

      (2) treating with emulsified asphalt;

      (3) watering;

      (4) double chip and seal the road surface.

2. Fugitive particulate matter emissions from outdoor conveying of aggregates shall be controlled by the following method on an as-needed basis:

   A. applying water at the feed and the intermediate points.

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

   A. tarping the aggregate hauling vehicles;

   B. maintain vehicle bodies in a condition to prevent leakage;

   C. spray the aggregates with water;

   D. maintain a 10 MPH speed limit in the yard.

4. Fugitive particulate matter emissions from the loading and unloading of aggregate shall be controlled by one of the following methods:

   A. reduce free fall distance to a minimum;

   B. reduce the rate of discharge of the aggregate;

   C. spray the aggregate with water on an as-needed basis.

7. Plan Implementation

   A. The effective date of this plan was October 5, 2001.

   B. Date of most recent update: July 11, 2011.

DEFINITIONS:

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

Reference

The Indiana Administrative Code, Title 326 Air Pollution Control Board, Article 6. Particulate Rules, weblink: http://www.in.gov/legislative/iac/T03260/A00060.PDF? . See page 12 for Rule 5. Fugitive Particulate Matter Emission Limitations.

FEDERALLY ENFORCEABLE
STATE OPERATING PERMIT RENEWAL

OFFICE OF AIR QUALITY

Meshberger Brothers Stone Corporation
1972 West State Road 28
Ridgeville, Indiana 47380

Attachment B

Title 40: Protection of Environment

PART 60—NEW SOURCE PERFORMANCE STANDARDS

SUBPART I - STANDARDS OF PERFORMANCE
FOR HOT MIX ASPHALT FACILITIES

F135-29992-03158

40 CFR 60, SUBPART I — STANDARDS OF PERFORMANCE FOR HOT MIX ASPHALT FACILITIES

§ 60.90 Applicability and designation of affected facility.

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

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

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

§ 60.91 Definitions.

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

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

[51 FR 12325, Apr. 10, 1986]

§ 60.92 Standard for particulate matter.

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

(1) Contain particulate matter in excess of 90 mg/dscm (four hundredths (0.04) gr/dscf).

(2) Exhibit 20 percent opacity, or greater.

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

§ 60.93 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).

(b) The owner or operator shall determine compliance with the particulate matter standards in §60.92 as follows:

(1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf).

(2) Method 9 and the procedures in §60.11 shall be used to determine opacity.

[54 FR 6667, Feb. 14, 1989]

Reference

The US EPA Electronic Code of Federal Regulations - 40 CFR 60, Subpart I: Standards of Performance for Hot Mix Asphalt Facilities weblink:
http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=875648a88dd2168ac2096fe26e3e4c98&rgn=div6&view=text&node=40:6.0.1.1.1.20&idno=40

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OFFICE OF AIR QUALITY

Meshberger Brothers Stone Corporation
1972 West State Road 28
Ridgeville, Indiana 47380

Attachment C

Title 40: Protection of Environment

PART 60—NEW SOURCE PERFORMANCE STANDARDS

Subpart OOO - STANDARDS OF PERFORMANCE
FOR NONMETALLIC MINERAL PROCESSING PLANTS

F135-29992-03158

40 CFR 60, Subpart OOO—Standards of Performance for Nonmetallic Mineral Processing Plants

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

§ 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 expediently 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.

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

Where:

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

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

Ae= 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.

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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).

[a]Exceptions to the PM limit apply for individual enclosed storage bins and other equipment. See §60.672(d) through (f).

[b]The stack opacity limit and associated opacity testing requirements do not apply for affected facilities using wet scrubbers.

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Table 3 to Subpart OOO—Fugitive Emission Limits

Table 3 to Subpart OOO—Fugitive Emission Limits

For * * *	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) * * *	The owner or operator must meet the following fugitive emissions limit for crushers at which a capture system is not used * * *	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	10 percent opacity	15 percent opacity	An initial performance test according to §60.11 of this part and §60.675 of this subpart.
Affected facilities (as defined in §§60.670 and 60.671) that commence construction, modification, or reconstruction on or after April 22, 2008	7 percent opacity	12 percent opacity	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
			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.

Reference:
The US EPA Electronic Code of Federal Regulations - 40 CFR 60, Subpart OOO—Standards of Performance for Nonmetallic Mineral Processing Plants weblink:
http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=43918166a5e8fa1b77b615cd0efc6c39&rgn=div6&view=text&node=40:6.0.1.1.1.80&idno=40

FEDERALLY ENFORCEABLE
STATE OPERATING PERMIT RENEWAL
OFFICE OF AIR QUALITY

Meshberger Brothers Stone Corporation
1972 West State Road 28
Ridgeville, Indiana 47380

Attachment D

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart JJJJJJ - NESHAPs for Industrial, Commercial, and Institutional Boilers Area Sources

F135-29992-03158

40 CFR 63, Subpart JJJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

Source: 76 FR 15591, March 21, 2011, unless otherwise noted.

What This Subpart Covers

§ 63.11193 Am I subject to this subpart?

You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler as defined in §63.11237 that is located at, or is part of, an area source of hazardous air pollutants (HAP), as defined in §63.2, except as specified in §63.11195.

§ 63.11194 What is the affected source of this subpart?

(a) This subpart applies to each new, reconstructed, or existing affected source as defined in paragraphs (a)(1) and (2) of this section.

(1) The affected source is the collection of all existing industrial, commercial, and institutional boilers within a subcategory (coal, biomass, oil), as listed in §63.11200 and defined in §63.11237, located at an area source.

(2) The affected source of this subpart is each new or reconstructed industrial, commercial, or institutional boiler within a subcategory, as listed in §63.11200 and as defined in §63.11237, located at an area source.

(b) An affected source is an existing source if you commenced construction or reconstruction of the affected source on or before June 4, 2010.

(c) An affected source is a new source if you commenced construction or reconstruction of the affected source after June 4, 2010 and you meet the applicability criteria at the time you commence construction.

(d) A boiler is a new affected source if you commenced fuel switching from natural gas to solid fossil fuel, biomass, or liquid fuel after June 4, 2010.

(e) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or part 71 as a result of this subpart. You may, however, be required to obtain a title V permit due to another reason or reasons. See 40 CFR 70.3(a) and (b) or 71.3(a) and (b). Notwithstanding the exemption from title V permitting for area sources under this subpart, you must continue to comply with the provisions of this subpart.

§ 63.11195 Are any boilers not subject to this subpart?

The types of boilers listed in paragraphs (a) through (g) of this section are not subject to this subpart and to any requirements in this subpart.

(a) Any boiler specifically listed as, or included in the definition of, an affected source in another standard(s) under this part.

(b) Any boiler specifically listed as an affected source in another standard(s) established under section 129 of the Clean Air Act.

(c) A boiler required to have a permit under section 3005 of the Solid Waste Disposal Act or covered by subpart EEE of this part (e.g., hazardous waste boilers).

(d) A boiler that is used specifically for research and development. This exemption does not include boilers that solely or primarily provide steam (or heat) to a process or for heating at a research and development facility. This exemption does not prohibit the use of the steam (or heat) generated from the boiler during research and development, however, the boiler must be concurrently and primarily engaged in research and development for the exemption to apply.

(e) A gas-fired boiler as defined in this subpart.

(f) A hot water heater as defined in this subpart.

(g) Any boiler that is used as a control device to comply with another subpart of this part, provided that at least 50 percent of the heat input to the boiler is provided by the gas stream that is regulated under another subpart.

§ 63.11196 What are my compliance dates?

(a) If you own or operate an existing affected boiler, you must achieve compliance with the applicable provisions in this subpart as specified in paragraphs (a)(1) through (3) of this section.

(1) If the existing affected boiler is subject to a work practice or management practice standard of a tune-up, you must achieve compliance with the work practice or management standard no later than March 21, 2012.

(2) If the existing affected boiler is subject to emission limits, you must achieve compliance with the emission limits no later than March 21, 2014.

(3) If the existing affected boiler is subject to the energy assessment requirement, you must achieve compliance with the energy assessment requirement no later than March 21, 2014.

(b) If you start up a new affected source on or before May 20, 2011, you must achieve compliance with the provisions of this subpart no later than May 20, 2011.

(c) If you start up a new affected source after May 20, 2011, you must achieve compliance with the provisions of this subpart upon startup of your affected source.

(d) If you own or operate an industrial, commercial, or institutional boiler and would be subject to this subpart except for the exemption in §63.11195(b) for commercial and industrial solid waste incineration units covered by 40 CFR part 60, subpart CCCC or subpart DDDD, and you cease combusting solid waste, you must be in compliance with this subpart on the effective date of the waste to fuel switch.

Emission Limits, Work Practice Standards, Emission Reduction Measures, and Management Practices

§ 63.11200 What are the subcategories of boilers?

The subcategories of boilers are coal, biomass, and oil. Each subcategory is defined in §63.11237.

§ 63.11201 What standards must I meet?

(a) You must comply with each emission limit specified in Table 1 to this subpart that applies to your boiler.

(b) You must comply with each work practice standard, emission reduction measure, and management practice specified in Table 2 to this subpart that applies to your boiler. An energy assessment completed on or after January 1, 2008 that meets the requirements in Table 2 to this subpart satisfies the energy assessment portion of this requirement.

(c) You must comply with each operating limit specified in Table 3 to this subpart that applies to your boiler.

(d) These standards apply at all times.

General Compliance Requirements

§ 63.11205 What are my general requirements for complying with this subpart?

(a) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(b) You can demonstrate compliance with any applicable mercury emission limit using fuel analysis if the emission rate calculated according to §63.11211(c) is less than the applicable emission limit. Otherwise, you must demonstrate compliance using stack testing.

(c) If you demonstrate compliance with any applicable emission limit through performance stack testing and subsequent compliance with operating limits (including the use of continuous parameter monitoring system), with a CEMS, or with a COMS, you must develop a site-specific monitoring plan according to the requirements in paragraphs (c)(1) through (3) of this section for the use of any CEMS, COMS, or continuous parameter monitoring system. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under §63.8(f).

(1) For each continuous monitoring system required in this section (including CEMS, COMS, or continuous parameter monitoring system), you must develop, and submit to the delegated authority for approval upon request, a site-specific monitoring plan that addresses paragraphs (c)(1)(i) through (vi) of this section. You must submit this site-specific monitoring plan, if requested, at least 60 days before your initial performance evaluation of your CMS. This requirement to develop and submit a site specific monitoring plan does not apply to affected sources with existing monitoring plans that apply to CEMS and COMS prepared under Appendix B to part 60 of this chapter and which meet the requirements of §63.11224.

(i) Installation of the continuous monitoring system sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and

(iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations).

(iv) Ongoing operation and maintenance procedures in accordance with the general requirements of §63.8(c)(1)(ii), (c)(3), and (c)(4)(ii);

(v) Ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d); and

(vi) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of §63.10(c) (as applicable in Table 8 to this subpart), (e)(1), and (e)(2)(i).

(2) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan.

(3) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.

Initial Compliance Requirements

§ 63.11210 What are my initial compliance requirements and by what date must I conduct them?

(a) You must demonstrate initial compliance with each emission limit specified in Table 1 to this subpart that applies to you by either conducting performance (stack) tests, as applicable, according to §63.11212 and Table 4 to this subpart or, for mercury, conducting fuel analyses, as applicable, according to §63.11213 and Table 5 to this subpart.

(b) For existing affected boilers that have applicable emission limits, you must demonstrate initial compliance no later than 180 days after the compliance date that is specified in §63.11196 and according to the applicable provisions in §63.7(a)(2).

(c) For existing affected boilers that have applicable work practice standards, management practices, or emission reduction measures, you must demonstrate initial compliance no later than the compliance date that is specified in §63.11196 and according to the applicable provisions in §63.7(a)(2).

(d) For new or reconstructed affected sources, you must demonstrate initial compliance no later than 180 calendar days after March 21, 2011 or within 180 calendar days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(e) For affected boilers that ceased burning solid waste consistent with §63.11196(d), you must demonstrate compliance within 60 days of the effective date of the waste-to-fuel switch. If you have not conducted your compliance demonstration for this subpart within the previous 12 months, you must complete all compliance demonstrations before you commence or recommence combustion of solid waste.

§ 63.11211 How do I demonstrate initial compliance with the emission limits?

(a) For affected boilers that demonstrate compliance with any of the emission limits of this subpart through performance (stack) testing, your initial compliance requirements include conducting performance tests according to §63.11212 and Table 4 to this subpart, conducting a fuel analysis for each type of fuel burned in your boiler according to §63.11213 and Table 5 to this subpart, establishing operating limits according to §63.11222, Table 6 to this subpart and paragraph (b) of this section, as applicable, and conducting continuous monitoring system (CMS) performance evaluations according to §63.11224. For affected boilers that burn a single type of fuel, you are exempted from the compliance requirements of conducting a fuel analysis for each type of fuel burned in your boiler. For purposes of this subpart, boilers that use a supplemental fuel only for startup, unit shutdown, and transient flame stability purposes still qualify as affected boilers that burn a single type of fuel, and the supplemental fuel is not subject to the fuel analysis requirements under §63.11213 and Table 5 to this subpart.

(b) You must establish parameter operating limits according to paragraphs (b)(1) through (4) of this section.

(1) For a wet scrubber, you must establish the minimum liquid flowrate and pressure drop as defined in §63.11237, as your operating limits during the three-run performance stack test. If you use a wet scrubber and you conduct separate performance stack tests for particulate matter and mercury emissions, you must establish one set of minimum scrubber liquid flowrate and pressure drop operating limits. If you conduct multiple performance stack tests, you must set the minimum liquid flowrate and pressure drop operating limits at the highest minimum values established during the performance stack tests.

(2) For an electrostatic precipitator operated with a wet scrubber, you must establish the minimum voltage and secondary amperage (or total electric power input), as defined in §63.11237, as your operating limits during the three-run performance stack test. (These operating limits do not apply to electrostatic precipitators that are operated as dry controls without a wet scrubber.)

(3) For activated carbon injection, you must establish the minimum activated carbon injection rate, as defined in §63.11237, as your operating limit during the three-run performance stack test.

(4) The operating limit for boilers with fabric filters that demonstrate continuous compliance through bag leak detection systems is that a bag leak detection system be installed according to the requirements in §63.11224, and that each fabric filter must be operated such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period.

(c) If you elect to demonstrate compliance with an applicable mercury emission limit through fuel analysis, you must conduct fuel analyses according to §63.11213 and Table 5 to this subpart and follow the procedures in paragraphs (c)(1) through (3) of this section.

(1) If you burn more than one fuel type, you must determine the fuel type, or mixture, you could burn in your boiler that would result in the maximum emission rates of mercury.

(2) You must determine the 90th percentile confidence level fuel mercury concentration of the composite samples analyzed for each fuel type using Equation 1 of this section.

$$P_{90} = mean + (SD * t) \quad (Eq. 1)$$

Where:

P90 = 90th percentile confidence level mercury concentration, in pounds per million Btu.mean = Arithmetic average of the fuel mercury concentration in the fuel samples analyzed according to §63.11213, in units of pounds per million Btu.SD = Standard deviation of the mercury concentration in the fuel samples analyzed according to §63.11213, in units of pounds per million Btu.t = t distribution critical value for 90th percentile (0.1) probability for the appropriate degrees of freedom (number of samples minus one) as obtained from a Distribution Critical Value Table.

(3) To demonstrate compliance with the applicable mercury emission limit, the emission rate that you calculate for your boiler using Equation 1 of this section must be less than the applicable mercury emission limit.

§ 63.11212 What stack tests and procedures must I use for the performance tests?

(a) You must conduct all performance tests according to §63.7(c), (d), (f), and (h). You must also develop a site-specific test plan according to the requirements in §63.7(c).

(b) You must conduct each stack test according to the requirements in Table 4 to this subpart.

(c) You must conduct performance stack tests at the representative operating load conditions while burning the type of fuel or mixture of fuels that have the highest emissions potential for each regulated pollutant, and you must demonstrate initial compliance and establish your operating limits based on these performance stack tests. For subcategories with more than one emission limit, these requirements could result in the need to conduct more than one performance stack test. Following each performance stack test and until the next performance stack test, you must comply with the operating limit for operating load conditions specified in Table 3 to this subpart.

(d) You must conduct a minimum of three separate test runs for each performance stack test required in this section, as specified in §63.7(e)(3) and in accordance with the provisions in Table 4 to this subpart.

(e) To determine compliance with the emission limits, you must use the F–Factor methodology and equations in sections 12.2 and 12.3 of EPA Method 19 of appendix A–7 to part 60 of this chapter to convert the measured particulate matter concentrations and the measured mercury concentrations that result from the initial performance test to pounds per million Btu heat input emission rates.

§ 63.11213 What fuel analyses and procedures must I use for the performance tests?

(a) You must conduct fuel analyses according to the procedures in paragraphs (b) and (c) of this section and Table 5 to this subpart, as applicable. You are not required to conduct fuel analyses for fuels used for only startup, unit shutdown, and transient flame stability purposes. You are required to conduct fuel analyses only for fuels and units that are subject to emission limits for mercury in Table 1 of this subpart.

(b) At a minimum, you must obtain three composite fuel samples for each fuel type according to the procedures in Table 5 to this subpart. Each composite sample must consist of a minimum of three samples collected at approximately equal intervals during a test run period.

(c) Determine the concentration of mercury in the fuel in units of pounds per million Btu of each composite sample for each fuel type according to the procedures in Table 5 to this subpart.

§ 63.11214 How do I demonstrate initial compliance with the work practice standard, emission reduction measures, and management practice?

(a) If you own or operate an existing or new coal-fired boiler with a heat input capacity of less than 10 million Btu per hour, you must conduct a performance tune-up according to §63.11223(b) and you must submit a signed statement in the Notification of Compliance Status report that indicates that you conducted a tune-up of the boiler.

(b) If you own or operate an existing or new biomass-fired boiler or an existing or new oil-fired boiler, you must conduct a performance tune-up according to §63.11223(b) and you must submit a signed statement in the Notification of Compliance Status report that indicates that you conducted a tune-up of the boiler.

(c) If you own or operate an existing affected boiler with a heat input capacity of 10 million Btu per hour or greater, you must submit a signed certification in the Notification of Compliance Status report that an energy assessment of the boiler and its energy use systems was completed and submit, upon request, the energy assessment report.

(d) If you own or operate a boiler subject to emission limits in Table 1 of this subpart, you must minimize the boiler's startup and shutdown periods following the manufacturer's recommended procedures, if available. If manufacturer's recommended procedures are not available, you must follow recommended procedures for a unit of similar design for which manufacturer's recommended procedures are available. You must submit a signed statement in the Notification of Compliance Status report that indicates that you conducted startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available.

Continuous Compliance Requirements

§ 63.11220 When must I conduct subsequent performance tests?

(a) If your boiler has a heat input capacity of 10 million Btu per hour or greater, you must conduct all applicable performance (stack) tests according to §63.11212 on an triennial basis, unless you follow the requirements listed in paragraphs (b) through (d) of this section. Triennial performance tests must be completed no more than 37 months after the previous performance test, unless you follow the requirements listed in paragraphs (b) through (d) of this section.

(b) You can conduct performance stack tests less often for particulate matter or mercury if your performance stack tests for the pollutant for at least 3 consecutive years show that your emissions are at or below 75 percent of the emission limit, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. In this case, you do not have to conduct a performance stack test for that pollutant for the next 2 years. You must conduct a performance stack test during the third year and no more than 37 months after the previous performance stack test.

(c) If your boiler continues to meet the emission limit for particulate matter or mercury, you may choose to conduct performance stack tests for the pollutant every third year if your emissions are at or below 75 percent of the emission limit, and if there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions, but each such performance stack test must be conducted no more than 37 months after the previous performance test.

(d) If you have an applicable CO emission limit, you must conduct triennial performance tests for CO according to §63.11212. Each triennial performance test must be conducted between no more than 37 months after the previous performance test.

(e) If you demonstrate compliance with the mercury emission limit based on fuel analysis, you must conduct a fuel analysis according to §63.11213 for each type of fuel burned monthly. If you plan to burn a new type of fuel or fuel mixture, you must conduct a fuel analysis before burning the new type of fuel or mixture in your boiler. You must recalculate the mercury emission rate using Equation 1 of §63.11211. The recalculated mercury emission rate must be less than the applicable emission limit.

§ 63.11221 How do I monitor and collect data to demonstrate continuous compliance?

(a) You must monitor and collect data according to this section.

(b) You must operate the monitoring system and collect data at all required intervals at all times the affected source is operating except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods (see section 63.8(c)(7) of this part), and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to effect monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable.

(c) You may not use data recorded during monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

(d) Except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments, failure to collect required data is a deviation of the monitoring requirements.

§ 63.11222 How do I demonstrate continuous compliance with the emission limits?

(a) You must demonstrate continuous compliance with each emission limit and operating limit in Tables 1 and 3 to this subpart that applies to you according to the methods specified in Table 7 to this subpart and to paragraphs (a)(1) through (4) of this section.

(1) Following the date on which the initial compliance demonstration is completed or is required to be completed under §§63.7 and 63.11196, whichever date comes first, you must continuously monitor the operating parameters. Operation above the established maximum, below the established minimum, or outside the allowable range of the operating limits specified in paragraph (a) of this section constitutes a deviation from your operating limits established under this subpart, except during performance tests conducted to determine compliance with the emission and operating limits or to establish

new operating limits. Operating limits are confirmed or reestablished during performance tests.

(2) If you have an applicable mercury or PM emission limit, you must keep records of the type and amount of all fuels burned in each boiler during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in lower emissions of mercury than the applicable emission limit (if you demonstrate compliance through fuel analysis), or result in lower fuel input of mercury than the maximum values calculated during the last performance stack test (if you demonstrate compliance through performance stack testing).

(3) If you have an applicable mercury emission limit and you plan to burn a new type of fuel, you must determine the mercury concentration for any new fuel type in units of pounds per million Btu, using the procedures in Equation 1 of §63.11211 based on supplier data or your own fuel analysis, and meet the requirements in paragraphs (a)(3)(i) or (ii) of this section.

(i) The recalculated mercury emission rate must be less than the applicable emission limit.

(ii) If the mercury concentration is higher than mercury fuel input during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in §63.11212 to demonstrate that the mercury emissions do not exceed the emission limit.

(4) If your unit is controlled with a fabric filter, and you demonstrate continuous compliance using a bag leak detection system, you must initiate corrective action within 1 hour of a bag leak detection system alarm and operate and maintain the fabric filter system such that the alarm does not sound more than 5 percent of the operating time during a 6-month period. You must also keep records of the date, time, and duration of each alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken. You must also record the percent of the operating time during each 6-month period that the alarm sounds. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm is counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alarm time is counted as the actual amount of time taken to initiate corrective action.

(b) You must report each instance in which you did not meet each emission limit and operating limit in Tables 1 and 3 to this subpart that apply to you. These instances are deviations from the emission limits in this subpart. These deviations must be reported according to the requirements in §63.11225.

§ 63.11223 How do I demonstrate continuous compliance with the work practice and management practice standards?

(a) For affected sources subject to the work practice standard or the management practices of a tune-up, you must conduct a biennial performance tune-up according to paragraphs (b) of this section and keep records as required in §63.11225(c) to demonstrate continuous compliance. Each biennial tune-up must be conducted no more than 25 months after the previous tune-up.

(b) You must conduct a tune-up of the boiler biennially to demonstrate continuous compliance as specified in paragraphs (b)(1) through (7) of this section.

(1) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown, but you must inspect each burner at least once every 36 months).

(2) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.

(3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly.

(4) Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available.

(5) Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made).

(6) Maintain onsite and submit, if requested by the Administrator, biennial report containing the information in paragraphs (b)(6)(i) through (iii) of this section.

(i) The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured before and after the tune-up of the boiler.

(ii) A description of any corrective actions taken as a part of the tune-up of the boiler.

(iii) The type and amount of fuel used over the 12 months prior to the biennial tune-up of the boiler.

(7) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within one week of startup.

(c) If you own or operate an existing or new coal-fired boiler with a heat input capacity of 10 million Btu per hour or greater, you must minimize the boiler's time spent during startup and shutdown following the manufacturer's recommended procedures and you must submit a signed statement in the Notification of Compliance Status report that indicates that you conducted startups and shutdowns according to the manufacturer's recommended procedures.

§ 63.11224 What are my monitoring, installation, operation, and maintenance requirements?

(a) If your boiler is subject to a carbon monoxide emission limit in Table 1 to this subpart, you must install, operate, and maintain a continuous oxygen monitor according to the procedures in paragraphs (a)(1) through (6) of this section by the compliance date specified in §63.11196. The oxygen level shall be monitored at the outlet of the boiler.

(1) Each monitor must be installed, operated, and maintained according to the applicable procedures under Performance Specification 3 at 40 CFR part 60, appendix B, and according to the site-specific monitoring plan developed according to paragraph (c) of this section.

(2) You must conduct a performance evaluation of each CEMS according to the requirements in §63.8(e) and according to Performance Specification 3 at 40 CFR part 60, appendix B.

(3) Each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(4) The CEMS data must be reduced as specified in §63.8(g)(2).

(5) You must calculate and record the 12-hour block average concentrations.

(6) For purposes of calculating data averages, you must use all the data collected during all periods in assessing compliance, excluding data collected during periods when the monitoring system malfunctions or is out of control, during associated repairs, and during required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments). Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. Any period for

which the monitoring system malfunctions or is out of control and data are not available for a required calculation constitutes a deviation from the monitoring requirements. Periods when data are unavailable because of required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments) do not constitute monitoring deviations.

(b) If you are using a control device to comply with the emission limits specified in Table 1 to this subpart, you must maintain each operating limit in Table 3 to this subpart that applies to your boiler as specified in Table 7 to this subpart. If you use a control device not covered in Table 3 to this subpart, or you wish to establish and monitor an alternative operating limit and alternative monitoring parameters, you must apply to the United States Environmental Protection Agency (EPA) Administrator for approval of alternative monitoring under §63.8(f).

(c) If you demonstrate compliance with any applicable emission limit through stack testing and subsequent compliance with operating limits, you must develop a site-specific monitoring plan according to the requirements in paragraphs (c)(1) through (4) of this section. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under §63.8(f).

(1) For each continuous monitoring system (CMS) required in this section, you must develop, and submit to the EPA Administrator for approval upon request, a site-specific monitoring plan that addresses paragraphs (b)(1)(i) through (iii) of this section. You must submit this site-specific monitoring plan (if requested) at least 60 days before your initial performance evaluation of your CMS.

(i) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device).

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems.

(iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations).

(2) In your site-specific monitoring plan, you must also address paragraphs (b)(2)(i) through (iii) of this section.

(i) Ongoing operation and maintenance procedures in accordance with the general requirements of §63.8(c)(1), (3), and (4)(ii).

(ii) Ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d).

(iii) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of §63.10(c), (e)(1), and (e)(2)(i).

(3) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan.

(4) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.

(d) If you have an operating limit that requires the use of a CMS, you must install, operate, and maintain each continuous parameter monitoring system according to the procedures in paragraphs (d)(1) through (5) of this section.

(1) The continuous parameter monitoring system must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four successive cycles of operation to have a valid hour of data.

(2) Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span

adjustments), you must conduct all monitoring in continuous operation at all times that the unit is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(3) For purposes of calculating data averages, you must not use data recorded during monitoring malfunctions, associated repairs, out of control periods, or required quality assurance or control activities. You must use all the data collected during all other periods in assessing compliance. Any period for which the monitoring system is out-of-control and data are not available for a required calculation constitutes a deviation from the monitoring requirements.

(4) Determine the 12-hour block average of all recorded readings, except as provided in paragraph (d)(3) of this section.

(5) Record the results of each inspection, calibration, and validation check.

(e) If you have an applicable opacity operating limit under this rule, you must install, operate, certify and maintain each continuous opacity monitoring system (COMS) according to the procedures in paragraphs (e)(1) through (7) of this section by the compliance date specified in §63.11196.

(1) Each COMS must be installed, operated, and maintained according to Performance Specification 1 of 40 CFR part 60, appendix B.

(2) You must conduct a performance evaluation of each COMS according to the requirements in §63.8 and according to Performance Specification 1 of 40 CFR part 60, appendix B.

(3) As specified in §63.8(c)(4)(i), each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(4) The COMS data must be reduced as specified in §63.8(g)(2).

(5) You must include in your site-specific monitoring plan procedures and acceptance criteria for operating and maintaining each COMS according to the requirements in §63.8(d). At a minimum, the monitoring plan must include a daily calibration drift assessment, a quarterly performance audit, and an annual zero alignment audit of each COMS.

(6) You must operate and maintain each COMS according to the requirements in the monitoring plan and the requirements of §63.8(e). Identify periods the COMS is out of control including any periods that the COMS fails to pass a daily calibration drift assessment, a quarterly performance audit, or an annual zero alignment audit.

(7) You must determine and record all the 1-hour block averages collected for periods during which the COMS is not out of control.

(f) If you use a fabric filter bag leak detection system to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate the bag leak detection system as specified in paragraphs (f)(1) through (8) of this section.

(1) You must install and operate a bag leak detection system for each exhaust stack of the fabric filter.

(2) Each bag leak detection system must be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations and in accordance with EPA–454/R–98–015 (incorporated by reference, see §63.14).

(3) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less.

(4) The bag leak detection system sensor must provide output of relative or absolute particulate matter loadings.

(5) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor.

(6) The bag leak detection system must be equipped with an audible or visual alarm system that will activate automatically when an increase in relative particulate matter emissions over a preset level is detected. The alarm must be located where it is easily heard or seen by plant operating personnel.

(7) For positive pressure fabric filter systems that do not duct all compartments of cells to a common stack, a bag leak detection system must be installed in each baghouse compartment or cell.

(8) Where multiple bag leak detectors are required, the system's instrumentation and alarm may be shared among detectors.

§ 63.11225 What are my notification, reporting, and recordkeeping requirements?

(a) You must submit the notifications specified in paragraphs (a)(1) through (a)(5) of this section to the delegated authority.

(1) You must submit all of the notifications in §§63.7(b): 63.8(e) and (f); 63.9(b) through (e); and 63.9(g) and (h) that apply to you by the dates specified in those sections.

(2) As specified in §63.9(b)(2), you must submit the Initial Notification no later than 120 calendar days after May 20, 2011 or within 120 days after the source becomes subject to the standard.

(3) If you are required to conduct a performance stack test you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance stack test is scheduled to begin.

(4) You must submit the Notification of Compliance Status in accordance with §63.9(h) no later than 120 days after the applicable compliance date specified in §63.11196 unless you must conduct a performance stack test. If you must conduct a performance stack test, you must submit the Notification of Compliance Status within 60 days of completing the performance stack test. In addition to the information required in §63.9(h)(2), your notification must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

(i) “This facility complies with the requirements in §63.11214 to conduct an initial tune-up of the boiler.”

(ii) “This facility has had an energy assessment performed according to §63.11214(c).”

(iii) For an owner or operator that installs bag leak detection systems: “This facility has prepared a bag leak detection system monitoring plan in accordance with §63.11224 and will operate each bag leak detection system according to the plan.”

(iv) For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: “No secondary materials that are solid waste were combusted in any affected unit.”

(5) If you are using data from a previously conducted emission test to serve as documentation of conformance with the emission standards and operating limits of this subpart consistent with §63.7(e)(2)(iv), you must submit the test data in lieu of the initial performance test results with the Notification of Compliance Status required under paragraph (a)(4) of this section.

(b) You must prepare, by March 1 of each year, and submit to the delegated authority upon request, an annual compliance certification report for the previous calendar year containing the information specified in paragraphs (b)(1) through (4) of this section. You must submit the report by

March 15 if you had any instance described by paragraph (b)(3) of this section. For boilers that are subject only to a requirement to conduct a biennial tune-up according to §63.11223(a) and not subject to emission limits or operating limits, you may prepare only a biennial compliance report as specified in paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report.

(1) Company name and address.

(2) Statement by a responsible official, with the official's name, title, phone number, e-mail address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart.

(3) If the source experiences any deviations from the applicable requirements during the reporting period, include a description of deviations, the time periods during which the deviations occurred, and the corrective actions taken.

(4) The total fuel use by each affected boiler subject to an emission limit, for each calendar month within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by you or EPA through a petition process to be a non-waste under §241.3(c), whether the fuel(s) were processed from discarded non-hazardous secondary materials within the meaning of §241.3, and the total fuel usage amount with units of measure.

(c) You must maintain the records specified in paragraphs (c)(1) through (5) of this section.

(1) As required in §63.10(b)(2)(xiv), you must keep a copy of each notification and report that you submitted to comply with this subpart and all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted.

(2) You must keep records to document conformance with the work practices, emission reduction measures, and management practices required by §63.11214 as specified in paragraphs (c)(2)(i) and (ii) of this section.

(i) Records must identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned.

(ii) Records documenting the fuel type(s) used monthly by each boiler, including, but not limited to, a description of the fuel, including whether the fuel has received a non-waste determination by you or EPA, and the total fuel usage amount with units of measure. If you combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to §241.3(b)(1), you must keep a record which documents how the secondary material meets each of the legitimacy criteria. If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to §241.3(b)(4), you must keep records as to how the operations that produced the fuel satisfies the definition of processing in §241.2. If the fuel received a non-waste determination pursuant to the petition process submitted under §241.3(c), you must keep a record that documents how the fuel satisfies the requirements of the petition process.

(3) For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation that were done to demonstrate compliance with the mercury emission limits. Supporting documentation should include results of any fuel analyses. You can use the results from one fuel analysis for multiple boilers provided they are all burning the same fuel type.

(4) Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in §63.11205(a), including

corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation.

(6) You must keep the records of all inspection and monitoring data required by §§63.11221 and 63.11222, and the information identified in paragraphs (c)(6)(i) through (vi) of this section for each required inspection or monitoring.

(i) The date, place, and time of the monitoring event.

(ii) Person conducting the monitoring.

(iii) Technique or method used.

(iv) Operating conditions during the activity.

(v) Results, including the date, time, and duration of the period from the time the monitoring indicated a problem to the time that monitoring indicated proper operation.

(vi) Maintenance or corrective action taken (if applicable).

(7) If you use a bag leak detection system, you must keep the records specified in paragraphs (c)(7)(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.

(iii) The date and time of all bag leak detection system alarms, and for each valid alarm, the time you initiated corrective action, the corrective action taken, and the date on which corrective action was completed.

(d) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1). As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each recorded action. You must keep each record onsite for at least 2 years after the date of each recorded action according to §63.10(b)(1). You may keep the records off site for the remaining 3 years.

(e) As of January 1, 2012 and within 60 days after the date of completing each performance test, as defined in §63.2, conducted to demonstrate compliance with this subpart, you must submit relative accuracy test audit (i.e., reference method) data and performance test (i.e., compliance test) data, except opacity data, electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see http://www.epa.gov/ttn/chief/ert/ert tool.html/) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database.

(f) If you intend to commence or recommence combustion of solid waste, you must provide 30 days prior notice of the date upon which you will commence or recommence combustion of solid waste. The notification must identify:

(1) The name of the owner or operator of the affected source, the location of the source, the boiler(s) that will commence burning solid waste, and the date of the notice.

(2) The currently applicable subcategory under this subpart.

(3) The date on which you became subject to the currently applicable emission limits.

(4) The date upon which you will commence combusting solid waste.

(g) If you intend to switch fuels, and this fuel switch may result in the applicability of a different subcategory or a switch out of subpart JJJJJJ due to a switch to 100 percent natural gas, you must provide 30 days prior notice of the date upon which you will switch fuels. The notification must identify:

(1) The name of the owner or operator of the affected source, the location of the source, the boiler(s) that will switch fuels, and the date of the notice.

(2) The currently applicable subcategory under this subpart.

(3) The date on which you became subject to the currently applicable standards.

(4) The date upon which you will commence the fuel switch.

§ 63.11226 How can I assert an affirmative defense if I exceed an emission limit during a malfunction?

In response to an action to enforce the standards set forth in paragraph §63.11201 you may assert an affirmative defense to a claim for civil penalties for exceedances of numerical emission limits that are caused by malfunction, as defined at §63.2. Appropriate penalties may be assessed, however, if you fail to meet your burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(a) To establish the affirmative defense in any action to enforce such a limit, you must timely meet the notification requirements in paragraph (b) of this section, and must prove by a preponderance of evidence that:

(1) The excess emissions:

(i) Were caused by a sudden, infrequent, and unavoidable failure of air pollution control and monitoring equipment, process equipment, or a process to operate in a normal or usual manner, and

(ii) Could not have been prevented through careful planning, proper design or better operation and maintenance practices; and

(iii) Did not stem from any activity or event that could have been foreseen and avoided, or planned for; and

(iv) Were not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

(2) Repairs were made as expeditiously as possible when the applicable emission limitations were being exceeded. Off-shift and overtime labor were used, to the extent practicable to make these repairs; and

(3) The frequency, amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions; and

(4) If the excess emissions resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

(5) All possible steps were taken to minimize the impact of the excess emissions on ambient air quality, the environment and human health; and

(6) All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and

(7) All of the actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs; and

(8) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions; and

(9) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the excess emissions resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of excess emissions that were the result of the malfunction.

(b) Notification. The owner or operator of the facility experiencing an exceedance of its emission limit(s) during a malfunction shall notify the Administrator by telephone or facsimile (FAX) transmission as soon as possible, but no later than two business days after the initial occurrence of the malfunction, if it wishes to avail itself of an affirmative defense to civil penalties for that malfunction. The owner or operator seeking to assert an affirmative defense shall also submit a written report to the Administrator within 45 days of the initial occurrence of the exceedance of the standard in §63.11201 to demonstrate, with all necessary supporting documentation, that it has met the requirements set forth in paragraph (a) of this section. The owner or operator may seek an extension of this deadline for up to 30 additional days by submitting a written request to the Administrator before the expiration of the 45 day period. Until a request for an extension has been approved by the Administrator, the owner or operator is subject to the requirement to submit such report within 45 days of the initial occurrence of the exceedance.

Other Requirements and Information

§ 63.11235 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

§ 63.11236 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by EPA or a delegated authority such as your state, local, or tribal agency. If the EPA Administrator has delegated authority to your state, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to your state, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a state, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraphs (c) of this section are retained by the EPA Administrator and are not transferred to the state, local, or tribal agency.

(c) The authorities that cannot be delegated to state, local, or tribal agencies are specified in paragraphs (c)(1) through (5) of this section.

(1) Approval of an alternative non-opacity emission standard and work practice standards in §63.11223(a).

(2) Approval of alternative opacity emission standard under §63.6(h)(9).

(3) Approval of major change to test methods under §63.7(e)(2)(ii) and (f). A “major change to test method” is defined in §63.90.

(4) Approval of a major change to monitoring under §63.8(f). A “major change to monitoring” is defined in §63.90.

(5) Approval of major change to recordkeeping and reporting under §63.10(f). A “major change to recordkeeping/reporting” is defined in §63.90.

§ 63.11237 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in §63.2 (the General Provisions), and in this section as follows:

Affirmative defense means, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.

Annual heat input basis means the heat input for the 12 months preceding the compliance demonstration.

Bag leak detection system means a group of instruments that is capable of monitoring particulate matter loadings in the exhaust of a fabric filter (i.e., baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on electrodynamic, triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

Biomass means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue and wood products (e.g., trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings); animal manure, including litter and other bedding materials; vegetative agricultural and silvicultural materials, such as logging residues (slash), nut and grain hulls and chaff (e.g., almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds. This definition of biomass is not intended to suggest that these materials are or are not solid waste.

Biomass subcategory includes any boiler that burns at least 15 percent biomass on an annual heat input basis.

Boiler means an enclosed device using controlled flame combustion in which water is heated to recover thermal energy in the form of steam or hot water. Controlled flame combustion refers to a steady-state, or near steady-state, process wherein fuel and/or oxidizer feed rates are controlled. Waste heat boilers are excluded from this definition.

Boiler system means the boiler and associated components, such as, the feedwater system, the combustion air system, the boiler fuel system (including burners), blowdown system, combustion control system, steam system, and condensate return system.

Coal means all solid fuels classifiable as anthracite, bituminous, sub-bituminous, or lignite by the American Society for Testing and Materials in ASTM D388 (incorporated by reference, see §63.14), coal refuse, and petroleum coke. For the purposes of this subpart, this definition of "coal" includes synthetic fuels derived from coal including, but not limited to, solvent-refined coal, coal-oil mixtures, and coal-water mixtures. Coal derived gases are excluded from this definition.

Coal subcategory includes any boiler that burns any solid fossil fuel and no more than 15 percent biomass on an annual heat input basis.

Commercial boiler means a boiler used in commercial establishments such as hotels, restaurants, and laundries to provide electricity, steam, and/or hot water.

Deviation

(1) Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(i) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limit, operating limit, or work practice standard;

(ii) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(2) A deviation is not always a violation. The determination of whether a deviation constitutes a violation of the standard is up to the discretion of the entity responsible for enforcement of the standards.

Dry scrubber means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder material. Sorbent injection systems in fluidized bed boilers are included in this definition. A dry scrubber is a dry control system.

Electrostatic precipitator (ESP) means an add-on air pollution control device used to capture particulate matter by charging the particles using an electrostatic field, collecting the particles using a grounded collecting surface, and transporting the particles into a hopper. An electrostatic precipitator is a dry control system, except when it is operated with a wet scrubber.

Energy assessment means the following only as this term is used in Table 3 to this subpart:

(1) Energy assessment for facilities with affected boilers using less than 0.3 trillion Btu (TBtu) per year heat input will be one day in length maximum. The boiler system and energy use system accounting for at least 50 percent of the affected boiler(s) energy output will be evaluated to identify energy savings opportunities, within the limit of performing a one day energy assessment.

(2) Energy assessment for facilities with affected boilers and process heaters using 0.3 to 1 TBtu/year will be three days in length maximum. The boiler system(s) and any energy use system(s) accounting for at least 33 percent of the affected boiler(s) energy output will be evaluated to identify energy savings opportunities, within the limit of performing a 3-day energy assessment.

(3) Energy assessment for facilities with affected boilers and process heaters using greater than 1.0 TBtu/year, the boiler system(s) and any energy use system(s) accounting for at least 20 percent of the affected boiler(s) energy output will be evaluated to identify energy savings opportunities.

Energy use system includes, but not limited to, process heating; compressed air systems; machine drive (motors, pumps, fans); process cooling; facility heating, ventilation, and air-conditioning (HVAC) systems; hot heater systems;, building envelop; and lighting.

Equivalent means the following only as this term is used in Table 5 to this subpart:

(1) An equivalent sample collection procedure means a published voluntary consensus standard or practice (VCS) or EPA method that includes collection of a minimum of three composite fuel samples, with each composite consisting of a minimum of three increments collected at approximately equal intervals over the test period.

(2) An equivalent sample compositing procedure means a published VCS or EPA method to systematically mix and obtain a representative subsample (part) of the composite sample.

(3) An equivalent sample preparation procedure means a published VCS or EPA method that: Clearly states that the standard, practice or method is appropriate for the pollutant and the fuel matrix; or is cited as an appropriate sample preparation standard, practice or method for the pollutant in the chosen VCS or EPA determinative or analytical method.

(4) An equivalent procedure for determining heat content means a published VCS or EPA method to obtain gross calorific (or higher heating) value.

(5) An equivalent procedure for determining fuel moisture content means a published VCS or EPA method to obtain moisture content. If the sample analysis plan calls for determining mercury using an aliquot of the dried sample, then the drying temperature must be modified to prevent vaporizing this metal. On the other hand, if metals analysis is done on an “as received” basis, a separate aliquot can be dried to determine moisture content and the mercury concentration mathematically adjusted to a dry basis.

(6) An equivalent mercury determinative or analytical procedure means a published VCS or EPA method that clearly states that the standard, practice, or method is appropriate for mercury and the fuel matrix and has a published detection limit equal or lower than the methods listed in Table 5 to this subpart for the same purpose.

Fabric filter means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse. A fabric filter is a dry control system.

Federally enforceable means all limitations and conditions that are enforceable by the EPA Administrator, including the requirements of 40 CFR part 60 and 40 CFR part 61, requirements within any applicable state implementation plan, and any permit requirements established under §§52.21 or under 51.18 and §51.24.

Fuel type means each category of fuels that share a common name or classification. Examples include, but are not limited to, bituminous coal, sub-bituminous coal, lignite, anthracite, biomass, distillate

oil, residual oil. Individual fuel types received from different suppliers are not considered new fuel types.

Gaseous fuels includes, but is not limited to, natural gas, process gas, landfill gas, coal derived gas, refinery gas, hydrogen, and biogas.

Gas-fired boiler includes any boiler that burns gaseous fuels not combined with any solid fuels, burns liquid fuel only during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined total of 48 hours during any calendar year.

Heat input means heat derived from combustion of fuel in a boiler and does not include the heat input from preheated combustion air, recirculated flue gases, or returned condensate.

Hot water heater means a closed vessel with a capacity of no more than 120 U.S. gallons in which water is heated by combustion of gaseous or liquid fuel and is withdrawn for use external to the vessel at pressures not exceeding 160 psig, including the apparatus by which the heat is generated and all controls and devices necessary to prevent water temperatures from exceeding 210 degrees Fahrenheit (99 degrees Celsius).

Industrial boiler means a boiler used in manufacturing, processing, mining, and refining or any other industry to provide steam, hot water, and/or electricity.

Institutional boiler means a boiler used in institutional establishments such as medical centers, research centers, and institutions of higher education to provide electricity, steam, and/or hot water.

Liquid fuel means, but not limited to, petroleum, distillate oil, residual oil, any form of liquid fuel derived from petroleum, used oil, liquid biofuels, and biodiesel.

Minimum *activated carbon injection rate* means load fraction (percent) multiplied by the lowest 1-hour average activated carbon injection rate measured according to Table 6 to this subpart during the most recent performance stack test demonstrating compliance with the applicable emission limits.

Minimum oxygen level means the lowest 1-hour average oxygen level measured according to Table 6 of this subpart during the most recent performance stack test demonstrating compliance with the applicable CO emission limit.

Minimum PM Scrubber pressure drop means the lowest 1-hour average PM scrubber pressure drop measured according to Table 6 to this subpart during the most recent performance stack test demonstrating compliance with the applicable emission limit.

Minimum sorbent flow rate means the boiler load (percent) multiplied by the lowest 2-hour average sorbent (or activated carbon) injection rate measured according to Table 6 to this subpart during the most recent performance stack test demonstrating compliance with the applicable emission limits.

Minimum voltage or amperage means the lowest 1-hour average total electric power value (secondary voltage × secondary current = secondary electric power) to the electrostatic precipitator measured according to Table 6 to this subpart during the most recent performance stack test demonstrating compliance with the applicable emission limits.

Natural gas means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane including intermediate gas streams generated during processing of natural gas at production sites or at gas processing plants; or

(2) Liquefied petroleum gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §63.14).

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43 megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

(4) Propane or propane-derived synthetic natural gas. Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C3H8.

Oil subcategory includes any boiler that burns any liquid fuel and is not in either the biomass or coal subcategories. Gas-fired boilers that burn liquid fuel during periods of gas curtailment, gas supply emergencies, or for periodic testing not to exceed 48 hours during any calendar year are not included in this definition.

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

Particulate matter (PM) means any finely divided solid or liquid material, other than uncombined water, as measured by the test methods specified under this subpart, or an alternative method.

Performance testing means the collection of data resulting from the execution of a test method used (either by stack testing or fuel analysis) to demonstrate compliance with a relevant emission standard.

Period of natural gas curtailment or supply interruption means a period of time during which the supply of natural gas to an affected facility is halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of a facility for the purposes of this definition. An increase in the cost or unit price of natural gas does not constitute a period of natural gas curtailment or supply interruption.

Qualified energy assessor means:

(1) someone who has demonstrated capabilities to evaluate a set of the typical energy savings opportunities available in opportunity areas for steam generation and major energy using systems, including, but not limited to:

(i) Boiler combustion management.

(ii) Boiler thermal energy recovery, including

(A) Conventional feed water economizer,

(B) Conventional combustion air preheater, and

(C) Condensing economizer.

(iii) Boiler blowdown thermal energy recovery.

(iv) Primary energy resource selection, including

(A) Fuel (primary energy source) switching, and

(B) Applied steam energy versus direct-fired energy versus electricity.

(v) Insulation issues.

(vi) Steam trap and steam leak management.

(vi) Condensate recovery.

(viii) Steam end-use management.

(2) Capabilities and knowledge includes, but is not limited to:

(i) Background, experience, and recognized abilities to perform the assessment activities, data analysis, and report preparation.

(ii) Familiarity with operating and maintenance practices for steam or process heating systems.

(iii) Additional potential steam system improvement opportunities including improving steam turbine operations and reducing steam demand.

(iv) Additional process heating system opportunities including effective utilization of waste heat and use of proper process heating methods.

(v) Boiler-steam turbine cogeneration systems.

(vi) Industry specific steam end-use systems.

Responsible official means responsible official as defined in §70.2.

Solid fossil fuel includes, but not limited to, coal, petroleum coke, and tire derived fuel.

Waste heat boiler means a device that recovers normally unused energy and converts it to usable heat. Waste heat boilers are also referred to as heat recovery steam generators.

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, which is promulgated pursuant to section 112(h) of the Clean Air Act.

Table 1 to Subpart JJJJJJ of Part 63_Emission Limits

[As stated in § 63.11201, you must comply with the following applicable emission limits:]

If your boiler is in this subcategory	For the following pollutants. . .	You must achieve less than or equal to the following emission limits, except during periods of startup and shutdown. . .
1. New coal-fired boiler with heat input capacity of 30 million Btu per hour or greater.	a. Particulate Matter.	0.03 lb per MMBtu of heat input.
	b. Mercury.....	0.0000048 lb per MMBtu of heat input.
	c. Carbon Monoxide.	400 ppm by volume on a dry basis corrected to 3 percent oxygen.
2. New coal-fired boiler with heat input capacity of between 10 and 30 million Btu per hour.	a. Particulate Matter.	0.42 lb per MMBtu of heat input.
	b. Mercury.....	0.0000048 lb per MMBtu of heat input.
	c. Carbon Monoxide.	400 ppm by volume on a dry basis corrected to 3 percent oxygen.
3. New biomass-fired boiler with heat input capacity of 30 million Btu per hour or greater.	a. Particulate Matter.	0.03 lb per MMBtu of heat input.
4. New biomass fired boiler with heat input capacity of between 10 and 30 million Btu per hour.	a. Particulate Matter.	0.07 lb per MMBtu of heat input.
5. New oil-fired boiler with heat input capacity of 10	a. Particulate Matter.	0.03 lb per MMBtu of heat input.

million Btu per hour or greater.		
6. Existing coal (units with heat input capacity of 10 million Btu per hour or greater).	a. Mercury.....	0.0000048 lb per MMBtu of heat input.
	b. Carbon Monoxide.	400 ppm by volume on a dry basis corrected to 3 percent oxygen.

Table 3 to Subpart JJJJJJ of Part 63_Operating Limits for Boilers With Emission Limits

[As stated in § 63.11201, you must comply with the applicable operating limits:]

If you demonstrate compliance with applicable emission limits using:	You must meet these operating limits.
1. Fabric filter control.....	a. Maintain opacity to less than or equal to 10 percent opacity (daily block average); OR
	b. Install and operate a bag leak detection system according to § 63.11224 and operate the fabric filter such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during each 6-month period.
2. Electrostatic precipitator control.	a. Maintain opacity to less than or equal to 10 percent opacity (daily block average); OR
	b. Maintain the secondary power input of the electrostatic precipitator at or above the lowest 1-hour average secondary electric power measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations.
3. Wet PM scrubber control...	Maintain the pressure drop at or above the lowest 1-hour average pressure drop across the wet scrubber and the liquid flow-rate at or above the lowest 1-hour average liquid flow rate measured during the most recent performance test demonstrating compliance with the PM emission limitation.
4. Dry sorbent or carbon injection control.	Maintain the sorbent or carbon injection rate at or above the lowest 2-hour average sorbent flow rate measured during the most recent performance test demonstrating compliance with the

	mercury emissions limitation. When your boiler operates at lower loads, multiply your sorbent or carbon injection rate by the load fraction (e.g., actual heat input divided by the heat input during performance stack test, for 50 percent load, multiply the injection rate operating limit by 0.5).
5. Any other add-on air pollution control type.	This option is for boilers that operate dry control systems. Boilers must maintain opacity to less than or equal to 10 percent opacity (daily block average).
6. Fuel analysis.....	Maintain the fuel type or fuel mixture (annual average) such that the mercury emission rates calculated according to § 63.11211(b) is less than the applicable emission limits for mercury.
7. Performance stack testing.	For boilers that demonstrate compliance with a performance stack test, maintain the operating load of each unit such that is does not exceed 110 percent of the average operating load recorded during the most recent performance stack test.
8. Continuous Oxygen Monitor.	Maintain the oxygen level at or above the lowest 1-hour average oxygen level measured during the most recent CO performance stack test.

Table 4 to Subpart JJJJJJ of Part 63_Performance (Stack) Testing Requirements

[As stated in § 63.11212, you must comply with the following requirements for performance (stack) test for affected sources:]

To conduct a performance test for the following pollutant. . .	You must. . .	Using. . .
1. Particulate Matter.....	a. Select sampling ports location and the number of traverse points.	Method 1 in appendix A-1 to part 60 of this chapter.
	b. Determine velocity and volumetric flow-rate of the stack gas.	Method 2, 2F, or 2G in appendix A-2 to part 60 of this chapter.
	c. Determine oxygen and carbon dioxide concentrations of the stack gas.	Method 3A or 3B in appendix A-2 to part 60 of this chapter, or ASTM D6522-00

			(Reapproved 2005), \a\ or ANSI/ASME PTC 19.10-1981.\a\
	d.	Measure the moisture content of the stack gas.	Method 4 in appendix A-3 to part 60 of this chapter.
	e.	Measure the particulate matter emission concentration.	Method 5 or 17 (positive pressure fabric filters must use Method 5D) in appendix A-3 and A-6 to part 60 of this chapter and a minimum 1 dscm of sample volume per run.
	f.	Convert emissions concentration to lb/MMBtu emission rates.	Method 19 F-factor methodology in appendix A-7 to part 60 of this chapter.
2. Mercury.....	a.	Select sampling ports location and the number of traverse points.	Method 1 in appendix A-1 to part 60 of this chapter.
	b.	Determine velocity and volumetric flow-rate of the stack gas.	Method 2, 2F, or 2G in appendix A-2 to part 60 of this chapter.
	c.	Determine oxygen and carbon dioxide concentrations of the stack gas.	Method 3A or 3B in appendix A-2 to part 60 of this chapter, or ASTM D6522-00 (Reapproved 2005) ,\a\ or ANSI/ASME PTC 19.10-1981. \a\
	d.	Measure the moisture content of the stack gas.	Method 4 in appendix A-3 to part 60 of this chapter.
	e.	Measure the mercury emission concentration.	Method 29, 30A, or 30B in appendix A-8 to part 60 of this chapter or Method 101A in appendix B to part 61 of this chapter or ASTM Method D6784-02.\a\ Collect a minimum 2 dscm of sample volume with Method 29 of 101A per run.

			Use a minimum run time of 2 hours with Method 30A.
	f.	Convert emissions concentration to lb/MMBtu emission rates.	Method 19 F-factor methodology in appendix A-7 to part 60 of this chapter.
3. Carbon Monoxide.....	a.	Select the sampling ports location and the number of traverse points.	Method 1 in appendix A-1 to part 60 of this chapter.
	b.	Determine oxygen and carbon dioxide concentrations of the stack gas.	Method 3A or 3B in appendix A-2 to part 60 of this chapter, or ASTM D6522-00 (Reapproved 2005),\a\ or ANSI/ASME PTC 19.10-1981.\a\
	c.	Measure the moisture content of the stack gas.	Method 4 in appendix A-3 to part 60 of this chapter.
	d.	Measure the carbon monoxide emission concentration.	Method 10, 10A, or 10B in appendix A-4 to part 60 of this chapter or ASTM D6522-00 (Reapproved 2005) \a\ and a minimum 1 hour sampling time per run.

\a\ Incorporated by reference, see § 63.14.

Table 5 to Subpart JJJJJJ of Part 63_Fuel Analysis Requirements

[As stated in § 63.11213, you must comply with the following requirements for fuel analysis testing for affected sources:]

To conduct a fuel analysis for the following pollutant . . .		You must. . .	Using . . .
1. Mercury.....	a.	Collect fuel samples.	Procedure in § 63.11213(b) or ASTM D2234/D2234M \a\ (for coal) or ASTM D6323 \a\ (for biomass) or equivalent.
	b.	Compose fuel samples.	Procedure in § 63.11213(b) or

	equivalent.
c. Prepare composited fuel samples.	EPA SW-846-3050B \a\ (for solid samples) or EPA SW-846-3020A \a\ (for liquid samples) or ASTM D2013/D2013M \a\ (for coal) or ASTM D5198 \a\ (for biomass) or equivalent.
d. Determine heat content of the fuel type.	ASTM D5865 \a\ (for coal) or ASTM E711 \a\ (for biomass) or equivalent.
e. Determine moisture content of the fuel type	ASTM D3173 \a\ or ASTM E871 \a\ or equivalent.
f. Measure mercury concentration in fuel sample	ASTM D6722 \a\ (for coal) or EPA SW-846-7471B \a\ (for solid samples) or EPA SW-846-7470A \a\ (for liquid samples) or equivalent.
g. Convert concentrations into units of lb/MMBtu of heat content	

\a\ Incorporated by reference, see § 63.14.

Table 7 to Subpart DDDDD of Part 63_Demonstrating Continuous Compliance

[As stated in § 63.11222, you must show continuous compliance with the emission limitations for affected sources according to the following:]

If you must meet the following operating limits. . .	You must demonstrate continuous compliance by. . .
1. Opacity.....	a. Collecting the opacity monitoring system data according to § 63.11224(e) and § 63.11221; and b. Reducing the opacity monitoring data to 6-minute averages; and c. Maintaining opacity to less than or equal to 10 percent (daily block average).
2. Fabric filter bag leak detection operation.	Installing and operating a bag leak detection system according to § 63.11224 and operating the fabric filter

	such that the requirements in § 63.11222(a)(4) are met.
3. Wet scrubber pressure drop and liquid flow-rate.	a. Collecting the pressure drop and liquid flow rate monitoring system data according to §§ 63.11224 and 63.11221; and b. Reducing the data to 12-hour block averages; and c. Maintaining the 12-hour average pressure drop and liquid flow-rate at or above the operating limits established during the performance test according to § 63.1140.
4. Dry scrubber sorbent or carbon injection rate.	a. Collecting the sorbent or carbon injection rate monitoring system data for the dry scrubber according to §§ 63.11224 and 63.11220; and b. Reducing the data to 12-hour block averages; and c. Maintaining the 12-hour average sorbent or carbon injection rate at or above the minimum sorbent or carbon injection rate as defined in § 63.11237.
5. Electrostatic precipitator secondary amperage and voltage, or total power input.	a. Collecting the secondary amperage and voltage, or total power input monitoring system data for the electrostatic precipitator according to §§ 63.11224 and 63.11220; and b. Reducing the data to 12-hour block averages; and c. Maintaining the 12-hour average secondary amperage and voltage, or total power input at or above the operating limits established during the performance test according to § 63.11214.
6. Fuel pollutant content....	a. Only burning the fuel types and fuel mixtures used to demonstrate compliance with the applicable emission limit according to § 63.11214 as applicable; and b. Keeping monthly records of fuel use according to § 63.11222.
7. Oxygen content.....	a. Continuously monitor the oxygen content in the combustion exhaust according to § 63.11224. b. Maintain the 12-hour average oxygen content at or above the operating limit established during the most recent carbon monoxide performance test.

Table 8 to Subpart JJJJJJ of Part 63_Applicability of General Provisions to Subpart JJJJJJ

[As stated in § 63.11235, you must comply with the applicable General Provisions according to the following:]

General provisions cite	Subject	Does it apply?
§ 63.1.....	Applicability.....	Yes.
§ 63.2.....	Definitions.....	Yes. Additional terms defined in § 63.11237.
§ 63.3.....	Units and Abbreviations.	Yes.
§ 63.4.....	Prohibited Activities and Circumvention.	Yes.
§ 63.5.....	Preconstruction Review and Notification Requirements.	No
§ 63.6(a), (b)(1)-(b)(5), (b)(7), (c), (f)(2)-(3), (g), (i), (j).	Compliance with Standards and Maintenance Requirements.	Yes.
§ 63.6(e)(1)(i).....	General Duty to minimize emissions.	No. See § 63.11205 for general duty requirement.
§ 63.6(e)(1)(ii).....	Requirement to correct malfunctions ASAP.	No.
§ 63.6(e)(3).....	SSM Plan.....	No.
§ 63.6(f)(1).....	SSM exemption.....	No.
§ 63.6(h)(1).....	SSM exemption.....	No.
§ 63.6(h)(2) to (9).....	Determining compliance with opacity emission standards.	Yes.
§ 63.7(a), (b), (c), (d) , (e)(2)-(e)(9), (f), (g), and (h).	Performance Testing Requirements.	Yes.
§ 63.7(e)(1).....	Performance testing.	No. See § 63.11210.
§ 63.8(a), (b), (c)(1), (c)(1)(ii), (c)(2) to (c)(9), (d)(1) and (d)(2), (e),(f), and (g).	Monitoring Requirements.	Yes.
§ 63.8(c)(1)(i).....	General duty to minimize emissions and CMS	No.

	operation.	
§ 63.8(c)(1)(iii).....	Requirement to develop SSM Plan for CMS.	No.
§ 63.8(d)(3).....	Written procedures for CMS.	Yes, except for the last sentence, which refers to an SSM plan. SSM plans are not required.
§ 63.9.....	Notification Requirements.	Yes.
§ 63.10(a) and (b)(1).....	Recordkeeping and Reporting Requirements.	Yes.
§ 63.10(b)(2)(i).....	Recordkeeping of occurrence and duration of startups or shutdowns.	No.
§ 63.10(b)(2)(ii).....	Recordkeeping of malfunctions.	No. See § 63.11225 for recordkeeping of (1) occurrence and duration and (2) actions taken during malfunctions.
§ 63.10(b)(2)(iii).....	Maintenance records.	Yes.
§ 63.10(b)(2)(iv) and (v)..	Actions taken to minimize emissions during SSM.	No.
§ 63.10(b)(2)(vi).....	Recordkeeping for CMS malfunctions.	Yes.
§ 63.10(b)(2)(vii) to (xiv)	Other CMS requirements.	Yes.
§ 63.10(b)(3).....	Recordkeeping requirements for applicability determinations.	No.
§ 63.10(c)(1) to (9).....	Recordkeeping for sources with CMS.	Yes.
§ 63.10(c)(10).....	Recording nature and cause of malfunctions.	No. See § 63.11225 for malfunction recordkeeping requirements.
§ 63.10(c)(11).....	Recording corrective	No. See § 63.11225 for

	actions.	malfunction recordkeeping requirements.
§ 63.10(c)(12) and (13)....	Recordkeeping for sources with CMS.	Yes.
§ 63.10(c)(15).....	Allows use of SSM plan.	No.
§ 63.10(d)(1) and (2).....	General reporting requirements.	Yes.
§ 63.10(d)(3).....	Reporting opacity or visible emission observation results.	No.
§ 63.10(d)(4).....	Progress reports under an extension of compliance.	Yes.
§ 63.10(d)(5).....	SSM reports.....	No. See § 63.11225 for malfunction reporting requirements.
§ 63.10(e) and (f).....	.....	Yes.
§ 63.11.....	Control Device Requirements.	No.
§ 63.12.....	State Authority and Delegation.	Yes.
§ 63.13-63.16.....	Addresses, Incorporation by Reference, Availability of Information, Performance Track Provisions.	Yes.
§ 63.1(a)(5), (a)(7)-(a)(9), (b)(2), (c)(3)-(4), (d), 63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(3), (h)(5)(iv), 63.8(a)(3), 63.9(b)(3), (h)(4), 63.10(c)(2)-(4), (c)(9).	Reserved.....	No.

View Printed Federal Register (76 FR 15591) page in PDF format.

Reference
The US EPA Electronic Code of Federal Regulations - 40 CFR 63, Subpart JJJJJJ—National Emission Standards for Industrial, Commercial, and Institutional Boilers Area Sources weblink:
http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr;sid=fc2f490d56c4cdb99ca95b608f4a7040;rgn=div2;view=text;node=20110321%3A1.24;idno=40;cc=ecfr;start=1;size=25

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (ATSD) for a Federally Enforceable State Operating Permit (FESOP) Renewal

Source Background and Description

Source Name: Meshberger Brothers Stone Corporation
Source Location: 1972 West State Road 28, Ridgeville, Indiana 47380
County: Randolph
SIC Code: 2951 (Asphalt Paving Mixtures and Blocks)
Permit Renewal No.: F135-29992-03158
Permit Reviewer: Hannah L. Desrosiers

On July 19, 2011, the Office of Air Quality (OAQ) had a notice published in News-Gazette, Winchester, Indiana, stating that Meshberger Brothers Stone Corporation had applied for a renewal of their FESOP, issued on December 18, 2006, to continue operation of their existing stationary batch-mix, hot-mix, asphalt plant and a cold-mix production operation. The notice also stated that the OAQ proposed to issue a FESOP Renewal for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Comments and Responses

No comments were received during the public notice period.

Additional Changes

The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD; therefore, changes are documented in this ATSD. Revised language is provided below with deleted language as ~~strikeouts~~ and new language **bolded**.

(a) The information contained in the "Unrestricted Potential Emissions" Section of the TSD regarding greenhouse gas emissions was unintentionally omitted from the Draft. Therefore, the information is provided as follows:

Pollutant	tons/year
PM	28,137.83
PM10[(1)]	3,974.12
PM2.5	250.03
SO2	198.12
NOx	105.87
VOC	21,101.23
CO	353.37
Total HAPs [(2)]	5,512.66
GHGs as CO2e	**60,951.51**
Maximum (Worst Case) HAP	1,894.92 (xylene)

NOTES

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

(2) HAPs include acetaldehyde, acrolein, benzene, beryllium, bis(2-ethylhexyl)phthalate, ethylbenzene, formaldehyde, HCl, hexane, methyl chloroform, naphthalene, phenol, polycyclic organic matter, propionaldehyde, quinone, toluene, total PAH HAPs, xylene, and antimony, arsenic, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium compounds.

(3) Appendices A.1 and A.2, of this TSD, reflect the unrestricted, uncontrolled, potential emissions of the source.

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(b) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) greenhouse gases (GHGs) is less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year.

(**c**~~b~~)

No changes were made to the permit as a result of this update.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Ms. Hannah Desrosiers 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) 234-5374 or toll free at 1-800-451-6027 extension 4-5374.

(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

Indiana Department of Environmental Management
Office of Air Quality

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

Source Description and Location

Source Name:	Meshberger Brothers Stone Corporation
Source Location:	1972 West State Road 28, Ridgeville, Indiana 47380
County:	Randolph
SIC Code:	2951 (Asphalt Paving Mixtures and Blocks)
Permit Renewal No.:	F135-29992-03158
Permit Reviewer:	Hannah L. Desrosiers

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Meshberger Brothers Stone Corporation relating to the operation of a stationary batch-mix, hot-mix, asphalt plant and a cold-mix production operation.

Source Definition

Meshberger Brothers Stone Corporation operates its hot mix asphalt pavement plant on the same property as its quarry. The plants have separate offices, employees, and equipment. The quarry supplies crushed aggregate to the asphalt plant. IDEM, OAQ has examined whether the asphalt plant and the quarry are part of the same major source. The term "major source" is defined at 326 IAC 2-7-1(22). In order for these plants to be considered one major source, they must meet all three of the following criteria:

(1) the plants must be under common ownership or common control;

(2) the plants must have the same two-digit Standard Industrial Classification (SIC) Code or one must serve as a support facility for the other; and,

(3) the plants must be located on contiguous or adjacent properties.

The two plants have the same owner, so there is common ownership. IDEM's Nonrule Policy Document Air-005 sets out that if two plants are owned by the same person or entity, common control also exists. The first part of the major source definition is therefore met.

The SIC Code Manual of 1987 sets out how to determine the proper SIC Code for each type of business. More information about SIC Codes is available at http://www.osha.gov/pls/imis/sic_manual.html on the Internet. The quarry has the two-digit SIC Code 14 for the Major Group Mining and Quarrying of Nonmetallic Minerals, Except Fuels. The asphalt plant has the two-digit SIC Code 29 for the Major Group Petroleum Refining and Related Industries. Therefore, the two plants do not have the same two-digit SIC code.

A plant is a support facility to another plant if it dedicates 50% or more of its output to the other plant. The quarry sends about 25% of its annual output to the asphalt plant. The asphalt plant sends a very minimal amount, far less than 50%, of its asphalt pavement production to the quarry. Since the plants have different SIC Codes and neither is a support facility to the other, they do not meet the second part of the major source definition.

The two plants are located on the same property, so the third part of the definition is met. Since the plants do not meet all three parts of the major source definition, IDEM, OAQ has determined that the two plants are not part of the same major source.

Background and Description of Permitted Emission Units and Pollution Control Equipment

On December 13, 2010, Meshberger Brothers Stone Corporation (Meshberger) submitted an application to the OAQ requesting to renew its operating permit. Meshberger has confirmed that they do not process blast furnace slag, steel slag, or recycled asphalt shingles, asbestos-free or otherwise, in their aggregate mix, and that they do not perform any grinding of any kind of recycled asphalt shingles. Additionally, Meshberger has confirmed that they want to retain the flexibility to crush recycled asphalt pavement (RAP) on-site. Meshberger was issued a New Source Review and FESOP Renewal (No. F135-22947-03158) on December 18, 2006.

The source consists of the following permitted emission units:

(a) One (1) stationary batch-mix, hot-mix asphalt plant, consisting of the following

(1) One (1) batch mixer, identified as EU#10, constructed in 2002, with a maximum throughput capacity of two hundred (200) tons of raw material per hour, using one (1) cyclone, identified as EU#16, and one (1) baghouse, identified as EU#19, to control particulate emissions, and exhausting to Stack SV#1. This source does not use blast furnace slag, electric arc furnace steel mill slag, or recycled asphalt shingles (RAS), asbestos-free or otherwise, in their aggregate mix;

(2) one (1) aggregate dryer, identified as EU#4, equipped with one (1) burner, identified as EU#5, constructed in 2002 and modified in 2006, having a maximum heat input capacity of eighty-five (85.0) million British thermal units per hour and firing natural gas, No. 2 fuel oil, or waste oil, using one (1) cyclone, identified as EU#16, and one (1) baghouse, identified as EU#19, to control particulate emissions, and exhausting to Stack SV#1,

(3) Material handling, screening, and conveying operations, constructed in 2002, uncontrolled and exhausting to the outside atmosphere, and consisting of the following:

(A) One (1) cold feed system, constructed prior to 2002, with a maximum throughput capacity of two hundred fifty (250) tons of asphalt per hour, and consisting of:

(i) Six (6) cold feed bins, identified as EU#1;

(ii) One (1) conveyor to the dryer, identified as EU#3;

(iii) One screen deck, identified as EU#7;

(iv) Hot aggregate storage bins, identified as EU#8; and

(v) One (1) aggregate weigh hopper, identified as EU#9;

(B) One (1) hot asphalt storage and conveyor system, having a maximum throughput capacity of two hundred (200) tons of asphalt per hour, and consisting of:

(i) One (1) drag-slat conveyor, identified as EU#11; and

(ii) Two (2) hot asphalt storage bins, identified as EU#35 and EU#36, constructed in 1985; and

(iii) one (1) hot asphalt storage bin, identified as EU#12, constructed in 1996.

Note: This source obtains its aggregate from the quarry where it is located, therefore no storage piles, aside from the RAP, are included in the source description, or emission calculations, since they are already accounted for in the quarry's operating permit.

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

(4) One (1) Recycled asphalt pavement (RAP) system, constructed in 2006, with a maximum throughput capacity of thirty (30) tons per hour, uncontrolled and exhausting to the outside atmosphere, and consisting of:

(1) One (1) feed bin, identified as EU#37;

(2) One (1) lump breaker, identified as EU#38;

(3) One (1) conveyor, identified as EU#39; and

(4) Recycled asphalt pavement (RAP) storage piles, having a maximum height of twelve (12) feet and a maximum storage capacity of one and twenty-eight hundredths (1.28) tons.

Under 40 CFR 60, Subpart OOO, New Source Performance Standards for Nonmetallic Mineral Processing Plants, this is considered an affected facility.

(b) One (1) cold-mix cutback asphalt production operation, identified as EU#11, constructed in 2002, using one (1) cyclone, identified as EU#16, and one (1) baghouse, identified as EU#19, to control particulate emissions, exhausting to Stack SV#1, and including:

(1) cold-mix (stockpile mix) asphalt storage piles;

Emission Units and Pollution Control Equipment Constructed and/or Operated without a Permit

No unpermitted emission units were discovered operating at this existing source during this review process.

Emission Units and Pollution Control Equipment Removed From the Source

No emission units have been removed from this existing source during this review process.

Insignificant Activities (Only for FESOP Renewals and Title V Renewals)

The source also consists of the following insignificant activities:

(a) One (1) liquid asphalt cement hot oil heating system, including the following:

(1) One (1) hot oil heater, identified as EU#13A, constructed in 1995, with a maximum heat input capacity of seven hundred thousandths (0.700) million British thermal units per hour (MMBtu/hr), firing natural gas or No. 2 fuel oil, uncontrolled and exhausting to Stack SV2; [326 IAC 6-2]

Under 40 CFR 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, this is considered an affected facility.

Note: this unit employs indirect heat transfer and qualifies as a boiler under 326 IAC 6-2.

(2) One (1) 30,000 gallon liquid asphalt storage tank, identified as EU#13B, constructed in 1995, uncontrolled and exhausting to Stack SV2.

(b) One (1) hot asphalt storage and slat conveyor transfer heater, identified as EU#33, with a maximum heat input capacity of five hundred thousandths (0.500) million British thermal units per hour (MMBtu/hr), firing natural gas or No. 2 fuel oil, uncontrolled and exhausting to Stack SV4; [326 IAC 6-2]

Under 40 CFR 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, this is considered an affected facility.

Note: this unit employs indirect heat transfer and qualifies as a boiler under 326 IAC 6-2.

(c) One (1) 20,000 gallon liquid asphalt storage tank, identified as EU#34, constructed in 1985, equipped with an electric hot oil heater, uncontrolled and exhausting to Stack SV3;

(d) One (1) 8,000 gallon No. 2 fuel oil storage tank, identified as EU#32, constructed in 1985, uncontrolled and exhausting to the outside atmosphere;

(e) Miscellaneous VOC and HAP Storage tanks, each with capacities less than or equal to 1,000 gallons, and annual throughputs of less than 12,000 gallons, uncontrolled and exhausting to the atmosphere;

(f) Vessels storing lubricating oil, hydraulic oils, machining oils, and machining fluids;

(g) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;

(h) Natural gas pressure regulator vents, excluding venting at oil and gas production facilities;

(i) A laboratory as defined in 326 IAC 2-7-1(21)(D); and

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

Existing Approvals

The source has been operating under New Source Construction and FESOP Renewal No.: F135-22947-03158, issued on December 18, 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.

Enforcement Issue

There are no pending enforcement actions related to this existing source.

Emission Calculations

See Appendices A.1 and A.2 of this TSD for detailed emission calculations.

County Attainment Status

The source is located in Randolph County. The following attainment status designations are applicable to Randolph County:

Pollutant	Designation
SO2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O3	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard.[1]
PM10	Unclassifiable effective November 15, 1990.
PM2.5	Unclassifiable or attainment effective April 5, 2005.
NO2	Cannot be classified or better than national standards.
Pb	Not designated.

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

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

(b) PM2.5
Randolph County has been classified as attainment for PM2.5. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions. These rules became effective on July 15, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM2.5 emissions until 326 IAC 2-2 is revised.

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

Fugitive Emissions

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

Unrestricted Potential Emissions

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	tons/year
PM	28,137.83
PM10[(1)]	3,974.12
PM2.5	250.03
SO2	198.12
NOx	105.87
VOC	21,101.23
CO	353.37
Total HAPs [(2)]	5,512.66
Maximum (Worst Case) HAP	1,894.92 (xylene)

NOTES

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

(2) HAPs include acetaldehyde, acrolein, benzene, beryllium, bis(2-ethylhexyl)phthalate, ethylbenzene, formaldehyde, HCl, hexane, methyl chloroform, naphthalene, phenol, polycyclic organic matter, propionaldehyde, quinone, toluene, total PAH HAPs, xylene, and antimony, arsenic, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium compounds.

(3) Appendices A.1 and A.2, of this TSD, reflect the unrestricted, uncontrolled, potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM10, PM2.5, SO2, NOx, VOC, and CO are each equal to or greater than one hundred (100) tons per year. However, the Permittee has agreed to limit the source's PM10, PM2.5, SO2, NOx, VOC, and CO emissions, each, to less than Title V levels, therefore the Permittee will be issued a FESOP Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. However, the Permittee has agreed to limit the source's single HAP emissions and total HAP emissions below Title V levels. Therefore, the Permittee will be issued a FESOP Renewal.

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.

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Process/ Emission Unit	Potential To Emit of the Entire Source after Issuance of Renewal (tons/year)									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs**	Total HAPs	Worst Single HAP
Ducted Emissions										
Dryer Fuel Combustion (worst case) (1)	83.88	66.84	66.84	96.33	37.25	2.05	31.29	45,033.84	10.48	8.65 (HCL)
Dryer/Mixer and Batch Tower (Process) (2)	219.06	89.84	95.08	21.68	29.57	8.87	98.56	9,154.95	1.91	0.67 (xylene)
Dryer/Mixer Slag Processing	0	0	0	0	0	0	0	0	0	NA
Hot Oil Heater Fuel Combustion (worst case)	0.04	0.07	0.07	1.55	0.44	0.02	0.26	494.97	0.007	0.006 (hexane)
Hot Asphalt Storage & Conveyor System Heater Fuel Combustion (worst case)	0.03	0.05	0.05	1.11	0.31	0.01	0.18	353.55	0.005	0.004 (hexane)
Worst Case Emissions*	**219.14**	**89.96**	**95.20**	**99.00**	**38.00**	**8.90**	**99.00**	**45,882.35**	**10.49**	**8.65 (HCL)**
Fugitive Emissions										
Asphalt Load-Out, Silo Filling, On-Site Yard (3)	0.27	0.27	0.27	0	0	4.22	0.71	0	0.07	0.02 (formaldehyde)
Material Storage Piles	0.14	0.05	0.05	0	0	0	0	0	0	0
Material Processing and Handling (3)	1.59	0.75	0.11	0	0	0	0	0	0	0
Material Crushing, Screening, and Conveying (3)	7.82	2.86	2.86	0	0	0	0	0	0	0
Unpaved and Paved Roads (worst case) (1)	20.04	5.11	0.51	0	0	0	0	0	0	0
Cold Mix Asphalt Production (4)	0	0	0	0	0	54.97	0	0	14.34	4.95 (xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0	0	0	0	NA
Volatile Organic Liquid Storage Vessels***	0	0	0	0	0	negl	0	0	negl	negl
Total Fugitive Emissions	**29.86**	**9.04**	**3.80**	**0**	**0**	**59.19**	**0.71**	**0**	**14.41**	**4.95 (xylenes)**
Total Limited/ Controlled Emissions	**249.00**	**99.00**	**99.00**	**99.00**	**38.00**	**68.09**	**99.71**	**45,882.35**	**24.90**	**8.65 (HCL)**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO_2e	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000 CO_2e	NA	NA
Emission Offset/ Nonattainment NSR Major Source Thresholds	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

HCL = Hydrogen Chloride NA = Not applicable negl. = negligible

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

** The 100,000 CO2e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

*** Fugitive emissions from each of the volatile organic liquid storage tanks were calculated using the EPA Tanks 4.0.9d program and were determined to be negligible.

(1) Limited PTE based upon annual production and fuel usage limits to comply with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).

(2) Limited PTE based upon annual production limit and lb/ton emission limits to comply with 326 IAC 2-2 (PSD) and 326 IAC 2-8 (FESOP).

(3) Limited PTE based upon annual production limit to comply with 326 IAC 2-2 (PSD) & 326 IAC 2-8 (FESOP).

(4) Limited PTE based upon maximum annual VOC usage limit to comply with 326 IAC 2-8 (FESOP).

(a) FESOP Status

This existing source is not a Title V major stationary source, because the potential to emit criteria pollutants from the entire source will be limited to less than the Title V major source threshold levels. In addition, this existing source is not a major source of HAPs, as defined in 40 CFR 63.41, because the potential to emit HAPs is limited to less than ten (10) tons per year for a single HAP and twenty-five (25) tons per year of total HAPs. 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).

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

(1) Pursuant to 326 IAC 2-8-4, the PM10, PM2.5, NOx, VOC, and CO emissions from the stationary batch-mix, hot-mix asphalt plant dryer burner (dryer/mixer), and all other associated emission units at this source, shall be limited as follows:

(A) The hot-mix asphalt production rate shall not exceed 492,792 tons per twelve (12) consecutive month period with compliance determined at the end of each month. *This is a revised limit for this source.*

(B) PM10 emissions from the dryer/mixer shall not exceed three hundred sixty-five thousandths (0.365) pounds of PM10 per ton of asphalt produced. *This is a change from the existing pound per hour limit to a pound per ton limit.*

(C) PM2.5 emissions from the dryer/mixer shall not exceed three hundred eighty-six thousandths (0.386) pounds of PM2.5 per ton of asphalt produced. *This is a new limit for this source.*

(D) NOX emissions from the dryer/mixer shall not exceed one hundred and twenty thousandths (0.120) pounds of NOX per ton of asphalt produced. *This is a new limit for this source.*

(E) VOC emissions from the dryer/mixer shall not exceed thirty-six thousandths (0.036) pounds of VOC per ton of asphalt produced. *This is a new limit for this source.*

(F) CO emissions from the dryer/mixer shall not exceed forty hundredths (0.40) pounds of CO per ton of asphalt produced. *This is an existing limit for this source.*

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

See Appendix A for detailed calculations.

Note: The following terms and conditions from previous approvals have been revised in this FESOP Renewal:

(i) The existing pound per hour (lb/hr) PM10 limit has been transitioned to a pound per ton (lb/ton) emission limit, which when coupled with a maximum annual hot-mix asphalt production limit (ton/yr) are more practicably enforceable, and offer a more thorough and comprehensive

method of determining compliance. Thereby enabling the source to more easily ensure compliance with the one hundred (100) ton per year FESOP threshold, to render the requirements of 326 IAC 2-7 Title V (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

(ii) During this review, the emissions calculations were updated to reflect the source's most current "worst-case" operating conditions for all units, and includes emissions not previously counted. Additionally, since OAQ relies on the most up-to-date emission factors recommended by U.S. EPA, facility emissions have been characterized using the most recent version of U.S. EPA's AP-42. As a result, the following changes have been made to the permit:

(α) CO emissions from the drying/mixing process, and from the silo filling, load out, and on-site yard, not previously accounted for in FESOP, No.: F135-22947-03158, have been calculated. In order to ensure compliance with the one hundred (100) ton per year FESOP threshold for VOC, and to render the requirements of 326 IAC 2-7 Title V (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the existing FESOP maximum annual hot-mix asphalt production limit has been reduced from 497,750 to 492,792 tons/yr;

(β) The existing PM10 emission limit of eighteen and ninety-five hundredths (18.95) lbs/hr (equivalent to three hundred and thirty-four thousandths (0.334) lbs/ton) has been converted, and increased, to three hundred sixty-five thousandths (0.365) lbs/ton. This was possible because the decrease in the annual asphalt production limit is such that the PM10 emission limit can be increased to allow the source added operational flexibility and still ensure compliance with the one hundred (100) ton per year FESOP threshold for PM10, and make the requirements of 326 IAC 2-7 Title V (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

(χ) A new FESOP PM2.5 limit has been added to the permit, because on May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, with an effective date for the rule of July 15, 2008. While Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements, the May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM2.5 emissions until 326 IAC 2-2 is revised.

(δ) NOx emissions from the drying/mixing process, not previously accounted for in FESOP, No.: F135-22947-03158, have been calculated. In order to ensure compliance with the one hundred (100) ton per year FESOP threshold for VOC, and to render the requirements of 326 IAC 2-7 Title V (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, a new FESOP (lb/ton) limit for NOx has been added to the permit;

(ε) VOC emissions from the drying/mixing process, and from the silo filling, load out, and on-site yard, not previously accounted for in

FESOP, No.: F135-22947-03158, have been calculated. In order to ensure compliance with the one hundred (100) ton per year FESOP threshold for VOC, and to render the requirements of 326 IAC 2-7 Title V (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, a new FESOP (lb/ton) limit for VOC has been added to the permit;

(2) Pursuant to 326 IAC 2-8, the Permittee shall continue to control PM10, and PM2.5 emissions from the asphalt load-out and on-site yard, hot oil and asphalt heaters, material screening, and conveying, material processing and handling, material storage piles, and paved and unpaved roads according to the fugitive dust plan, included as Attachment A to the permit. *This is an existing requirement for this source.*

Compliance with this requirement, combined with the potential to emit PM, PM10, and PM2.5 from all other emission units at this source, shall limit the source-wide total potential to emit of PM10, and PM2.5 to less than one hundred (100) tons per twelve (12) consecutive month period, each, and to render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-1.1-5 (Nonattainment New Source Review), not applicable.

(3) Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall not use slag as an aggregate additive in its hot mix asphalt operations. *This is a new requirement for this source.*

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

Note: The following terms and conditions from previous approvals have been revised in this FESOP Renewal:

(α) Recent testing performed on another asphalt plant facility, having similar operations, has shown that slag emits higher SO2 emissions than were previously accounted for in standard asphalt plant emission calculations. Consequently, IDEM determined that the emission factors developed during that testing should be applied to emissions from slag use at all asphalt plants, and that permit requirements and conditions should be revised and/or added, as needed, to account for any additional SO2 emissions generated by the addition of slag to the aggregate mix.

This source has indicated that they have no interest in using slag as an additive in their aggregate mix. Therefore, a new condition prohibiting the use of slag in the aggregate mix has been added to the permit in order to ensure compliance with the one hundred (100) ton per year FESOP threshold for SO2, and to render the requirements of 326 IAC 2-7 Title V (Part 70) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable;

(4) Pursuant to 326 IAC 2-8-4, the SO2 and HAP emissions from the dryer/mixer burner and hot oil heater shall be limited as follows:

(A) <u>Fuel Specifications</u>

(i) The sulfur content of the No. 2 distillate fuel oil shall continue to not exceed five tenths percent (0.5%) by weight. *This is an existing limit for this source.*

(ii) The sulfur content of the waste oil shall not exceed fifty hundredths percent (0.50%) by weight. *This is a revised limit for this source.*

(viii) The chlorine content of the waste oil shall not exceed ten hundredths percent (0.10%) by weight. *This is a new limit for this source*.

(ix) HCl emissions from the dryer/mixer shall not exceed sixty-six ten-thousandths (0.0066) pounds of HCl per gallon of waste oil burned. *This is a new limit for this source.*

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

See Appendix A for detailed calculations.

Note: The following terms and conditions from previous approvals have been revised/added in this FESOP Renewal:

(α) Based on the specification sheet submitted by the source, the sulfur content of the waste oil used by the source is only forty-four hundredths percent (0.44%). Therefore, as requested by the source, the waste oil sulfur content limit has been changed from one percent (1.0%) by weight to fifty hundredths percent (0.50%). This change allows the source to use more waste oil, thereby increasing operational flexibility.

(β) HAP emissions from fuel combustion, and the dryer/mixer and batch tower processes, not previously accounted for in FESOP, No. F135-22947-03158, have been calculated. As a result, the following limits have been added to the permit:

(I) A new chlorine content limit for waste oil (a limiting factor for HAPs) has been added to the permit to ensure compliance with the ten (10) ton per year single HAP, and the twenty-five (25) ton per year combined HAP, thresholds and to render the requirements of 326 IAC 2-7 Title V (Part 70) not applicable; and

(II) A new FESOP limit for HCL has been added to the permit, to ensure compliance with the ten (10) ton per year single HAP, and the twenty-five (25) ton per year combined HAP, thresholds and to render the requirements of 326 IAC 2-7 Title V (Part 70) not applicable;

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

(i) Natural gas usage shall not exceed 745 million cubic feet per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a new limit for this source.*

(ii) No. 2 distillate fuel oil usage shall not exceed 2,713,647 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a revised limit for this source*; and

(iii) Waste oil usage shall not exceed 2,621,346 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a revised limit for this source.*

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

See Appendix A for the detailed calculations.

Note: The following terms and conditions from previous approvals have been revised in this FESOP Renewal:

(α) A Natural Gas usage limit has been added to the permit to allow the source to determine compliance with the FESOP SO2 limit using an equation.

(β) The No. 2 distillate fuel oil usage limit has been reduced from 2,735,211 gallons per twelve (12) consecutive month period to 2,713,647 gallons per twelve (12) consecutive month period, in order to ensure compliance with the one hundred (100) ton per year FESOP threshold for each pollutant and to render the requirements of 326 IAC 2-7 Title V (Part 70) not applicable.

(χ) The waste oil usage limit (the limiting factor for PM, PM10, PM2.5, and SO2 with regards to fuel combustion), has been increased from the existing equivalency of one (1.0) gallon of waste oil per every one and five hundred seven thousandths (1.507) gallons of No. 2 distillate fuel oil based on SO2 emissions (or approximately 1,815,004 gallons), such that the total gallons of No. 2 distillate fuel oil and No. 2 distillate fuel oil equivalent inputs would not exceed 2,735,211 gallons of No. 2 distillate fuel oil per twelve (12) consecutive month period, to less than 2,621,346 gallons of waste oil per twelve (12) consecutive month period, in order to ensure compliance with the one hundred (100) ton per year FESOP threshold for each pollutant and to render the requirements of 326 IAC 2-7 Title V (Part 70) not applicable. This change allows the source to use more waste oil, thereby increasing operational flexibility.

(C) <u>Multiple Fuel Usage Limitation:</u>
When combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, emissions shall be limited as follows:

(i) Sulfur dioxide (SO2) emissions from the dryer/mixer burner shall not exceed ninety-six and thirty-three (96.33) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Note: The existing permit specifies compliance in terms of fuel equivalency, however, the source has indicated that they would prefer compliance be demonstrated by equation, as follows;

The Permittee shall limit fuel usage in the dryer/mixer burner according to the following formula:

$$S = \frac{G(E_G) + O(E_O) + W(E_W)}{2{,}000 \text{ lbs/ton}}$$

Where:

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

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

O = gallons of No. 2 distillate fuel oil used in last 12 months with less than or equal to 0.5% sulfur content

W = gallons of waste oil used in last 12 months with less than or equal to 0.50% sulfur

Emission Factors:

E_G = 0.60 lbs/million cubic feet of natural gas

E_O = 0.071 lbs/gallon of No. 2 distillate fuel oil

E_W = 0.0735 lbs/gallon of waste oil

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

See Appendix A for detailed calculations.

(5) Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall not use asphalt shingles as an aggregate additive in its hot-mix asphalt operations. *This is a new requirement for this source.*

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

Note: The following terms and conditions from previous approvals have been revised/added in this FESOP Renewal:

(i) Post consumer waste asphalt shingles are a potential source of asbestos. The source has confirmed that is does <u>not</u> want the flexibility to process recycled shingles in their aggregate mix. Therefore, a new

condition prohibiting the use of asphalt shingles in the aggregate mix has been added to the permit;

(6) Pursuant to 326 IAC 2-8-4, the VOC emissions from cold-mix (cutback) asphalt production shall be limited as follows:

(A) VOC emissions from the sum of the binders shall not exceed fifty-four and ninety-seven hundredths (54.97) tons per twelve (12) consecutive month period with compliance determined at the end of each month. *This is a change from the existing VOC emission limit of ninety-seven and two tenths (97.2) tons per year.*

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

(i) Cut back asphalt rapid cure, containing a maximum of twenty-five and three tenths percent (25.3%) of the liquid binder by weight of VOC solvent and ninety-five percent (95.0%) by weight of VOC solvent evaporating. *This is a change from thirty five percent (35.0%) to twenty-five and three tenths percent (25.3%) of the liquid binder by weight of VOC solvent.*

(ii) Cut back asphalt medium cure, containing a maximum of twenty-eight and six tenths percent (28.6%) of the liquid binder by weight of VOC solvent and seventy percent (70.0%) by weight of VOC solvent evaporating. *This is an existing limit for this source.*

(iii) Cut back asphalt slow cure, containing a maximum of twenty percent (20.0%) of the liquid binder by weight of VOC solvent and twenty-five percent (25.0%) by weight of VOC solvent evaporating. *This is an existing limit for this source.*

(iv) Emulsified asphalt with solvent, containing a maximum of fifteen percent (15.0%) of liquid binder by weight of VOC solvent and forty-six and four tenths percent (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 seven percent (7%) or less of the total emulsion by volume. *This is an existing limit for this source.*

(v) Other asphalt with solvent binder, containing a maximum twenty-five and nine tenths percent (25.9%) of the liquid binder of VOC solvent and two and five tenths percent (2.5%) by weight of the VOC solvent evaporating. *This is an existing limit for this source*

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

(i) The amount of VOC solvent used in rapid cure cutback asphalt shall not exceed fifty-seven and eighty-six hundredths (57.86) tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a change from the existing VOC solvent usage limit of one hundred two and three tenths (102.3) tons of VOC solvent per twelve (12) consecutive month period rolled on a monthly basis.*

(ii) The amount of VOC solvent used in medium cure cutback asphalt shall not exceed seventy-eight and fifty-three hundredths (78.53) tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a new limit for this source.*

(iii) The amount of VOC solvent used in slow cure cutback asphalt shall not exceed two hundred nineteen and eighty-eight hundredths (219.88) tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a new limit for this source.*

(iv) The amount of VOC solvent used in emulsified asphalt shall not exceed one hundred eighteen and forty-seven hundredths (118.47) tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a new limit for this source.*

(v) The amount of VOC solvent used in all other asphalt shall not exceed two thousand one hundred ninety-eight and seventy-eight hundredths (2,198.78) tons per twelve (12) consecutive month period, with compliance determined at the end of each month. *This is a new limit for this source.*

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

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

$$\text{VOC emitted (tons/yr)} = \frac{\text{VOC solvent used for each binder (tons/yr)}}{\text{Adjustment factor}}$$

Type of binder	adjustment factor	*changed from an equivalency ratio of:*
cutback asphalt rapid cure	1.053	*1.0*
cutback asphalt medium cure	1.429	*0.737*
cutback asphalt slow cure	4.0	*0.263*
emulsified asphalt	2.155	*0.488*
other asphalt	40.0	*0.0263*

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

See Appendix A for the detailed calculations.

Note: The following terms and conditions have been revised/added in this FESOP Renewal:

(i) The most recent AP-42 emission factor has been used to characterize VOC emissions from the cold-mix asphalt production and storage. Additionally, the adjustment factors (formerly equivalency ratios) have been updated. The cold-mix VOC limit has been revised to accommodate these updates, as well as the effect of the revised asphalt production limit on the VOC emissions from the dryer/mixer unit.

(ii) HAP emissions from the cold-mix asphalt production and storage, not previously accounted for in FESOP Renewal, No. F135-22947-03158, have been calculated. The revised cold-mix VOC limit is now sufficient to limit the cold-mix asphalt production rate such that source wide potential to emit of any single HAP is limited to less than ten (10) tons per year, and any combination of HAPs is limited to less than twenty-five (25) tons per year; and therefore, rendering the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable.

(b) PSD Minor Source

This existing source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit PM is limited to less than two hundred fifty (250) tons per year and the potential to emit all other attainment regulated pollutants are less than two hundred fifty (250) tons per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

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

(1) PM emissions from the stationary batch-mix, hot-mix asphalt plant dryer/mixer burner, and all other associated emission units at this source, shall be limited as follows:

(A) The hot-mix asphalt production rate shall not exceed 492,792 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(B) PM emissions from the dryer/mixer shall not exceed eight hundred eighty-nine thousandths (0.889) pounds of PM per ton of asphalt produced. *This is a change from the existing pound per hour limit to a pound per ton limit.*

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

See Appendix A for detailed calculations.

Note: The following terms and conditions from previous approvals have been revised in this FESOP Renewal:

(i) The existing pound per hour (lb/hr) PM emission limit has been transitioned to a pound per ton (lb/ton) limit, which when coupled with a maximum annual hot-mix asphalt production limit (ton/yr) are more practicably enforceable, offer a more thorough and comprehensive method of determining compliance, and limit PM emissions from the entire source to less than two hundred fifty (250) tons per year, thereby rendering the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

(ii) As noted above, the emissions calculations were updated to reflect the source's most current "worst-case" operating conditions for all units, and includes emissions not previously counted. Additionally, the most recent AP-42 emission factors have been used to characterize these emissions. As a result, the following applies:

(α) The existing PM emission limit of thirty-five and seven tenths (35.7) lbs/hr (equivalent to six hundred and twenty-eight thousandths (0.628) lbs/ton) has been converted, and increased, to eight hundred eighty-nine thousandths (0.889) lbs/ton. This was possible because the decrease in the annual asphalt production limit is such that the PM emission limit can be increased to allow the source added operational flexibility and still limit PM emissions from the entire source to less than two hundred fifty (250) tons per year, and render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable. This change increases the operational flexibility of the plant.

Federal Rule Applicability

New Source Performance Standards (NSPS)

(a) 40 CFR 60, Subpart I - Standards for Hot-mix Asphalt Facilities

The existing stationary batch-mix, hot-mix asphalt plant, approved for construction in 1996, is still subject to the New Source Performance Standard, 40 CFR 60, Subpart I (326 IAC 12), because it continues to meet the definition of a hot-mix asphalt facility pursuant to the rule and was constructed after June 11, 1973. *This is an existing requirement for this source.*

The units subject to this rule include the following:

(1) Dryers

(2) Systems for screening, handling, storing, and weighing hot aggregate

(3) Systems for loading, transferring, and storing mineral filler

(4) Systems for mixing hot mix asphalt

(5) The loading, transfer, and storage systems associated with emission control systems

Therefore, pursuant to 40 CFR 60.92(a), particulate matter emissions from the above listed units, shall not exceed four hundredths (0.04) grains per dry standard cubic foot (gr/dscf), and visible emissions shall not exceed twenty percent (20%) opacity.

The source will continue to comply with this rule by using a cyclone and a baghouse to limit particulate matter emissions from the dryer/mixer to less than four hundredths (0.04) gr/dscf, and by applying the management techniques outlined in their Fugitive Dust Plan, included as Attachment A to the permit.

The hot-mix asphalt facility is still subject to the following portions of 40 CFR 60, Subpart I (included as Attachment A of the permit):

(1) 40 CFR 60.90.

(2) 40 CFR 60.91.

(3) 40 CFR 60.92.

(4) 40 CFR 60.93.

Note: this NSPS includes testing requirements applicable to this source.

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

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

The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc (326 IAC 12), are still not included in the permit, because the one (1) hot oil heater, with maximum heat input capacity of seven hundred thousandths (0.700) MMBtu/hr, and the one (1) hot asphalt storage and slat conveyor transfer heater, with a maximum heat input capacity of five hundred thousandths (0.500) MMBtu/hr, each, has a maximum design heat input capacity of less than the applicability threshold of ten (10) million British thermal units per hour.

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

(1) The requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels, 40 CFR 60, Subpart Kb (326 IAC 12), are still not included in the permit for the existing 8,000 gallon No. 2 fuel oil storage tank (EU#32), because although the tank was constructed after the rule applicability date of July 23, 1984, the tank has a maximum capacity of less than seventy-five cubic meters (75 m^3) (19,813 gallons), and the liquid stored in the tank has a maximum true vapor pressure of less than fifteen kiloPascals (15.0 kPa) (2.16 psi).

(2) The requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels, 40 CFR 60, Subpart Kb (326 IAC 12), are still not included in the permit for the existing 20,000 gallon liquid asphalt storage tank (EU#34), and 30,000 gallon liquid asphalt storage tank (EU#13B), because although each tank was constructed after the rule applicability date of July 23, 1984, and has a maximum capacity greater than seventy-five cubic meters (75 m^3) (19,813 gallons), the liquid stored in each tank has a maximum true vapor pressure of less than fifteen kiloPascals (15.0 kPa) (2.16 psi).

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

The requirements of the New Source Performance Standard for Asphalt Processing and Asphalt Roofing Manufacture, 40 CFR 60, Subpart UU (2U) (326 IAC 12), are still not included in the permit, because the existing stationary batch-mix, hot-mix asphalt plant still does not meet the definition of an asphalt processing plant, since it does not blow asphalt, or an asphalt roofing plant since it does not produce asphalt roofing products, and finally pursuant to §60.101(a) the portable drum hot-mix asphalt plant is still not a petroleum refinery since 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.

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

The existing stationary batch-mix, hot-mix asphalt plant is still subject to the New Source Performance Standard for Nonmetallic Mineral Processing Plants, 40 CFR 60, Subpart OOO (3O) (326 IAC 12), when the Recycled Asphalt Pavement (RAP) system is being used to reduce the size of nonmetallic minerals embedded in the RAP.

The units subject to this rule include the following:

(1) crushers;

(2) grinding mills; and

(3) subsequent affected facilities up to, but not including, the first storage silo or bin, such as:

(A) bucket elevators;

(B) belt conveyors;

(C) screening operations; and

(D) bagging operations;

The RAP crushing, screening, and conveying operations are still subject to the following requirements of 40 CFR 60, Subpart OOO:

(1)	40 CFR 60.670	(5)	40 CFR 60.674
(2)	40 CFR 60.671	(6)	40 CFR 60.675
(3)	40 CFR 60.672	(7)	40 CFR 60.676
(4)	40 CFR 60.673		

Note: this NSPS includes testing requirements applicable to this source.

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, still apply to the Recycled Asphalt Pavement (RAP) system except as otherwise specified in 40 CFR 60, Subpart OOO.

(f) <u>40 CFR 60, Subpart UUU - Standards for Calciners and Dryers in Mineral Industries</u>
The requirements of the New Source Performance Standard for Calciners and Dryers in Mineral Industries, 40 CFR 60, Subpart UUU (3U) (326 IAC 12), are still not included in the permit, because the existing stationary batch-mix, hot-mix asphalt plant still does not meet the definition of a mineral processing plant, since it does not process or produce any of the following minerals, their concentrates or any mixture of which the majority (>50 percent) is any of the following minerals or a combination of these minerals: alumina, ball clay, bentonite, diatomite, feldspar, fire clay, fuller's earth, gypsum, industrial sand, kaolin, lightweight aggregate, magnesium compounds, perlite, roofing granules, talc, titanium dioxide, and vermiculite.

(g) There are no other New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(a) <u>40 CFR 63, Subpart DDDDD - NESHAPs for Industrial, Commercial, and Institutional Boilers and Process Heaters</u>
The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD (5D) (326 IAC 20), are still not included in the permit, as follows:

On June 8, 2007, the United States Court of Appeals for the District of Columbia Circuit (in *National Resource Defense Council, Sierra Club, Environmental Integrity Project vs. EPA*, No. 04-1385), vacated 40 CFR 63, Subpart DDDDD in its entirety. Additionally, since State Rule 326 IAC 20-95 incorporated the requirements of the NESHAP 40 CFR 63, Subpart DDDDD by reference, the requirements of 326 IAC 20-95 are no longer effective. However, since NESHAP 40 CFR Part 63, Subpart DDDDD has been vacated, Section 112(j) of the Clean Air Act, major sources of Hazardous Air Pollutants (HAPs), in specified source categories, requires a case-by-case MACT determination when EPA fails to promulgate a scheduled MACT Standard by the regulatory deadline. Meshberger Brothers Stone Corporation is still considered an area source under Section 112 of the Clean Air Act, MACT Standards. Therefore, the source is not subject to a case-by-case MACT determination.

(b) <u>40 CFR 63, Subpart LLLLL - NESHAPs for Asphalt Processing and Asphalt Roofing Manufacturing</u>
The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63, Subpart LLLLL (5L) (326 IAC 20-71), are not included in the permit, because the existing stationary batch-mix, hot-mix asphalt plant still does not meet the definition of an asphalt processing plant or an asphalt roofing manufacturing facility, since it does not engage in the preparation of asphalt flux or

asphalt roofing materials. Additionally, it is not a major source of HAPs, and is not located at nor is it a part of a major source of HAP emissions.

(c) 40 CFR 63, Subpart CCCCCC - NESHAP for the Source Category Identified as Gasoline Dispensing Facilities (GDF)
The requirements of this National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Source Category Identified as Gasoline Dispensing Facilities (GDF), 40 CFR 63.11110, Subpart CCCCCC (6C) (326 IAC 20), are not included in the permit, because this existing existing stationary batch-mix, hot-mix asphalt plant has no gasoline dispensing facilities.

(d) 40 CFR 63, Subpart JJJJJJ - NESHAPs for Industrial, Commercial, and Institutional Boilers Area Sources

(1) The one (1), seven hundred thousandths (0.700) million British thermal units per hour (MMBtu/hr) hot oil heater, identified as EU#13A, and the one (1) five hundred thousandths (0.500) million British thermal units per hour (MMBtu/hr) hot asphalt storage and slat conveyor transfer heater, identified as EU#33, are each subject to the National Emission Standards for Hazardous Air Pollutants for the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJJ (6J), since this existing source is an area source of hazardous air pollutants (HAP), as defined in §63.2, and because the hot oil heater and the hot asphalt storage and slat conveyor transfer heater, each, can fire either natural gas or No. 2 fuel oil.

The units subject to this rule include the following:

- Each boiler that combusts coal, biomass, and/or oil.

Applicable portions of the NESHAP are the following:

(A)	40 CFR 63.11193;	(I)	40 CFR 63.11223(a),(b)(1) - (7);
(B)	40 CFR 63.11194(a)(1),(b),(e);	(J)	40 CFR 63.11225(a),(b),(c),(d),(g);
(C)	40 CFR 63.11196(a)(1);	(K)	40 CFR 63.11235
(D)	40 CFR 63.11200;	(L)	40 CFR 63.11236
(E)	40 CFR 63.11201(b),(d);	(M)	40 CFR 63.11237
(F)	40 CFR 63.11205(a);	(N)	Table 2
(G)	40 CFR 63.11210(c);	(O)	Table 8
(H)	40 CFR 63.11214(b);		

Note: There are no testing requirements applicable to this source for this NESHAP.

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the hot oil heater and the hot asphalt storage and slat conveyor transfer heater, each, except as otherwise specified in 40 CFR 63, Subpart JJJJJJ.

(2) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJJ (6J), are not included in the permit for the dryer/mixer burner since although this existing source is an area source of hazardous air pollutants (HAP), as defined in §63.2, the dryer/mixer burner is a direct-fired process unit and not a boiler, as define in 40 CFR 63.11237.

(e) 40 CFR 63, Subpart AAAAAAA - NESHAP for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing
The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63, Subpart

AAAAAAA (7A) (326 IAC 20), are not included in the permit, because although the existing stationary batch-mix, hot-mix asphalt plant is an area source of hazardous air pollutant (HAP) emissions, as defined in §63.2, it does not meet the definition of an asphalt processing operation or an asphalt roofing manufacturing operation, as defined in §63.11566, since it does not engage in the preparation of asphalt flux or asphalt roofing materials.

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

Compliance Assurance Monitoring (CAM)

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

State Rule Applicability - Entire Source

(a) 326 IAC 1-6-3 (Preventive Maintenance Plan)
Any person responsible for operating any facility required to obtain a permit under the Federally Enforceable State Operating Permit (FESOP) Program, 326 IAC 2-8, shall prepare and maintain a preventive maintenance plan in accordance with 326 IAC 1-6-3(a), whenever a control device is required for compliance with any applicable emission limitations and/or air pollution control regulations. The batch drying/mixing process still requires the use of a control device to limit the particulate emissions of PM, PM10 and PM2.5 to less than PSD and TV thresholds. Therefore a PMP is still required for these units and their associated control devices.

(b) 326 IAC 1-7 (Stack Height)
The requirements of 326 IAC 1-7 (Stack Height) are not included in the permit because although the unlimited and uncontrolled PM10 and SO2 emissions from this existing source, are each greater than one hundred (100) tons per year, asphalt concrete plants are still specifically exempted under 326 IAC 1-7-5(c).

(c) 326 IAC 2-1.1-5 (Nonattainment New Source Review)
Randolph County is classified as attainment or unclassifiable in Indiana for all criteria pollutants. Therefore, pursuant to 326 IAC 2-1.1-5, the Nonattainment New Source Review requirements do not apply, and are not included in the permit.

(d) 326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
PSD applicability is discussed under the "PTE of the Entire Source after Issuance of the FESOP" section above.

(e) 326 IAC 2-3 (Emission Offset)
Randolph County is classified as attainment or unclassifiable in Indiana for all criteria pollutants. Therefore, the requirements of 326 IAC 2-3 (Emission Offset) still do not apply, and are not included in the permit.

(f) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit HAPs, from the existing hot-mix and cold-mix asphalt production operations, is still greater than ten (10) tons per year for any single HAP and greater than twenty-five (25) tons per year of a combination of HAPs. However, the source has agreed to continue to limit potential HAPs emissions from these facilities to less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, the requirements of 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) still do not apply, see the "Potential to Emit after Issuance" section above, and are not included in the in the permit.

(g) 326 IAC 2-6 (Emission Reporting)
This source is still not subject to 326 IAC 2-6 (Emission Reporting) because it is not required to have an operating permit pursuant to 326 IAC 2-7 (Part 70); it is not located in Lake, Porter, or LaPorte County, and its potential to emit lead is less than five (5) tons per year. Therefore, pursuant to 326 IAC 2-6-1(b), the source is still only subject to additional information requests as provided for in 326 IAC 2-6-5.

(h) 326 IAC 2-8-4 (FESOP)
FESOP applicability is discussed under the "PTE of the Entire Source after Issuance of the FESOP" section above.

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

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

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

(j) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
The source is still subject to the requirements of 326 IAC 6-4, because the asphalt load-out and on-site yard, material storage piles, material processing and handling, material crushing, screening, and conveying, and paved and unpaved roads, each, continue to have the potential to emit fugitive particulate emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the existing 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.

(k) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is still subject to the requirements of 326 IAC 6-5, because the asphalt load-out and on-site yard, material storage piles, material processing and handling, material crushing, screening, and conveying, and paved and unpaved roads were constructed after December 13, 1985, and continue to have potential fugitive particulate emissions greater than twenty-five (25) tons per year. Therefore, pursuant to 326 IAC 6-5, fugitive particulate matter emissions shall continue to be controlled according to the Fugitive Dust Control Plan, which is included as Attachment A to the permit.

(l) 326 IAC 6.5 PM Limitations Except Lake County
This source is not subject to 326 IAC 6.5 because it is not located in any one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

(m) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.

(n) 326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

State Rule Applicability – Individual Facilities

Batch-Mix, Hot-Mix Asphalt Plant

(a) 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)
The existing dryer burner is still not a source of indirect heating, as defined in 326 IAC 1-2-19 "Combustion for indirect heating". Therefore, the requirements of 326 IAC 6-2 still do not apply, and are not included in the permit.

(b) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
The existing dryer/mixer is still subject to 40 CFR 60, Subpart I (Standards of Performance for Hot Mix Asphalt Facilities) and incorporated by reference through 326 IAC 12. Therefore, pursuant to 326 IAC 6-3-1(c)(5), the existing dryer/mixer is still not subject to the requirements of 326 IAC 6-3 because it is subject to the more stringent particulate limit established in 326 IAC 12.

(c) 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)
The existing dryer burner is still subject to 326 IAC 7-1.1 because its PTE SO2 is equal to or greater than twenty-five (25) tons/year, or ten (10) pounds/hour, (limited potential emissions are ninety-six and thirty-three (96.33) tons per year). Therefore, pursuant to this rule, sulfur dioxide emissions from the dryer burner shall continue to be limited to:

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

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

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

(d) 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements)
Pursuant to 326 IAC 7-2-1(c), the source shall continue to 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.

(e) 326 IAC 8-1-6 (VOC rules: General Reduction Requirements for New Facilities)
The unlimited potential VOC emissions from the existing dryer/mixer are greater than twenty-five (25) tons per year. However, the source has opted to limit the potential VOC emissions from the existing dryer/mixer to less than twenty-five (25) tons per year, therefore, rendering the requirements of 326 IAC 8-1-6 Best Available Control Technology (BACT) not applicable.

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

(1) The hot-mix asphalt production rate shall not exceed 492,792 tons per twelve (12) consecutive month period with compliance determined at the end of each month. *This is a revised limit for this source.*

(2) VOC emissions from the dryer/mixer shall not exceed thirty-six thousandths (0.036) pounds of VOC per ton of asphalt produced. *This is a new limit for this source.*

Compliance with these limits shall limit the potential VOC emissions from the existing dryer/mixer to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render 326 IAC 8-1-6 BACT not applicable.

See Appendix A for the detailed calculations.

Note: The following terms and conditions have been revised/added in this FESOP Renewal:

(A) The most recent AP-42 emission factor has been used to characterize VOC emissions from the fuel combustion and the drying/mixing process. Additionally, VOC emissions from the drying/mixing process, and from the silo filling, load out, and on-site yard, not previously accounted for in FESOP, No.: F135-22947-03158, have been calculated. In order to ensure compliance with the twenty five (25) tons/yr threshold, to render the requirements of 326 IAC 8-1-6 BACT not applicable, a new (#/ton) limit for VOC has been added to the permit;

(f) 326 IAC 8-6-1 (Organic Solvent Emission Limitations)
The existing dryer/mixer is still subject to 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities). Therefore, the requirements of 326 IAC 8-6-1 (Organic Solvent Emission Limitations) still do not apply to the hot-mix asphalt production and are not included in the permit.

(g) There are no other 326 IAC 8 Rules that are applicable to the stationary batch-mix, hot-mix asphalt plant.

(h) 326 IAC 9-1 (Carbon Monoxide Emission Limits)
This existing stationary, batch-mix, 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 do not apply and are not included in the permit.

(i) 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category)
The existing one (1) eighty-five (85.0) MMBtu/hr dryer burner still does not meet the definition of an affected facility, as defined in 326 IAC 10-3-1(a), because it still has a maximum a heat input of less than two hundred fifty million (250,000,000) British thermal units per hour (MMBtu/hr); therefore, it is still not subject to this rule and the requirements are not included in the permit.

Hot Oil Heating System

(a) 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)
The one (1) existing hot oil heater, having a maximum rated heat input capacity of seven hundred thousandths (0.700) MMBtu/hr, is subject to 326 IAC 6-2-4 because it was constructed after the rule applicability date of September 21, 1983, and meets the definition of an indirect heating unit, as defined in 326 IAC 1-2-19, since it combusts fuel to produce usable heat that is to be transferred through a heat-conducting materials barrier or by a heat storage medium to a material to be heated so that the material being heated is not contacted by, and adds no substance to the products of combustion.

Pursuant to 326 IAC 6-2-4(a), for a total source maximum operating capacity rating of less than ten (10) MMBtu/hr, the pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input shall not exceed six tenths (0.6) pounds per MMBtu (lb/MMBtu).

Therefore, particulate emissions from the hot oil heater shall continue to not exceed six tenths (0.6) pounds per MMBtu heat input.

(b) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
The one (1) existing hot oil heater is still not subject to the requirements of 326 IAC 6-3 because it is already otherwise subject to 326 IAC 6-2.

(c) 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)
The PTE SO2 from the one (1) existing hot oil heater is still less than twenty-five (25) tons/year, or ten (10) pounds/hour. Therefore, the requirements of 326 IAC 7-1.1 still do not apply and are not included in the permit for this facility.

See Appendix A for the detailed calculations.

(d) 326 IAC 9-1 (Carbon Monoxide Emission Limits)
The one (1) existing hot oil heater is still not one of the source types listed in 326 IAC 9-1-2. Therefore, the requirements of 326 IAC 9-1 (Carbon Monoxide Emission Limits) still do not apply and are not included in the permit.

(e) 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category)
The one (1) existing hot oil heater still does not meet the definition of an affected facility, as defined in 326 IAC 10-3-1(a), because the heater still has a maximum a heat input of less than two hundred fifty million (250,000,000) British thermal units per hour (MMBtu). Therefore, the requirements of 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category) still do not apply and are not included in the permit.

Hot Asphalt Storage and Slat Conveyor Transfer Heater

(a) 326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)
The one (1) existing hot asphalt storage and slat conveyor transfer heater, having a maximum rated heat input capacity of five hundred thousandths (0.500) MMBtu/hr, is subject to 326 IAC 6-2-4 because it was constructed after the rule applicability date of September 21, 1983, and meets the definition of an indirect heating unit, as defined in 326 IAC 1-2-19, since it combusts fuel to produce usable heat that is to be transferred through a heat-conducting materials barrier or by a heat storage medium to a material to be heated so that the material being heated is not contacted by, and adds no substance to the products of combustion.

Pursuant to 326 IAC 6-2-4(a), for a total source maximum operating capacity rating of less than ten (10) MMBtu/hr, the pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input shall not exceed six tenths (0.6) pounds per MMBtu (lb/MMBtu).

Therefore, particulate emissions from the hot asphalt storage and slat conveyor transfer heater shall continue to not exceed six tenths (0.6) pounds per MMBtu heat input.

(b) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
The one (1), existing hot asphalt storage and slat conveyor transfer heater is still not subject to the requirements of 326 IAC 6-3 because it is already otherwise subject to 326 IAC 6-2.

(c) 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)
The PTE SO2 from the one (1) existing hot asphalt storage and slat conveyor transfer heater is still less than twenty-five (25) tons/year, or ten (10) pounds/hour. Therefore, the requirements of 326 IAC 7-1.1 still do not apply and are not included in the permit for this facility.

See Appendix A for the detailed calculations.

(d) 326 IAC 9-1 (Carbon Monoxide Emission Limits)
The one (1), existing hot asphalt storage and slat conveyor transfer heater is still not one of the source types listed in 326 IAC 9-1-2. Therefore, the requirements of 326 IAC 9-1 (Carbon Monoxide Emission Limits) still do not apply and are not included in the permit.

(e) 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category)
The one (1) existing hot asphalt storage and slat conveyor transfer heater still does not meet the definition of an affected facility, as defined in 326 IAC 10-3-1(a), because the heater still has a maximum a heat input of less than two hundred fifty million (250,000,000) British thermal units per hour (MMBtu). Therefore, the requirements of 326 IAC 10-3 (Nitrogen Oxide Reduction Program for Specific Source Category) still do not apply and are not included in the permit.

Recycled Asphalt Pavement Crushing System

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the existing portable recycled asphalt pavement (RAP) system shall not exceed forty and four hundredths (40.04) pounds per hour when operating at a process weight rate of thirty (30) tons (or 60,000 pounds) per hour.

The pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The source shall use wet suppression at all times the crushers, screens, and conveyors are in operation in order to comply with this limit.

See Appendix A, for the detailed calculations.

Cold-Mix Asphalt Production Operation

(a) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The existing cold-mix asphalt production operation, a continued source of potential VOC emissions greater than twenty-five (25) tons per year, is still subject to the requirements of 326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving); therefore, the requirements of 326 IAC 8-1-6 BACT still do not apply to the cold-mix asphalt production and are not included in the permit.

See Appendix A for the detailed calculations.

(b) 326 IAC 8-5-2 (Asphalt paving rules)
Any paving application made after January 1, 1980, is subject to the requirements of 326 IAC 8-5-2. Pursuant to this rule, 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 for any paving application except the following purposes:

(a) penetrating prime coating;

(b) stockpile storage; and

(c) application during the months of November, December, January, February and March.

(c) 326 IAC 8-6-1 (Organic Solvent Emission Limitations)
The existing cold-mix asphalt production operation, a continued source of potential VOC emissions greater than one hundred (100) tons per year, is still subject to the requirements of 326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving). Additionally, this source elected to limit their VOC emissions to less than one hundred (100) tons per year. Therefore, the requirements of 326 IAC 8-6-1 (Organic Solvent Emission Limitations) still do not apply to the cold-mix asphalt production and are not included in the permit.

See Appendix A for the detailed calculations.

(d) There are no other 326 IAC 8 Rules that are applicable to the cold-mix asphalt production operation.

Storage Tanks

(a) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
The potential to emit VOCs from each of the existing liquid asphalt storage tanks, identified as EU#13B, and EU#34, and the No. 2 fuel oil storage tank, identified as EU#32, is still less than twenty-five (25) tons per year, therefore, the requirements of 326 IAC 8-1-6 still do not apply and are not included in the in the permit.

See Appendix A for the detailed calculations.

(b) 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)
The existing liquid asphalt storage tanks, identified as EU#13B, and EU#34, and the No. 2 fuel oil storage tank, identified as EU#32, each, continue to have a maximum storage capacity less than thirty-nine thousand (39,000) gallons. Therefore, are the requirements of 326 IAC 8-4-3 still do not apply to any these tanks and are not included in the permit.

(c) 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
The existing liquid asphalt storage tanks, identified as EU#13B, and EU#34, and the No. 2 fuel oil storage tank, identified as EU#32, are each not subject to the requirements of this rule because the source is located in Randolph county, not Clark, Floyd, Lake, or Porter Counties.

(d) There are no other 326 IAC 8 Rules that are applicable to the existing storage tanks.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance determination, testing, and compliance monitoring requirements applicable to this source are as follows:

Compliance Determination Requirements

(a) The existing dryer/mixer continues to have applicable compliance determination requirements as specified below:
   (1) In order to comply with the PM, PM10, and PM2.5 limitations in the permit, the baghouse for the dryer/mixer, shall continue to be in operation and control emissions from the dryer/mixer at all times when the dryer/mixer is in operation.

   (2) The annual hot-mix asphalt production rate will be used to verify compliance with the PSD PM emission limitation, the FESOP PM10, PM2.5, NOx, VOC, and CO emission limitations, and the BACT avoidance VOC emission limitation.

(3) The fuel characteristics (i.e., sulfur content) and usage rates will be used to verify compliance with the SO2, NOx and HAPs emission limitations.

(4) The waste oil characteristics (i.e., chlorine content) and usage rates will be used to verify compliance with the FESOP HAP limitations.

(b) The liquid binder characteristics (i.e., evaporation temperature) and usage rate, in the production of cold-mix cutback asphalt, will be used to verify compliance with the FESOP VOC emission limitation.

Testing Requirements

The existing dryer/mixer continues to have applicable testing requirements as specified below:

Emission Unit	Control Device	Pollutant	Timeframe for Testing	Frequency of Testing
Dryer/mixer	Baghouse	PM	No later than five (5) yrs from the last valid test*	Once every five (5) years
Dryer/mixer	Baghouse	PM10 PM2.5	No later than five (5) yrs from the last valid test*	Once every five (5) years

*** NOTE: The last valid stack test for PM and PM10 occurred on May 13, 2008. The source was in compliance at that time.**

Compliance Monitoring Requirements

(a) The existing batch mixer and aggregate dryer burner baghouse stack exhaust, and the material processing and handling, crushing, screening, conveying, and material transfer points continue to have applicable compliance monitoring conditions as specified below:

Emission Unit & Control Device	Parameter	Frequency	Range	Excursions and Exceedances
Dryer/mixer baghouse stack exhaust (SV#1)	Visible Emissions	Once per day	normal/abnormal	Response Steps
	Pressure Drop	Once per day	2.0 to 6.0 inches	Response Steps
	Bags in baghouse	As needed	normal/abnormal	Response Steps
Crushers, conveyors, screens, and material transfer points	Visible Emissions	Once per day	normal/abnormal	Response Steps

These monitoring conditions are necessary because the baghouse used in conjunction with the dryer/mixer must operate properly to ensure continued 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.

(c) The RAP crushing, shingle grinding, and the material conveying, screening, and transfer points have applicable compliance monitoring conditions as follows:

Parameter	Frequency	Range	Excursions and Exceedances
Visible Emissions	Once per day	normal/abnormal	Response Steps

These monitoring conditions are necessary to ensure compliance with 40 CFR 60, Subpart I, 326 IAC 60, Subpart OOO, 326 IAC 2-8 (FESOP), 326 IAC 6-5, and the limits that render the requirements of 326 IAC 2-2 (PSD) and 326 IAC 2-7 (Part 70 Permit Program) not applicable.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on December 13, 2010.

The operation of this source shall be subject to the conditions of the attached proposed FESOP Renewal No. F135-29992-03158. The staff recommends to the Commissioner that this FESOP Renewal be approved.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Ms. Hannah Desrosiers 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) 234-5374 or toll free at 1-800-451-6027 extension 4-5374.

(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: Unlimited Emissions Calculations
Entire Source

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

Batch-mix Asphalt Plant Maximum Capacity

Maximum Hourly Asphalt Production =	200	ton/hr								
Maximum Annual Asphalt Production =	1,752,000	ton/yr								
Maximum Annual Slag Usage =	0	ton/yr	0	% sulfur						
Maximum Dryer Fuel Input Rate =	85.0	MMBtu/hr								
Natural Gas Usage =	745	MMCF/yr								
No. 2 Fuel Oil Usage =	5,318,571	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Usage =	0	gal/yr, and	0	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and	0	% sulfur						
Propane Usage =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Butane Usage =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Used/Waste Oil Usage =	5,318,571	gal/yr, and	0.50	% sulfur	1.00	% ash	0.100	% chlorine,	0.010	% lead
Unlimited PM Dryer/Mixer Emission Factor =	32.0	lb/ton of asphalt production								
Unlimited PM10 Dryer/Mixer Emission Factor =	4.5	lb/ton of asphalt production								
Unlimited PM2.5 Dryer/Mixer Emission Factor =	0.27	lb/ton of asphalt production								
Unlimited SO2 Dryer/Mixer Emission Factor =	0.09	lb/ton of asphalt production								
Unlimited NOx Dryer/Mixer Emission Factor =	0.12	lb/ton of asphalt production								
Unlimited VOC Dryer/Mixer Emission Factor =	0.036	lb/ton of asphalt production								
Unlimited CO Dryer/Mixer Emission Factor =	0.40	lb/ton of asphalt production								
Unlimited Slag SO2 Dryer/Mixer Emission Factor =	0	lb/ton of slag processed								

Unlimited/Uncontrolled Emissions

	Unlimited/Uncontrolled Potential to Emit (tons/year)										
	Criteria Pollutants								Hazardous Air Pollutants		
Process Description	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**CO2e**	**Total HAPs**	**Worst Case HAP**	
Ducted Emissions											
Dryer Fuel Combustion (worst case)	170.19	135.62	135.62	195.46	53.19	2.66	31.27	60,103.00	20.56	17.55	(hydrogen chloride)
Dryer/Mixer and Batch Tower (Process)	28,032.00	3,942.00	236.52	77.09	105.12	31.54	350.40	32,548.13	6.80	2.37	(formaldehyde)
Dryer/Mixer Slag Processing	0	0	0	0	0	0	0	0	0	0	
Hot Oil Heater Fuel Combustion (worst case)	0.04	0.07	0.07	1.55	0.44	0.02	0.26	494.97	0.007	0.006	(hexane)
Hot Asphalt Storage & Conveyor System Heater Fuel Combustion (worst case)	0.03	0.05	0.05	1.11	0.31	0.01	0.18	353.55	0.005	0.004	(hexane)
Worst Case Emissions*	**28,032.08**	**3,942.12**	**236.64**	**198.12**	**105.87**	**31.56**	**350.84**	**60,951.51**	**20.57**	**17.55**	(hydrogen chloride)
Fugitive Emissions											
Asphalt Load-Out, Silo Filling, On-Site Yard	0.97	0.97	0.97	0	0	15.01	2.52	0	0.25	0.08	(formaldehyde)
Material Storage Piles	0.14	0.05	0.05	0	0	0	0	0	0	0	
Material Processing and Handling	5.66	2.68	0.41	0	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	27.80	10.15	10.15	0	0	0	0	0	0	0	
Unpaved and Paved Roads (worst case)	71.19	18.14	1.81	0	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	0	21,054.66	0	0	5,491.83	1,894.92	(xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0	0	0	0	0	
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	0	negl	0	
Total Fugitive Emissions	**105.75**	**31.99**	**13.39**	**0**	**0**	**21,069.67**	**2.52**	**0**	**5,492.08**	**1,894.92**	(xylenes)
Totals Unlimited/Uncontrolled PTE	**28,137.83**	**3,974.12**	**250.03**	**198.12**	**105.87**	**21,101.23**	**353.37**	**60,951.51**	**5,512.66**	**1,894.92**	(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 + Worst Case Emissions from Hot Asphalt Storage & Conveyor System Heater Fuel Combustion

Fuel component percentages provided by the source.

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

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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 =	200	ton/hr								
Maximum Annual Asphalt Production =	1,752,000	ton/yr								
Maximum Fuel Input Rate =	85	MMBtu/hr								
Natural Gas Usage =	745	MMCF/yr								
No. 2 Fuel Oil Usage =	5,318,571	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Usage =	0	gal/yr, and	0	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and	0	% sulfur						
Propane Usage =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Butane Usage =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Used/Waste Oil Usage =	5,318,571	gal/yr, and	0.50	% sulfur	1.00	% ash	0.100	% chlorine,	0.010	% lead

Unlimited/Uncontrolled Emissions

	Emission Factor (units)							Unlimited/Uncontrolled Potential to Emit (tons/yr)							
Criteria Pollutant	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/ Waste Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/ Waste Oil (tons/yr)	**Worse Case Fuel (tons/yr)**
PM	1.9	2.0	7.0	3.22	0.5	0.6	64.0	0.71	5.32	0	0	0	0	170.19	**170.19**
PM10/PM2.5	7.6	3.3	8.3	4.72	0.5	0.6	51	2.83	8.78	0	0	0	0	135.62	**135.62**
SO2	0.6	71.0	0	0	0	0	73.5	0.22	188.81	0	0	0	0	195.46	**195.46**
NOx	100	20.0	20.0	55.0	13.0	15.0	19.0	37.23	53.19	0	0	0	0	50.53	**53.19**
VOC	5.5	0.20	0.20	0.28	1.00	1.10	1.0	2.05	0.53	0	0	0	0	2.66	**2.66**
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	31.2732	13.30	0	0	0	0	13.30	**31.27**
Hazardous Air Pollutant															
HCl							6.6							17.55	**17.55**
Antimony			5.25E-03	5.25E-03			negl			0	0			negl	**0.0E+00**
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03			1.1E-01	7.4E-05	1.49E-03	0	0			2.93E-01	**2.9E-01**
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05			negl	4.5E-06	1.12E-03	0	0			negl	**1.1E-03**
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04			9.3E-03	4.1E-04	1.12E-03	0	0			2.47E-02	**2.5E-02**
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02	5.2E-04	1.12E-03	0	0			5.32E-02	**5.3E-02**
Cobalt	8.4E-05		6.02E-03	6.02E-03			2.1E-04	3.1E-05		0	0			5.58E-04	**5.6E-04**
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03			0.55	1.9E-04	3.35E-03	0	0			1.5E+00	**1.46**
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03			6.8E-02	1.4E-04	2.23E-03	0	0			1.81E-01	**0.18**
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04				9.7E-05	1.12E-03	0	0				**1.1E-03**
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02	7.8E-04	1.12E-03	0	0			2.93E-02	**0.029**
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl	8.9E-06	5.58E-03	0	0			negl	**5.6E-03**
1.1.1-Trichloroethane			2.36E-04	2.36E-04						0	0				**0.0E+00**
1,3-Butadiene															**0.0E+00**
Acetaldehyde															**0.0E+00**
Acrolein															**0.0E+00**
Benzene	2.1E-03		2.14E-04	2.14E-04				7.8E-04		0	0				**7.8E-04**
Bis(2-ethylhexyl)phthalate							2.2E-03							5.85E-03	**5.9E-03**
Dichlorobenzene	1.2E-03						8.0E-07	4.5E-04						2.13E-06	**4.5E-04**
Ethylbenzene			6.36E-05	6.36E-05						0	0				**0.0E+00**
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				2.8E-02	1.62E-01	0	0				**0.162**
Hexane	1.8E+00							0.67							**0.670**
Phenol							2.4E-03							6.38E-03	**6.4E-03**
Toluene	3.4E-03		6.20E-03	6.20E-03				1.3E-03		0	0				**1.3E-03**
Total PAH Haps	negl		1.13E-03	1.13E-03			3.9E-02	negl		0	0			1.04E-01	**1.0E-01**
Polycyclic Organic Matter		3.30E-03							8.78E-03						**8.8E-03**
Xylene			1.09E-04	1.09E-04						0	0				**0.0E+00**
							Total HAPs	**0.70**	**0.19**	**0**	**0**	**0**	**0**	**19.71**	**20.56**

Methodology

Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Propane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0905 MMBtu]
Butane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0974 MMBtu]
Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
Sources of AP-42 Emission Factors for fuel combustion:
Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
No. 2, No.4, and No.6 Fuel Oil: AP-42 Chapter 1.3 (dated 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
*Since there are no specific AP-42 HAP emission factors for combustion of No. 4 fuel oil, it was assumed that HAP emissions from combustion of No. 4 fuel oil were equal to combustion of residual or No. 6 fuel oil.

Abbreviations

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

Appendix A.1: Unlimited Emissions Calculations
Greenhouse Gas (CO2e) Emissions from the
Dryer/Mixer Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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.

Batch-mix Asphalt Plant Maximum Capacity

Maximum Hourly Asphalt Production =	200	ton/hr								
Maximum Annual Asphalt Production =	1,752,000	ton/yr								
Natural Gas Usage =	745	MMCF/yr								
No. 2 Fuel Oil Usage =	5,318,571	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Usage =	0	gal/yr, and	0.50	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and	0.00	% sulfur						
Propane Usage =	0	gal/yr, and	0.20	gr/100 ft3 sulfur						
Butane Usage =	0	gal/yr, and	0.22	gr/100 ft3 sulfur						
Used/Waste Oil Usage =	5,318,571	gal/yr, and	1.00	% sulfur	1.00	% ash	0.400	% chlorine,	0.010	% lead

Unlimited/Uncontrolled Emissions

	Emission Factor (units)						
CO2e Fraction	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)
CO2	120,161.84	22,501.41	24,153.46	24,835.04	12,500.00	14,506.73	22,024.15
CH4	2.49	0.91	0.97	1.00	0.60	0.67	0.89
N2O	2.2	0.26	0.19	0.53	0.9	0.9	0.18

Greenhouse Warming Potentials (GWP)		
Name	Chemical Formula	Global warming potential
Carbon dioxide	CO_2	1
Methane	CH_4	21
Nitrous oxide	N_2O	310

	Unlimited/Uncontrolled Potential to Emit (tons/yr)						
CO2e Fraction	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)
CO2	44,736.25	59,837.68	0	0	0	0	58,568.52
CH4	0.93	2.43	0	0	0	0	2.37
N2O	0.82	0.69	0	0	0	0	0.48
Total	44,738.00	59,840.80	0	0	0	0	58,571.37
CO2e Equivalent Emissions (tons/yr)	45,009.66	60,103.00	0	0	0	0	58,766.77

CO2e for Worst Case Fuel* (tons/yr)
60,103.00

No. 2 fuel oil

Methodology
Fuel Usage from TSD Appendix A.1, page 1 of 14.
Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
Fuel Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Propane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.0915 MMBtu]
Butane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.102 MMBtu]
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)

Natural Gas: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2

No. 2 Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 9/98), Table 1.3-8

No.4 Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 9/98), Table 1.3-8

Residual (No. 5 or No. 6) Fuel Oil: Emission Factor for CO2 from 40 CFR Part 98 Subpart C, Table C-1, has been converted from kg/mmBtu to lb/kgal. Emission Factors for CH4 and N2O from AP-42 Chapter 1.3 (dated 9/98), Table 1.3-8

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

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

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

Emission Factor (EF) Conversions

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

Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (310).

Note: No. 4 fuel oil is the "worst case" fuel

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

Appendix A.1: Unlimited Emissions Calculations
Batch Dryer/Mixer and Batch Tower

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

The following calculations determine the unlimited/uncontrolled emissions from the aggregate drying/mixing and the batch tower.

Maximum Hourly Asphalt Production =	200	ton/hr
Maximum Annual Asphalt Production =	1,752,000	ton/yr

	Uncontrolled Emission Factors (lb/ton)			Unlimited/Uncontrolled Potential to Emit (tons/yr)			
	Batch-Mix Plant (dryer, hot screens, and mixer)			Batch-Mix Plant (dryer, hot screens, and mixer)			
Criteria Pollutant	Natural Gas	No. 2 Fuel Oil	Waste Oil	Natural Gas	No. 2 Fuel Oil	Waste Oil	**Worse Case PTE**
PM*	32	32	32	28,032.00	28,032.00	28,032.00	**28,032.00**
PM10*	4.5	4.5	4.5	3,942.00	3,942.00	3,942.00	**3,942.00**
PM2.5*	0.27	0.27	0.27	236.52	236.52	236.52	**236.52**
SO2**	0.0046	0.088	0.088	4.0	77.1	77.1	**77.1**
NOx**	0.025	0.12	0.12	21.9	105.1	105.1	**105.1**
VOC**	0.0082	0.0082	0.036	7.2	7.2	31.5	**31.5**
CO***	0.4	0.4	0.4	350.4	350.4	350.4	**350.4**
Hazardous Air Pollutant							
Arsenic	4.60E-07	4.60E-07	4.60E-07	4.03E-04	4.03E-04	4.03E-04	**4.03E-04**
Beryllium	1.50E-07	1.50E-07	1.50E-07	1.31E-04	1.31E-04	1.31E-04	**1.31E-04**
Cadmium	6.10E-07	6.10E-07	6.10E-07	5.34E-04	5.34E-04	5.34E-04	**5.34E-04**
Chromium	5.70E-07	5.70E-07	5.70E-07	4.99E-04	4.99E-04	4.99E-04	**4.99E-04**
Lead	8.90E-07	8.90E-07	1.00E-05	7.80E-04	7.80E-04	8.76E-03	**8.76E-03**
Manganese	6.90E-06	6.90E-06	6.90E-06	6.04E-03	6.04E-03	6.04E-03	**6.04E-03**
Mercury	4.10E-07	4.10E-07	4.10E-07	3.59E-04	3.59E-04	3.59E-04	**3.59E-04**
Nickel	3.00E-06	3.00E-06	3.00E-06	2.63E-03	2.63E-03	2.63E-03	**2.63E-03**
Selenium	4.90E-07	4.90E-07	4.90E-07	4.29E-04	4.29E-04	4.29E-04	**4.29E-04**
Acetaldehyde	3.20E-04	3.20E-04	3.20E-04	0.28		0.28	**0.28**
Benzene	2.80E-04	2.80E-04	2.80E-04	0.25	0.25	0.25	**0.25**
Ethylbenzene	2.20E-03	2.20E-03	2.20E-03	1.93	1.93	1.93	**1.93**
Formaldehyde	7.40E-04	7.40E-04	7.40E-04	0.65	0.65	0.65	**0.65**
Quinone	2.70E-04	2.70E-04	2.70E-04	0.24		0.24	**0.24**
Toluene	1.00E-03	1.00E-03	1.00E-03	0.88	0.88	0.88	**0.88**
Total PAH Haps	1.10E-04	1.10E-04	2.30E-04	0.10	0.10	0.20	**0.20**
Xylene	2.70E-03	2.70E-03	2.70E-03	2.37	2.37	2.37	**2.37**
						Total HAPs	**6.80**
						Worst Single HAP	**2.37** **(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 11.1-1, 11.1-2, 11.1-5, 11.1-6, 11.1-19, and 11.1-11
Natural gas, No. 2 fuel oil, and waste oil represent the worst possible emissions scenario. AP-42 did not provide emission factors for any other fuels.

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

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

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

Abbreviations

VOC - Volatile Organic Compounds
SO2 = Sulfur Dioxide
PAH = Polyaromatic Hydrocarbon
HCl = Hydrogen Chloride
HAP = Hazardous Air Pollutant

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

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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

Maximum Hourly Asphalt Production = 200 ton/hr
Maximum Annual Asphalt Production = 1,752,000 ton/yr

Criteria Pollutant	Emission Factor or Limitation (lb/ton) Batch-Mix Plant (dryer/mixer, controlled by fabric filter)			Greenhouse Gas Global Warming Potentials (GWP)	Unlimited/Uncontrolled Potential to Emit (tons/yr) Batch-Mix Plant (dryer/mixer, controlled by fabric filter)			CO2e for Worst Case Fuel (tons/yr)
	Natural Gas	No. 2 Fuel Oil	Waste Oil		Natural Gas	No. 2 Fuel Oil	Waste Oil	
CO2	37	37	37	1	32,412.00	32,412.00	32,412.00	32,548.13
CH4	0.0074	0.0074	0.0074	21	6.48	6.48	6.48	
N2O				310	0	0	0	
				Total	32,418	32,418	32,418	
				CO2e Equivalent Emissions (tons/yr)	32,548.13	32,548.13	32,548.13	

Methodology
Natural gas, No. 2 fuel oil, and waste oil represent the worst possible emissions scenario. AP-42 did not provide emission factors for any other fuels.
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-7 and 11.1-8
There are no emission factors for N20 available in either the 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no N2O emission anticipated from this process.

Unlimited/Uncontrolled Potential to Emit (tons/yr) = (Maximum Annual Asphalt Production (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (310).

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

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

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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

Maximum Annual Slag Usage* = 0 ton/yr 0 % sulfur

	Emission Factor (lb/ton)**	Unlimited Potential to Emit (tons/yr)
Criteria Pollutant	Slag Processing	Slag Processing
SO2	0.74	0

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) = [(Maximum Annual Slag Usage (ton/yr)] * [Emission Factor (lb/ton)] * [ton/2000 lbs]

Abbreviations
SO2 = Sulfur Dioxide

Appendix A.1: Unlimited Emissions Calculations
Hot-mix Asphalt Plant Hot Oil Heater
Fuel Combustion with Maximum Capacity < 100 MMBtu/hr
from the Hot oil Heating System

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

Maximum Hot Oil Heater Fuel Input Rate =	0.70	MMBtu/hr		
Natural Gas Usage =	6	MMCF/yr		
No. 2 Fuel Oil Usage =	43,800	gal/yr, and	0.50	% sulfur

Unlimited/Uncontrolled Emissions

	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
	Hot Oil Heater		Hot Oil Heater		
Criteria Pollutant	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	0.006	0.044	**0.04**
PM10/PM2.5	7.6	3.3	0.023	0.072	**0.07**
SO2	0.6	71.0	0.002	1.555	**1.55**
NOx	100	20.0	0.307	0.438	**0.44**
VOC	5.5	0.20	0.017	0.004	**0.02**
CO	84	5.0	0.258	0.110	**0.26**
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	6.1E-07	1.23E-05	**1.2E-05**
Beryllium	1.2E-05	4.2E-04	3.7E-08	9.20E-06	**9.2E-06**
Cadmium	1.1E-03	4.2E-04	3.4E-06	9.20E-06	**9.2E-06**
Chromium	1.4E-03	4.2E-04	4.3E-06	9.20E-06	**9.2E-06**
Cobalt	8.4E-05		2.6E-07		**2.6E-07**
Lead	5.0E-04	1.3E-03	1.5E-06	2.76E-05	**2.8E-05**
Manganese	3.8E-04	8.4E-04	1.2E-06	1.84E-05	**1.8E-05**
Mercury	2.6E-04	4.2E-04	8.0E-07	9.20E-06	**9.2E-06**
Nickel	2.1E-03	4.2E-04	6.4E-06	9.20E-06	**9.2E-06**
Selenium	2.4E-05	2.1E-03	7.4E-08	4.60E-05	**4.6E-05**
Benzene	2.1E-03		6.4E-06		**6.4E-06**
Dichlorobenzene	1.2E-03		3.7E-06		**3.7E-06**
Ethylbenzene					**0**
Formaldehyde	7.5E-02	6.10E-02	2.3E-04	1.34E-03	**1.3E-03**
Hexane	1.8E+00		0.01		**5.5E-03**
Phenol					**0**
Toluene	3.4E-03		1.0E-05		**1.0E-05**
Total PAH Haps	negl		negl		**0**
Polycyclic Organic Matter		3.30E-03		7.23E-05	**7.2E-05**
		Total HAPs =	**5.8E-03**	**1.6E-03**	**0.007**

Methodology

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

Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] * [kgal/1000 gal] * [ton/2000 lbs]
Sources of AP-42 Emission Factors for fuel combustion:
Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
No. 2 Fuel Oil: AP-42 Chapter 1.3 (dated 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 um)
VOC - Volatile Organic Compounds
SO2 = Sulfur Dioxide
NOx = Nitrous Oxides
CO = Carbon Monoxide
HAP = Hazardous Air Pollutant
HCl = Hydrogen Chloride
PAH = Polyaromatic Hydrocarbon

Appendix A.1: Unlimited Emissions Calculations
Greenhouse Gas (CO2e) Emissions from
Fuel Combustion with Maximum Capacity < 100 MMBtu/hr
from the Hot oil Heating System

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

Maximum Hot Oil Heater Fuel Input Rate =	0.70	MMBtu/hr		
Natural Gas Usage =	6	MMCF/yr		
No. 2 Fuel Oil Usage =	43,800	gal/yr,	0.50	% sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units) Natural Gas (lb/MMCF)	Emission Factor (units) No. 2 Fuel Oil (lb/kgal)	Greenhouse Global Warming Potentials (GWP)	Unlimited/Uncontrolled Potential to Emit (tons/yr) Natural Gas (tons/yr)	Unlimited/Uncontrolled Potential to Emit (tons/yr) No. 2 Fuel Oil (tons/yr)	Worse Case CO2e Emissions (tons/yr)
CO2	120,161.84	22,501.41	1	368.42	492.78	494.97
CH4	2.49	0.91	21	0.01	0.02	
N2O	2.2	0.26	310	0.01	0.01	
			Total	**368.43**	**492.81**	
			CO2e Equivalent Emissions (tons/yr)	370.67	494.97	**No. 2 fuel oil**

Methodology

Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]
Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)

Natural Gas: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter 1.4 (dated 7/98),

No. 2 Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 9/98), Table 1.3-8

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

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

Emission Factor (EF) Conversions

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

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

Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]
All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] *
Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x
Note: No. 2 fuel oil is the "worst case" fuel

Abbreviations

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

Appendix A.1: Unlimited Emissions Calculations
Hot Asphalt Storage and Conveyor System Heater
Fuel Combustion with Maximum Capacity < 100 MMBtu/hr
for the Hot Asphalt Storage & Conveyor System Heater

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

Maximum Hot Oil Heater Fuel Input Rate =	0.50	MMBtu/hr		
Natural Gas Usage =	4	MMCF/yr		
No. 2 Fuel Oil Usage =	31,286	gal/yr, and	0.50	% sulfur

Unlimited/Uncontrolled Emissions

	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
	Hot Oil Heater		Hot Oil Heater		
Criteria Pollutant	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	0.004	0.031	**0.03**
PM10/PM2.5	7.6	3.3	0.017	0.052	**0.05**
SO2	0.6	71.0	0.001	1.111	**1.11**
NOx	100	20.0	0.219	0.313	**0.31**
VOC	5.5	0.20	0.012	0.003	**0.01**
CO	84	5.0	0.184	0.078	**0.18**
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	4.4E-07	8.76E-06	**8.8E-06**
Beryllium	1.2E-05	4.2E-04	2.6E-08	6.57E-06	**6.6E-06**
Cadmium	1.1E-03	4.2E-04	2.4E-06	6.57E-06	**6.6E-06**
Chromium	1.4E-03	4.2E-04	3.1E-06	6.57E-06	**6.6E-06**
Cobalt	8.4E-05		1.8E-07		**1.8E-07**
Lead	5.0E-04	1.3E-03	1.1E-06	1.97E-05	**2.0E-05**
Manganese	3.8E-04	8.4E-04	8.3E-07	1.31E-05	**1.3E-05**
Mercury	2.6E-04	4.2E-04	5.7E-07	6.57E-06	**6.6E-06**
Nickel	2.1E-03	4.2E-04	4.6E-06	6.57E-06	**6.6E-06**
Selenium	2.4E-05	2.1E-03	5.3E-08	3.29E-05	**3.3E-05**
Benzene	2.1E-03		4.6E-06		**4.6E-06**
Dichlorobenzene	1.2E-03		2.6E-06		**2.6E-06**
Ethylbenzene					**0**
Formaldehyde	7.5E-02	6.10E-02	1.6E-04	9.54E-04	**9.5E-04**
Hexane	1.8E+00		0.00		**0.004**
Phenol					**0**
Toluene	3.4E-03		7.4E-06		**7.4E-06**
Total PAH Haps	negl		negl		**0**
Polycyclic Organic Matter		3.30E-03		5.16E-05	**5.2E-05**
		Total HAPs =	**4.1E-03**	**1.1E-03**	**0.005**

Methodology

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

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

Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]

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

Sources of AP-42 Emission Factors for fuel combustion:

Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
No. 2 Fuel Oil: AP-42 Chapter 1.3 (dated 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 um)
VOC - Volatile Organic Compounds
SO2 = Sulfur Dioxide
NOx = Nitrous Oxides
CO = Carbon Monoxide
HAP = Hazardous Air Pollutant
HCl = Hydrogen Chloride
PAH = Polyaromatic Hydrocarbon

Appendix A.1: Unlimited Emissions Calculations
Greenhouse Gas (CO2e) Emissions from
Fuel Combustion with Maximum Capacity < 100 MMBtu/hr
for the Hot Asphalt Storage & Conveyor System Heater

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

Maximum Hot Oil Heater Fuel Input Rate =	0.50	MMBtu/hr		
Natural Gas Usage =	4	MMCF/yr		
No. 2 Fuel Oil Usage =	31,286	gal/yr,	0.50	% sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units) Natural Gas (lb/MMCF)	Emission Factor (units) No. 2 Fuel Oil (lb/kgal)	Greenhouse Global Warming Potentials (GWP)	Unlimited/Uncontrolled Potential to Emit (tons/yr) Natural Gas (tons/yr)	Unlimited/Uncontrolled Potential to Emit (tons/yr) No. 2 Fuel Oil (tons/yr)	**Worse Case CO2e Emissions (tons/yr)**
CO2	120,161.84	22,501.41	1	263.15	351.99	**353.55**
CH4	2.49	0.91	21	0.01	0.01	
N2O	2.2	0.26	310	0.00	0.00	
			Total	**263.16**	**352.00**	
			CO2e Equivalent Emissions (tons/yr)	264.76	353.55	**No. 2 fuel oil**

Methodology

Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Equivalent Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 MMCF/1,000 MMBtu]
Equivalent Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr)] * [8,760 hrs/yr] * [1 gal/0.140 MMBtu]

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

Natural Gas: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter 1.4 (dated 7/98),

No. 2 Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 9/98), Table 1.3-8

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

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

Emission Factor (EF) Conversions

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

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

Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]

All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] *

Unlimited Potential to Emit CO2e (tons/yr) = Unlimited Potential to Emit CO2 of "worst case" fuel (ton/yr) x CO2 GWP (1) + Unlimited Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x

Note: No. 2 fuel oil is the "worst case" fuel

Abbreviations

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

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

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.5	
Maximum Annual Asphalt Production =	1,752,000	tons/yr

	Emission Factor (lb/ton asphalt)			Unlimited/Uncontrolled Potential to Emit (tons/yr)			
Pollutant	**Load-Out**	**Silo Filling**	**On-Site Yard**	**Load-Out**	**Silo Filling**	**On-Site Yard**	**Total**
Total PM*	5.2E-04	5.9E-04	NA	0.46	0.51	NA	**0.97**
Organic PM	3.4E-04	2.5E-04	NA	0.30	0.222	NA	**0.52**
TOC	0.004	0.012	0.001	3.64	10.68	0.964	**15.3**
CO	0.001	0.001	3.5E-04	1.18	1.034	0.308	**2.52**

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

PM/HAPs	**0.021**	**0.025**	**0**	**0.046**
VOC/HAPs	**0.054**	**0.136**	**0.014**	**0.204**
non-VOC/HAPs	**2.8E-04**	**2.9E-05**	**7.4E-05**	**3.8E-04**
non-VOC/non-HAPs	**0.26**	**0.15**	**0.07**	**0.49**

Total VOCs	**3.42**	**10.68**	**0.9**	**15.0**
Total HAPs	**0.08**	**0.16**	**0.014**	**0.25**
			Worst Single HAP	**0.078 (formaldehyde)**

Methodology
The asphalt temperature and volatility factor were provided by the source.
Unlimited/Uncontrolled Potential to Emit (tons/yr) = (Maximum Annual Asphalt Production (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-14, 11.1-15, and 11.1-16
Plant Load-Out Emission Factor Equations (AP-42 Table 11.1-14)::
Total PM/PM10/PM2.5 Ef = 0.000181 + 0.00141(-V)e^((0.0251)(T+460)-20.43)
Organic PM Ef = 0.00141(-V)e^((0.0251)(T+460)-20.43)
TOC Ef = 0.0172(-V)e^((0.0251)(T+460)-20.43)
CO Ef = 0.00558(-V)e^((0.0251)(T+460)-20.43)
Silo Filling Emission Factor Equations (AP-42 Table 11.1-14):
PM/PM10 Ef = 0.000332 + 0.00105(-V)e^((0.0251)(T+460)-20.43)
Organic PM Ef = 0.00105(-V)e^((0.0251)(T+460)-20.43)
TOC Ef = 0.0504(-V)e^((0.0251)(T+460)-20.43)
CO Ef = 0.00488(-V)e^((0.0251)(T+460)-20.43)
On Site Yard CO emissions estimated by multiplying the TOC emissions by 0.32
*No emission factors available for PM10 or PM2.5, therefore IDEM assumes PM10 and PM2.5 are equivalent to Total PM.

Abbreviations
TOC = Total Organic Compounds
CO = Carbon Monoxide
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
VOC = Volatile Organic Compound
HAP = Hazardous Air Pollutant

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

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

Organic Particulate-Based Compounds (Table 11.1-15)

					Speciation Profile		Unlimited/Uncontrolled Potential to Emit (tons/yr)			
Pollutant	**CASRN**	**Category**	**HAP Type**	**Source**	**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%	7.8E-04	1.0E-03	NA	1.8E-03
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	8.4E-05	3.1E-05	NA	1.1E-04
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	2.1E-04	2.9E-04	NA	5.0E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	5.7E-05	1.2E-04	NA	1.8E-04
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	2.3E-05	0	NA	2.3E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	6.6E-06	0	NA	6.6E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	5.7E-06	0	NA	5.7E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	6.9E-06	0	NA	6.9E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	2.3E-05	2.1E-05	NA	4.4E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	3.1E-04	4.7E-04	NA	7.7E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	1.1E-06	0	NA	1.1E-06
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	1.5E-04		NA	1.5E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	2.3E-03	2.2E-03	NA	4.5E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	1.4E-06	0	NA	1.4E-06
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	7.1E-03	1.2E-02	NA	0.019
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	3.7E-03	4.0E-03	NA	7.8E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	6.6E-05	6.7E-05	NA	1.3E-04
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	2.4E-03	4.0E-03	NA	6.4E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	4.5E-04	9.8E-04	NA	1.4E-03
Total PAH HAPs							**0.018**	**0.025**	**NA**	**0.043**
Other semi-volatile HAPs										
Phenol		PM/HAP	---	Organic PM	1.18%	0	3.5E-03	0	0	3.5E-03

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

Methodology

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

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

Abbreviations

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

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

Organic Volatile-Based Compounds (Table 11.1-16)

					Speciation Profile		Unlimited/Uncontrolled Potential to Emit (tons/yr)			
Pollutant	**CASRN**	**Category**	**HAP Type**	**Source**	**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%	**3.42**	**10.68**	**0.91**	**15.01**
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	2.4E-01	2.8E-02	6.3E-02	0.327
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	1.7E-03	5.9E-03	4.4E-04	0.008
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	2.6E-02	1.2E-01	6.8E-03	0.150
Total non-VOC/non-HAPS					7.30%	1.40%	**0.266**	**0.149**	**0.070**	**0.49**
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	1.9E-03	3.4E-03	5.0E-04	5.8E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	3.5E-04	5.2E-04	9.3E-05	9.7E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	1.8E-03	4.2E-03	4.7E-04	6.4E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	4.7E-04	1.7E-03	1.3E-04	2.3E-03
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	7.7E-06	4.3E-04	2.0E-06	4.4E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	5.5E-04	2.5E-03	1.4E-04	3.1E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	4.0E-03	0	1.1E-03	5.1E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	1.0E-02	4.1E-03	2.7E-03	0.017
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	3.2E-03	7.4E-02	8.5E-04	0.078
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	5.5E-03	1.1E-02	1.4E-03	0.018
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	6.6E-05	3.3E-05	1.7E-05	1.2E-04
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	2.9E-05	0	2.9E-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%	2.7E-04	5.8E-04	7.0E-05	9.1E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	2.8E-04	0	7.4E-05	3.5E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	7.7E-03	6.6E-03	2.0E-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	4.7E-05	0	1.3E-05	6.0E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	1.5E-02	2.1E-02	4.0E-03	0.040
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	2.9E-03	6.1E-03	7.7E-04	9.8E-03
Total volatile organic HAPs					1.50%	1.30%	**0.055**	**0.139**	**0.014**	**0.208**

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

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

Appendix A.1: Unlimited Emissions Calculations
Material Storage Piles

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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

Ef = 1.7*(s/1.5)*(365-p)/235*(f/15)
where Ef = emission factor (lb/acre/day)
s = silt content (wt %)
p = 125 days of rain greater than or equal to 0.01 inches
f = 15 % of wind greater than or equal to 12 mph

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10/PM2.5 (tons/yr)
Sand	2.6	3.01	0	0	0
Limestone	1.6	1.85	0	0	0
RAP	0.5	0.58	1.28	0.135	0.047
Gravel	1.6	1.85	0	0	0
Slag	3.8	4.40	0	0	0
Shingles	3.8	4.40	0	0	0
			Totals	**0.14**	**0.05**

Notes
This stationary, hot-mix asphalt plant is located on the same property as a quarry. Since the potential to emit particulatesfrom the Sand, Limestone and Gravel storage piles are included in the emissions calculations for the quarry, they are not included here.
*Silt content values obtained from AP-42 Table 13.2.4-1 (dated 1/95)
**Maximum anticipated pile size (acres) provided by the source.
PM2.5 = PM10

Methodology
PTE of PM (tons/yr) = (Emission Factor (lb/acre/day)) * (Maximum Pile Size (acres)) * (ton/2000 lbs) * (8760 hours/yr)
PTE of PM10/PM2.5 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PTE = Potential to Emit
RAP - recycled asphalt pavement

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

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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

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

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

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

Maximum Annual Asphalt Production =	1,752,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	1,664,400	tons/yr

Type of Activity	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM10 (tons/yr)	Unlimited/Uncontrolled PTE of PM2.5 (tons/yr)
Truck unloading of materials into storage piles	1.89	0.89	0.14
Front-end loader dumping of materials into feeder bins	1.89	0.89	0.14
Conveyor dropping material into dryer/mixer or batch tower	1.89	0.89	0.14
Total (tons/yr)	**5.66**	**2.68**	**0.41**

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

Material Screening and Conveying (AP-42 Section 11.19.2)

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

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM10 (lbs/ton)*	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM10/PM2.5 (tons/yr)**
Crushing	0.0054	0.0024	4.49	2.00
Screening	0.025	0.0087	20.81	7.24
Conveying	0.003	0.0011	2.50	0.92
Unlimited Potential to Emit (tons/yr) =			**27.80**	**10.15**

Methodology

Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
Unlimited Potential to Emit (tons/yr) = [Maximum Material Handling Throughput (tons/yr)] * [Emission Factor (lb/ton)] * [ton/2000 lbs]
Raw materials may include stone/gravel, slag, and recycled asphalt pavement (RAP)
Emission Factors from AP-42 Chapter 11.19.2 (dated 8/04), Table 11.19.2-2
*Uncontrolled emissions factors for PM/PM10 represent tertiary crushing of stone with moisture content ranging from 0.21 to 1.3 percent by weight (Table 11.19.2-2). The bulk moisture content of aggregate in the storage piles at a hot mix asphalt production plant typically stabilizes between 3 to 5 percent by weight (Source: AP-42 Section 11.1.1.1).
**Assumes PM10 = PM2.5

Abbreviations

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

Appendix A.1: Unlimited Emissions Calculations
Unpaved Roads

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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 =	1,752,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	1,664,400	tons/yr
Maximum Asphalt Cement/Binder Throughput =	87,600	tons/yr
Maximum No. 2 Fuel Oil Usage =	5,318,571	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	13.5	20.0	33.5	8.3E+04	2.8E+06	275	0.052	4,334.4
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	13.5	0	13.5	8.3E+04	1.1E+06	275	0.052	4,334.4
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	2.4E+03	1.2E+05	300	0.057	138.3
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	2.4E+03	2.9E+04	300	0.057	138.3
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	5.6E+02	2.5E+04	300	0.057	31.9
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	5.6E+02	6.7E+03	300	0.057	31.9
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	4.0E+05	7.6E+06	360	0.068	27,019.5
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	4.0E+05	5.9E+06	360	0.068	27,019.5
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	13.5	20.0	33.5	8.8E+04	2.9E+06	300	0.057	4,977.3
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	13.5	0	13.5	8.8E+04	1.2E+06	300	0.057	4,977.3
	Total				**1.1E+06**	**2.2E+07**			**73002.61**

Average Vehicle Weight Per Trip =	19.1	tons/trip
Average Miles Per Trip =	0.064	miles/trip

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

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Road)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
W =	19.1	19.1	19.1	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, Eext = E * [(365 - P)/365]
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	5.93	1.51	0.15	lb/mile
Mitigated Emission Factor, Eext =	3.90	0.99	0.10	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	12.86	3.28	0.33	8.45	2.15	0.22	4.23	1.08	0.11
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	12.86	3.28	0.33	8.45	2.15	0.22	4.23	1.08	0.11
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.410	0.105	0.01	0.270	0.069	0.01	0.135	0.034	0.00
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.410	0.105	0.01	0.270	0.069	0.01	0.135	0.034	0.00
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.095	0.024	0.00	0.062	0.016	0.00	0.031	0.008	0.00
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.095	0.024	0.00	0.062	0.016	0.00	0.031	0.008	0.00
Aggregate/RAP Loader Full	Front-end loader (3 CY)	80.14	20.43	2.04	52.70	13.43	1.34	26.35	6.72	0.67
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	80.14	20.43	2.04	52.70	13.43	1.34	26.35	6.72	0.67
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	14.76	3.76	0.38	9.71	2.47	0.25	4.85	1.24	0.12
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	14.76	3.76	0.38	9.71	2.47	0.25	4.85	1.24	0.12
	Totals	**216.54**	**55.19**	**5.52**	**142.38**	**36.29**	**3.63**	**71.19**	**18.14**	**1.81**

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

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

Appendix A.1: Unlimited Emissions Calculations
Paved Roads

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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 =	1,752,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	1,664,400	tons/yr
Maximum Asphalt Cement/Binder Throughput =	87,600	tons/yr
Maximum No. 2 Fuel Oil Usage =	5,318,571	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per day (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	13.5	20.0	33.5	8.3E+04	2.8E+06	300	0.057	4,728.4
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	13.5	0	13.5	8.3E+04	1.1E+06	300	0.057	4,728.4
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	2.4E+03	1.2E+05	300	0.057	138.3
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	2.4E+03	2.9E+04	300	0.057	138.3
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	5.6E+02	2.5E+04	300	0.057	31.9
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	5.6E+02	6.7E+03	300	0.057	31.9
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	4.0E+05	7.6E+06	300	0.057	22,516.2
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	4.0E+05	5.9E+06	300	0.057	22,516.2
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	13.5	20.0	33.5	8.8E+04	2.9E+06	600	0.114	9,954.5
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	13.5	0	13.5	8.8E+04	1.2E+06	600	0.114	9,954.5
	Total				**1.1E+06**	**2.2E+07**			**7.5E+04**

Average Vehicle Weight Per Trip =	19.1	tons/trip
Average Miles Per Trip =	0.066	miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	19.1	19.1	19.1	tons = average vehicle weight (provided by source)
sL =	0.6	0.6	0.6	g/m^2 = Ubitiguous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months)

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

where p =	125	days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N =	365	days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.140	0.028	0.0069	lb/mile
Mitigated Emission Factor, Eext =	0.13	0.03	0.01	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	0.33	0.07	0.02	0.30	0.06	0.01	0.15	0.03	0.01
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.33	0.07	0.02	0.30	0.06	0.01	0.15	0.03	0.01
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.010	0.002	4.7E-04	0.009	0.002	4.3E-04	0.004	8.8E-04	2.2E-04
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.010	0.002	4.7E-04	0.009	0.002	4.3E-04	0.004	8.8E-04	2.2E-04
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	2.2E-03	4.5E-04	1.1E-04	2.0E-03	4.1E-04	1.0E-04	1.0E-03	2.0E-04	5.0E-05
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	2.2E-03	4.5E-04	1.1E-04	2.0E-03	4.1E-04	1.0E-04	1.0E-03	2.0E-04	5.0E-05
Aggregate/RAP Loader Full	Front-end loader (3 CY)	1.57	0.31	0.08	1.44	0.29	0.07	0.72	0.14	0.04
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	1.57	0.31	0.08	1.44	0.29	0.07	0.72	0.14	0.04
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.70	0.14	0.03	0.64	0.13	0.03	0.32	0.06	0.02
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.70	0.14	0.03	0.64	0.13	0.03	0.32	0.06	0.02
	Totals	**5.23**	**1.05**	**0.26**	**4.78**	**0.96**	**0.23**	**2.39**	**0.48**	**0.12**

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

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

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

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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 =	1,752,000	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Asphalt Cement/Binder Throughput =	87,600	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%	22,162.8	21,054.7
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	25,053.6	17,537.5
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	17,520.0	4,380.0
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	13,140.0	6,097.0
Other asphalt with solvent binder	25.9%	2.5%	22,688.4	567.2
			Worst Case PTE of VOC =	**21,054.7**

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%	
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0%	Xylenes
PTE of Total HAPs (tons/yr) =	**5,491.8**	
PTE of Single HAP (tons/yr) =	**1,894.9**	**Xylenes**

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

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

Methodology
Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]
Maximum VOC Solvent Usage (tons/yr) = [Maximum Asphalt Cement/Binder Throughput (tons/yr)] * [Maximum Weight % of VOC Solvent in Binder]
PTE of VOC (tons/yr) = [Weight % VOC solvent in binder that evaporates] * [Maximum VOC Solvent Usage (tons/yr)]
PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]
PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]
*Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Compositior 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: Unlimited Emissions Calculations
Gasoline Fuel Transfer and Dispensing Operation

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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:

Gasoline Throughput =	0	gallons/day
=	0	kgal/yr

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
Tank breathing and emptying	1.0	0
Vehicle refueling (displaced losses - controlled)	1.1	0
Spillage	0.7	0
Total		**0**

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%	
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0%	Xylenes
Limited PTE of Total HAPs (tons/yr) =	**0**	
Limited PTE of Single HAP (tons/yr) =	**0**	**Xylenes**

Methodology
The gasoline throughput was provided by the source.
Gasoline Throughput (kgal/yr) = [Gasoline Throughput (lbs/day)] * [365 days/yr] * [kgal/1000 gal]
PTE of VOC (tons/yr) = [Gasoline Throughput (kgal/yr)] * [Emission Factor (lb/kgal)] * [ton/2000 lb]
PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]
PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]
*Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Composition of Petroleum Mixtures. The Association for Environmental Health and Science. 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: Limited Emissions Summary
Entire Source

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

Batch-mix Asphalt Plant Limitations

Maximum Hourly Asphalt Production =	200	ton/hr								
Annual Asphalt Production Limitation =	492,792	ton/yr								
Slag Usage Limitation =	0	ton/yr	0	% sulfur						
Natural Gas Limitation =	745	MMCF/yr								
No. 2 Fuel Oil Limitation =	2,713,647	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Limitation =	0	gal/yr, and	0	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and	0	% sulfur						
Propane Limitation =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Butane Limitation =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Used/Waste Oil Limitation =	2,621,346	gal/yr, and	0.50	% sulfur	1.00	% ash	0.100	% chlorine,	0.010	% lead

PM Dryer/Mixer Limitation =	0.889	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation =	0.365	lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation =	0.386	lb/ton of asphalt production
NOx Dryer/Mixer Limitation =	0.120	lb/ton of asphalt production
VOC Dryer/Mixer Limitation =	0.036	lb/ton of asphalt production
CO Dryer/Mixer Limitation =	0.40	lb/ton of asphalt production
Slag SO2 Dryer/Mixer Limitation =	0	lb/ton of slag processed
Cold Mix Asphalt VOC Usage Limitation =	54.97	tons/yr
HCl Limitation =	6.60	lb/kgal

Limited/Controlled Emissions

	Limited/Controlled Potential Emissions (tons/year)										
	Criteria Pollutants								Hazardous Air Pollutants		
Process Description	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**CO2e**	**Total HAPs**	**Worst Case HAP**	
Ducted Emissions											
Dryer Fuel Combustion (worst case)	83.88	66.84	66.84	96.33	37.25	2.05	31.29	45,033.84	10.48	8.65	(hydrogen chloride)
Dryer/Mixer and Batch Tower (Process)	219.06	89.84	95.08	21.68	29.57	8.87	98.56	9,154.95	1.91	0.67	(xylene)
Dryer/Mixer Slag Processing	0	0	0	0	0	0	0	0	0	0	
Hot Oil Heater Fuel Combustion (worst case)	0.04	0.07	0.07	1.55	0.44	0.02	0.26	494.97	0.007	0.006	(hexane)
Hot Asphalt Storage & Conveyor System Heater Fuel Combustion (worst case)	0.03	0.05	0.05	1.11	0.31	0.01	0.18	353.55	0.005	0.004	(hexane)
Worst Case Emissions*	**219.14**	**89.96**	**95.20**	**99.00**	**38.00**	**8.90**	**99.00**	**45,882.35**	**10.49**	**8.65**	**(hydrogen chloride)**
Fugitive Emissions											
Asphalt Load-Out, Silo Filling, On-Site Yard	0.27	0.27	0.27	0	0	4.22	0.71	0	0.07	0.02	(formaldehyde)
Material Storage Piles	0.14	0.05	0.05	0	0	0	0	0	0	0	
Material Processing and Handling	1.59	0.75	0.11	0	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	7.82	2.86	2.86	0	0	0	0	0	0	0	
Unpaved and Paved Roads (worst case)	20.04	5.11	0.51	0	0	0	0	0	0	0	
Cold Mix Asphalt Production	0	0	0	0	0	54.97	0	0	14.34	4.95	(xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0	0	0	0	0	
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	0	negl	negl	
Total Fugitive Emissions	**29.86**	**9.04**	**3.80**	**0**	**0**	**59.19**	**0.71**	**0**	**14.41**	**4.95**	(xylenes)
Totals Limited/Controlled Emissions	**249.00**	**99.00**	**99.00**	**99.00**	**38.00**	**68.09**	**99.71**	**45,882.35**	**24.90**	**8.65**	**(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 + Worst Case Emissions from Hot Asphalt Storage & Conveyor System Heater Fuel Combustion

Fuel component percentages provided by the source.

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

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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

Production and Fuel Limitations

Maximum Hourly Asphalt Production =	200	ton/hr								
Annual Asphalt Production Limitation =	492,792	ton/yr								
Natural Gas Limitation =	745	MMCF/yr								
No. 2 Fuel Oil Limitation =	2,713,647	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Limitation =	0	gal/yr, and	0	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and	0	% sulfur						
Propane Limitation =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Butane Limitation =	0	gal/yr, and	0	gr/100 ft3 sulfur						
Used/Waste Oil Limitation =	2,621,346	gal/yr, and	0.50	% sulfur	1.00	% ash	0.100	% chlorine,	0.010	% lead

Limited Emissions

	Emission Factor (units)							Limited Potential to Emit (tons/yr)							
Criteria Pollutant	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/ Waste Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/ Waste Oil (tons/yr)	**Worst Case Fuel (tons/yr)**
PM	1.9	2.0	7.0	3.22	0.5	0.6	64.0	0.71	2.71	0	0	0	0	83.88	**83.88**
PM10	7.6	3.3	8.3	4.72	0.5	0.6	51	2.83	4.48	0	0	0	0	66.84	**66.84**
SO2	0.6	71.0	0	0	0	0	73.5	0.22	96.33	0	0	0	0	96.33	**96.33**
NOx	100	20.0	20.0	55.0	13.0	15.0	19.0	37.25	27.14	0	0	0	0	24.90	**37.25**
VOC	5.5	0.20	0.20	0.28	1.0	1.10	1.0	2.05	0.27	0	0	0	0	1.31	**2.05**
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	31.29	6.78	0	0	0	0	6.55	**31.29**
Hazardous Air Pollutant															
HCl							6.60							8.65	**8.65**
Antimony			5.25E-03	5.25E-03			negl			0	0			negl	**0**
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03			1.1E-01	7.5E-05	7.60E-04	0	0			1.44E-01	**0.144**
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05			negl	4.5E-06	5.70E-04	0	0			negl	**5.7E-04**
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04			9.3E-03	4.1E-04	5.70E-04	0	0			1.22E-02	**0.012**
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02	5.2E-04	5.70E-04	0	0			2.62E-02	**0.026**
Cobalt	8.4E-05		6.02E-03	6.02E-03			2.1E-04	3.1E-05		0	0			2.75E-04	**2.8E-04**
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03			0.55	1.9E-04	1.71E-03	0	0			7.2E-01	**0.72**
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03			6.8E-02	1.4E-04	1.14E-03	0	0			8.91E-02	**0.09**
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04				9.7E-05	5.70E-04	0	0				**5.7E-04**
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02	7.8E-04	5.70E-04	0	0			1.44E-02	**0.014**
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl	8.9E-06	2.85E-03	0	0			negl	**2.8E-03**
1.1.1-Trichloroethane			2.36E-04	2.36E-04						0	0				**0**
1,3-Butadiene															**0**
Acetaldehyde															**0**
Acrolein															**0**
Benzene	2.1E-03		2.14E-04	2.14E-04				7.8E-04		0	0				**7.8E-04**
Bis(2-ethylhexyl)phthalate							2.2E-03							2.88E-03	**2.9E-03**
Dichlorobenzene	1.2E-03						8.0E-07	4.5E-04						1.05E-06	**4.5E-04**
Ethylbenzene			6.36E-05	6.36E-05						0	0				**0**
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				2.8E-02	8.28E-02	0	0				**0.083**
Hexane	1.8E+00							0.67							**0.671**
Phenol							2.4E-03							3.15E-03	**3.1E-03**
Toluene	3.4E-03		6.20E-03	6.20E-03				1.3E-03		0	0				**1.3E-03**
Total PAH Haps	negl		1.13E-03	1.13E-03			3.9E-02	negl		0	0			5.12E-02	**0.051**
Polycyclic Organic Matter		3.30E-03							4.48E-03						**4.5E-03**
Xylene			1.09E-04	1.09E-04						0	0				**0**
							Total HAPs	**0.70**	**0.10**	**0**	**0**	**0**	**0**	**9.71**	**10.48**

Methodology
Natural Gas: Limited Potential to Emit (tons/yr) = (Natural Gas Limitation (MMCF/yr)) * (Emission Factor (lb/MMCF)) * (ton/2000 lbs)
All Other Fuels: Limited Potential to Emit (tons/yr) = (Fuel Limitation (gals/yr)) * (Emission Factor (lb/kgal)) * (kgal/1000 gal) * (ton/2000 lbs)
Sources of AP-42 Emission Factors for fuel combustion:
Natural Gas : AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4
No. 2, No.4, and No.6 Fuel Oil: AP-42 Chapter 1.3 (dated 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

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

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

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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

Production and Fuel Limitations

Maximum Hourly Asphalt Production =	200	ton/hr								
Annual Asphalt Production Limitation =	492,792	ton/yr								
Natural Gas Limitation =	745	MMCF/yr								
No. 2 Fuel Oil Limitation =	2,713,647	gal/yr, and	0.50	% sulfur						
No. 4 Fuel Oil Limitation =	0	gal/yr, and	0.50	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and	0.00	% sulfur						
Propane Limitation =	0	gal/yr, and	0.20	gr/100 ft3 sulfur						
Butane Limitation =	0	gal/yr, and	0.22	gr/100 ft3 sulfur						
Used/Waste Oil Limitation =	2,621,346	gal/yr, and	1.00	% sulfur	1.00	% ash	0.400	% chlorine,	0.010	% lead

Limited Emissions

	Factor (units)							Greenhouse Warming Potentials (GWP)		
CO2e Fraction	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/Waste Oil (lb/kgal)	Name	Chemical Formula	Global warming potential
CO2	120,161.84	22,501.41	24,153.46	24,835.04	12,500.00	14,506.73	22,024.15	Carbon dioxide	CO_2	1
CH4	2.49	0.91	0.97	1.00	0.60	0.67	0.89	Methane	CH_4	21
N2O	2.20	0.26	0.19	0.53	0.90	0.90	0.18	Nitrous oxide	N_2O	310

	Potential to						
CO2e Fraction	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)
CO2	44,760.29	30,530.44	0	0	0	0	28,866.46
CH4	0.93	1.24	0	0	0	0	1.17
N2O	0.82	0.35	0	0	0	0	0.24
Total	**44,762.03**	**30,532.03**	**0**	**0**	**0**	**0**	**28,867.87**
CO2e Equivalent Emissions (tons/yr)	45,033.84	30,665.81	0	0	0	0	28,964.17

CO2e for Worst Case Fuel* (tons/yr)
45,033.84
Natural Gas

Methodology
Fuel Limitations from TSD Appendix A.2, page 1 of 15.
Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Sources of Emission Factors for fuel combustion: (Note: To form a conservative estimate, the "worst case" emission factors have been used.)

Natural Gas: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2

No. 2 Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 9/98), Table 1.3-8

No.4 Fuel Oil: Emission Factors for CO2, CH4, and N2O from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal.

Residual (No. 5 or No. 6) Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 9/98), Table 1.3-8

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

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

Emission Factor (EF) Conversions

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

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

Natural Gas: Limited Potential to Emit (tons/yr) = (Natural Gas Limitation (MMCF/yr)) * (Emission Factor (lb/MMCF)) * (ton/2000 lbs)
All Other Fuels: Limited Potential to Emit (tons/yr) = (Fuel Limitation (gals/yr)) * (Emission Factor (lb/kgal)) * (kgal/1000 gal) * (ton/2000 lbs)
Limited CO2e Emissions (tons/yr) = CO2 Potential Emission of "worst case" fuel (ton/yr) x CO2 GWP (1) + CH4 Potential Emission of "worst case" fuel (ton/yr) x CH4 GWP (21) + N2O Potential Emission of "worst case" fuel (ton/yr) x N2O GWP (310). Note: Natural Gas is the "worst case" fuel

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

Appendix A.2: Limited Emissions Summary
Dryer/Mixer and Batch Tower

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

The following calculations determine the limited emissions from the aggregate drying/mixing and the batch tower.

Maximum Hourly Asphalt Production =	200	ton/hr
Annual Asphalt Production Limitation =	492,792	ton/yr
PM Dryer/Mixer Limitation =	0.889	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation =	0.365	lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation =	0.386	lb/ton of asphalt production
CO Dryer/Mixer Limitation =	0.400	lb/ton of asphalt production
VOC Dryer/Mixer Limitation =	0.036	lb/ton of asphalt production

	Emission Factor or Limitation (lb/ton) Batch-Mix Plant (dryer, hot screens, and mixer)			Limited/Controlled Potential to Emit (tons/yr) Batch-Mix Plant (dryer, hot screens, and mixer)			
Criteria Pollutant	Natural Gas	No. 2 Fuel Oil	Waste Oil	Natural Gas	No. 2 Fuel Oil	Waste Oil	**Worst Case PTE**
PM	0.889	0.889	0.889	219.06	219.06	219.06	**219.06**
PM10	0.365	0.365	0.365	89.84	89.84	89.84	**89.84**
PM2.5	0.386	0.386	0.386	95.08	95.08	95.08	**95.08**
SO2*	0.0046	0.088	0.088	1.13	21.68	21.68	**21.68**
NOx*	0.025	0.12	0.12	6.16	29.57	29.57	**29.57**
VOC	0.036	0.036	0.036	8.87	8.87	8.87	**8.87**
CO**	0.400	0.400	0.400	98.56	98.56	98.56	**98.56**
Hazardous Air Pollutant							
Arsenic	4.60E-07	4.60E-07	4.60E-07	1.13E-04	1.13E-04	1.13E-04	**1.13E-04**
Beryllium	1.50E-07	1.50E-07	1.50E-07	3.70E-05	3.70E-05	3.70E-05	**3.70E-05**
Cadmium	6.10E-07	6.10E-07	6.10E-07	1.50E-04	1.50E-04	1.50E-04	**1.50E-04**
Chromium	5.70E-07	5.70E-07	5.70E-07	1.40E-04	1.40E-04	1.40E-04	**1.40E-04**
Lead	8.90E-07	8.90E-07	1.00E-05	2.19E-04	2.19E-04	2.46E-03	**2.46E-03**
Manganese	6.90E-06	6.90E-06	6.90E-06	1.70E-03	1.70E-03	1.70E-03	**1.70E-03**
Mercury	4.10E-07	4.10E-07	4.10E-07	1.01E-04	1.01E-04	1.01E-04	**1.01E-04**
Nickel	3.00E-06	3.00E-06	3.00E-06	7.39E-04	7.39E-04	7.39E-04	**7.39E-04**
Selenium	4.90E-07	4.90E-07	4.90E-07	1.21E-04	1.21E-04	1.21E-04	**1.21E-04**
Acetaldehyde	3.20E-04	3.20E-04	3.20E-04	0.08	0.08	0.08	**0.08**
Benzene	2.80E-04	2.80E-04	2.80E-04	0.07	0.07	0.07	**0.07**
Ethylbenzene	2.20E-03	2.20E-03	2.20E-03	0.54	0.54	0.54	**0.54**
Formaldehyde	7.40E-04	7.40E-04	7.40E-04	0.18	0.18	0.18	**0.18**
Quinone	2.70E-04	2.70E-04	2.70E-04	0.07	0.07	0.07	**0.07**
Toluene	1.00E-03	1.00E-03	1.00E-03	0.25	0.25	0.25	**0.25**
Total PAH Haps	1.10E-04	1.10E-04	2.30E-04	0.03	0.03	0.06	**0.06**
Xylene	2.70E-03	2.70E-03	2.70E-03	0.67	0.67	0.67	**0.67**
						Total HAPs	**1.91**
						Worst Single HAP	**0.67** **(xylene)**

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 11.1-1, 11.1-2, 11.1-5, 11.1-6, 11.1-19, and 11.1-11

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

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

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

Abbreviations

SO2 = Sulfur Dioxide
HCl = Hydrogen Chloride
PAH = Polyaromatic Hydrocarbon
VOC - Volatile Organic Compounds
HAP = Hazardous Air Pollutant

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

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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

Maximum Hourly Asphalt Production =	200	ton/hr
Annual Asphalt Production Limitation =	492,792	ton/yr

Criteria Pollutant	Emission Factor or Limitation (lb/ton) Batch-Mix Plant (dryer/mixer, controlled by fabric filter)			Greenhouse Gas Global Warming Potentials (GWP)	Limited Potential to Emit (tons/yr) Batch-Mix Plant (dryer/mixer, controlled by fabric filter)			CO2e for Worst Case Fuel (tons/yr)
	Natural Gas	No. 2 Fuel Oil	Waste Oil		Natural Gas	No. 2 Fuel Oil	Waste Oil	
CO2	37	37	37	1	9,116.66	9,116.66	9,116.66	9,154.95
CH4	0.0074	0.0074	0.0074	21	1.82	1.82	1.82	
N2O				310	0	0	0	
				Total	**9,118.48**	**9,118.48**	**9,118.48**	
				CO2e Equivalent Emissions (tons/yr)	9,154.95	9,154.95	9,154.95	

Methodology

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

There are no emission factors for N20 available in either the 40 CFR 98, Subpart C or AP-42 Chapter 11.1. Therefore, it is assumed that there are no N2O emission anticipated from this process.

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

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

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

Abbreviations

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

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

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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

Slag Usage Limitation =	0	ton/yr		
SO2 Slag Limitation =	0	lb/ton of slag processed	0	% sulfur

	Emission Factor or Limitation (lb/ton)*	Limited Potential to Emit (tons/yr)
Criteria Pollutant	Slag Processing	Slag Processing
SO2	0	0

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. 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%.

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: Limited Emissions Summary
Hot-mix Asphalt Plant Hot Oil Heater
Fuel Combustion with Maximum Capacity < 100 MMBtu/hr
from the Hot oil Heating System

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

Note: Since the emissions from the hot oil heating system are minimal, the limited emissions are equal to the unlimited emissions.

Maximum Hot Oil Heater Fuel Input Rate =	0.70	MMBtu/hr		
Natural Gas Usage =	6	MMCF/yr		
No. 2 Fuel Oil Usage =	43,800	gal/yr, and	0.50	% sulfur

Unlimited/Uncontrolled Emissions

	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
	Hot Oil Heater		Hot Oil Heater		
Criteria Pollutant	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	0.006	0.044	**0.04**
PM10/PM2.5	7.6	3.3	0.023	0.072	**0.07**
SO2	0.6	71.0	0.002	1.555	**1.55**
NOx	100	20.0	0.307	0.438	**0.44**
VOC	5.5	0.20	0.017	0.004	**0.02**
CO	84	5.0	0.258	0.110	**0.26**
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	6.1E-07	1.23E-05	**1.2E-05**
Beryllium	1.2E-05	4.2E-04	3.7E-08	9.20E-06	**9.2E-06**
Cadmium	1.1E-03	4.2E-04	3.4E-06	9.20E-06	**9.2E-06**
Chromium	1.4E-03	4.2E-04	4.3E-06	9.20E-06	**9.2E-06**
Cobalt	8.4E-05		2.6E-07		**2.6E-07**
Lead	5.0E-04	1.3E-03	1.5E-06	2.76E-05	**2.8E-05**
Manganese	3.8E-04	8.4E-04	1.2E-06	1.84E-05	**1.8E-05**
Mercury	2.6E-04	4.2E-04	8.0E-07	9.20E-06	**9.2E-06**
Nickel	2.1E-03	4.2E-04	6.4E-06	9.20E-06	**9.2E-06**
Selenium	2.4E-05	2.1E-03	7.4E-08	4.60E-05	**4.6E-05**
Benzene	2.1E-03		6.4E-06		**6.4E-06**
Dichlorobenzene	1.2E-03		3.7E-06		**3.7E-06**
Ethylbenzene					**0**
Formaldehyde	7.5E-02	6.10E-02	2.3E-04	1.34E-03	**1.3E-03**
Hexane	1.8E+00		0.01		**0.006**
Phenol					**0**
Toluene	3.4E-03		1.0E-05		**1.0E-05**
Total PAH Haps	negl		negl		**0**
Polycyclic Organic Matter		3.30E-03		7.23E-05	**7.2E-05**
		Total HAPs =	**5.8E-03**	**1.6E-03**	**0.007**

Methodology

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

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

Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]

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

Sources of AP-42 Emission Factors for fuel combustion:

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

No. 2 Fuel Oil: AP-42 Chapter 1.3 (dated 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	SO2 = Sulfur Dioxide	HAP = Hazardous Air Pollutant
PM10 = Particulate Matter (<10 um)	NOx = Nitrous Oxides	HCl = Hydrogen Chloride
VOC - Volatile Organic Compounds	CO = Carbon Monoxide	PAH = Polyaromatic Hydrocarbon

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

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

Maximum Hot Oil Heater Fuel Input Rate =	0.70	MMBtu/hr		
Natural Gas Usage =	6	MMCF/yr		
No. 2 Fuel Oil Usage =	43,800	gal/yr,	0.50	% sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units) Natural Gas (lb/MMCF)	Emission Factor (units) No. 2 Fuel Oil (lb/kgal)	Greenhouse Gas Global Warming Potentials (GWP)	Unlimited/Uncontrolled Potential to Emit (tons/yr) Natural Gas (tons/yr)	Unlimited/Uncontrolled Potential to Emit (tons/yr) No. 2 Fuel Oil (tons/yr)	Worse Case CO2e Emissions (tons/yr)
CO2	120,161.84	22,501.41	1	368.42	492.78	494.97
CH4	2.49	0.91	21	0.008	2.00E-02	
N2O	2.20	0.26	310	0.007	5.69E-03	
			Total	**368.43**	**492.81**	
			CO2e Equivalent Emissions (tons/yr)	370.67	494.97	

No. 2 fuel oil

Methodology

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

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

Natural Gas : Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter 1.4 (dated 7/98), Table 1.4-2

No. 2 Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 9/98), Table 1.3-8

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

Emission Factor (EF) Conversions

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

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

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

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

Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]

All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] *

Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (310).

Note: No. 2 fuel oil is the "worst case" fuel

Abbreviations

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

Appendix A.2: Limited Emissions Summary
Hot Asphalt Storage and Conveyor System Heater
Fuel Combustion with Maximum Capacity < 100 MMBtu/hr
Hot Asphalt Storage & Conveyor System Heater

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

Note: Since the emissions from the hot oil heating system are minimal, the limited emissions are equal to the unlimited emissions.

Maximum Hot Oil Heater Fuel Input Rate =	0.50	MMBtu/hr		
Natural Gas Usage =	4	MMCF/yr		
No. 2 Fuel Oil Usage =	31,286	gal/yr, and	0.50	% sulfur

Unlimited/Uncontrolled Emissions

	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
	Hot Oil Heater		Hot Oil Heater		
Criteria Pollutant	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	0.004	0.031	**0.03**
PM10/PM2.5	7.6	3.3	0.017	0.052	**0.05**
SO2	0.6	71.0	0.001	1.111	**1.11**
NOx	100	20.0	0.219	0.313	**0.31**
VOC	5.5	0.20	0.012	0.003	**0.01**
CO	84	5.0	0.184	0.078	**0.18**
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	4.4E-07	8.76E-06	**8.8E-06**
Beryllium	1.2E-05	4.2E-04	2.6E-08	6.57E-06	**6.6E-06**
Cadmium	1.1E-03	4.2E-04	2.4E-06	6.57E-06	**6.6E-06**
Chromium	1.4E-03	4.2E-04	3.1E-06	6.57E-06	**6.6E-06**
Cobalt	8.4E-05		1.8E-07		**1.8E-07**
Lead	5.0E-04	1.3E-03	1.1E-06	1.97E-05	**2.0E-05**
Manganese	3.8E-04	8.4E-04	8.3E-07	1.31E-05	**1.3E-05**
Mercury	2.6E-04	4.2E-04	5.7E-07	6.57E-06	**6.6E-06**
Nickel	2.1E-03	4.2E-04	4.6E-06	6.57E-06	**6.6E-06**
Selenium	2.4E-05	2.1E-03	5.3E-08	3.29E-05	**3.3E-05**
Benzene	2.1E-03		4.6E-06		**4.6E-06**
Dichlorobenzene	1.2E-03		2.6E-06		**2.6E-06**
Ethylbenzene					**0**
Formaldehyde	7.5E-02	6.10E-02	1.6E-04	9.54E-04	**9.5E-04**
Hexane	1.8E+00		0.00		**0.004**
Phenol					**0**
Toluene	3.4E-03		7.4E-06		**7.4E-06**
Total PAH Haps	negl		negl		**0**
Polycyclic Organic Matter		3.30E-03		5.16E-05	**5.2E-05**
		Total HAPs =	**4.1E-03**	**1.1E-03**	**0.005**

Methodology

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

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

Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]

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

Sources of AP-42 Emission Factors for fuel combustion:

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

No. 2 Fuel Oil: AP-42 Chapter 1.3 (dated 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	SO2 = Sulfur Dioxide	HAP = Hazardous Air Pollutant
PM10 = Particulate Matter (<10 um)	NOx = Nitrous Oxides	HCl = Hydrogen Chloride
VOC - Volatile Organic Compounds	CO = Carbon Monoxide	PAH = Polyaromatic Hydrocarbon

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

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

Maximum Hot Oil Heater Fuel Input Rate =	0.50	MMBtu/hr		
Natural Gas Usage =	4	MMCF/yr		
No. 2 Fuel Oil Usage =	31,286	gal/yr,	0.50	% sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units) Natural Gas (lb/MMCF)	Emission Factor (units) No. 2 Fuel Oil (lb/kgal)	Greenhouse Gas Global Warming Potentials (GWP)	Unlimited/Uncontrolled Potential to Emit (tons/yr) Natural Gas (tons/yr)	Unlimited/Uncontrolled Potential to Emit (tons/yr) No. 2 Fuel Oil (tons/yr)	Worse Case CO2e Emissions (tons/yr)
CO2	120,161.84	22,501.41	1	263.15	351.99	353.55
CH4	2.49	0.91	21	0.005	1.43E-02	
N2O	2.20	0.26	310	0.005	4.07E-03	
			Total	263.16	352.00	
			CO2e Equivalent Emissions (tons/yr)	264.76	353.55	

No. 2 fuel oil

Methodology

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

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

Natural Gas : Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/MMCF. Emission Factor for N2O from AP-42 Chapter 1.4 (dated 7/98),

No. 2 Fuel Oil: Emission Factors for CO2 and CH4 from 40 CFR Part 98 Subpart C, Tables C-1 and 2, have been converted from kg/mmBtu to lb/kgal. Emission Factor for N2O from AP-42 Chapter 1.3 (dated 9/98),

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

Emission Factor (EF) Conversions

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

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

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

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

Natural Gas: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Natural Gas Usage (MMCF/yr)] * [Emission Factor (lb/MMCF)] * [ton/2000 lbs]

All Other Fuels: Unlimited/Uncontrolled Potential to Emit (tons/yr) = [Maximum Fuel Usage (gals/yr)] * [Emission Factor (lb/kgal)] *

Potential to Emit CH4 of "worst case" fuel (ton/yr) x CH4 GWP (21) + Unlimited Potential to Emit N2O of "worst case" fuel (ton/yr) x N2O GWP (310).

Note: No. 2 fuel oil is the "worst case" fuel

*The source will limit the combined CO2e emissions from the dryer mixer burner, hot oil heaters, diesel fuel-fired portable crusher, and dryer mixer process, such that the CO2e emissions do not exceed 99,000 tons per year. Compliance with these limits will be

Abbreviations

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

Appendix A.2: Limited Emissions Summary
Asphalt Load-Out, Silo Filling, and Yard Emissions

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.5	
Annual Asphalt Production Limitation =	492,792	tons/yr

	Emission Factor (lb/ton asphalt)			Limited Potential to Emit (tons/yr)			
Pollutant	**Load-Out**	**Silo Filling**	**On-Site Yard**	**Load-Out**	**Silo Filling**	**On-Site Yard**	**Total**
Total PM*	5.2E-04	5.9E-04	NA	0.13	0.14	NA	**0.27**
Organic PM	3.4E-04	2.5E-04	NA	0.08	0.063	NA	**0.15**
TOC	0.004	0.012	0.001	1.02	3.00	0.271	**4.3**
CO	0.001	0.001	3.5E-04	0.33	0.291	0.087	**0.71**

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

PM/HAPs	**0.006**	**0.007**	**0**	**0.013**
VOC/HAPs	**0.015**	**0.038**	**0.004**	**0.057**
non-VOC/HAPs	**7.9E-05**	**8.1E-06**	**2.1E-05**	**1.1E-04**
non-VOC/non-HAPs	**0.07**	**0.04**	**0.02**	**0.14**

Total VOCs	**0.96**	**3.00**	**0.3**	**4.2**
Total HAPs	**0.02**	**0.05**	**0.004**	**0.07**
			Worst Single HAP	**0.022 (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)::

Total PM/PM10 Ef = 0.000181 + 0.00141(-V)e^((0.0251)(T+460)-20.43)
Organic PM Ef = 0.00141(-V)e^((0.0251)(T+460)-20.43)
TOC Ef = 0.0172(-V)e^((0.0251)(T+460)-20.43)
CO Ef = 0.00558(-V)e^((0.0251)(T+460)-20.43)

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

PM/PM10 Ef = 0.000332 + 0.00105(-V)e^((0.0251)(T+460)-20.43)
Organic PM Ef = 0.00105(-V)e^((0.0251)(T+460)-20.43)
TOC Ef = 0.0504(-V)e^((0.0251)(T+460)-20.43)
CO Ef = 0.00488(-V)e^((0.0251)(T+460)-20.43)

On Site Yard CO emissions estimated by multiplying the TOC emissions by 0.32
*No emission factors available for PM10 or PM2.5, therefore IDEM assumes PM10 and PM2.5 are equivalent to Total PM.

Abbreviations

PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
CO = Carbon Monoxide
HAP = Hazardous Air Pollutant
TOC = Total Organic Compounds
VOC = Volatile Organic Compound

Appendix A.2: Limited Emissions Summary
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

Organic Particulate-Based Compounds (Table 11.1-15)

					Speciation Profile		Limited Potential to Emit (tons/yr)			
Pollutant	**CASRN**	**Category**	**HAP Type**	**Source**	**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%	2.2E-04	2.9E-04	NA	5.1E-04
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	2.4E-05	8.8E-06	NA	3.2E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	5.9E-05	8.1E-05	NA	1.4E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	1.6E-05	3.5E-05	NA	5.1E-05
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	6.4E-06	0	NA	6.4E-06
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	1.8E-06	0	NA	1.8E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	1.6E-06	0	NA	1.6E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	1.9E-06	0	NA	1.9E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	6.6E-06	5.9E-06	NA	1.2E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	8.7E-05	1.3E-04	NA	2.2E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	3.1E-07	0	NA	3.1E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	4.2E-05	9.4E-05	NA	1.4E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	6.5E-04	6.3E-04	NA	1.3E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	3.9E-07	0	NA	3.9E-07
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	2.0E-03	3.3E-03	NA	0.005
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	1.1E-03	1.1E-03	NA	2.2E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	1.8E-05	1.9E-05	NA	3.7E-05
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	6.8E-04	1.1E-03	NA	1.8E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	1.3E-04	2.8E-04	NA	4.0E-04
Total PAH HAPs							**0.005**	**0.007**	**NA**	**0.012**
Other semi-volatile HAPs										
Phenol		PM/HAP	---	Organic PM	1.18%	0	9.9E-04	0	0	9.9E-04

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

Methodology

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

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

Abbreviations

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

Appendix A.2: Limited Emissions Summary
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)

Organic Volatile-Based Compounds (Table 11.1-16)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Limited Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of TOC)	Silo Filling and Asphalt Storage Tank (% by weight of TOC)	Load-out	Silo Filling	Onsite Yard	Total
VOC		VOC	---	TOC	94%	100%	**0.96**	**3.00**	**0.25**	**4.22**
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	6.7E-02	7.8E-03	1.8E-02	0.092
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	4.7E-04	1.7E-03	1.2E-04	0.002
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	7.3E-03	3.3E-02	1.9E-03	0.042
Total non-VOC/non-HAPS					7.30%	1.40%	**0.075**	**0.042**	**0.020**	**0.14**
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	5.3E-04	9.6E-04	1.4E-04	1.6E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	9.8E-05	1.5E-04	2.6E-05	2.7E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	5.0E-04	1.2E-03	1.3E-04	1.8E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	1.3E-04	4.8E-04	3.5E-05	6.5E-04
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	2.2E-06	1.2E-04	5.7E-07	1.2E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	1.5E-04	6.9E-04	4.1E-05	8.9E-04
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	1.1E-03	0	3.0E-04	1.4E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	2.9E-03	1.1E-03	7.6E-04	0.005
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	9.0E-04	2.1E-02	2.4E-04	0.022
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	1.5E-03	3.0E-03	4.1E-04	0.005
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	1.8E-05	9.3E-06	4.9E-06	3.3E-05
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	8.1E-06	0	8.1E-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%	7.5E-05	1.6E-04	2.0E-05	2.6E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	7.9E-05	0	2.1E-05	1.0E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	2.2E-03	1.9E-03	5.7E-04	0.005
1,1,1-Trichloroethane	71-55-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichloroethene	79-01-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichlorofluoromethane	75-69-4	VOC/HAP	---	TOC	0.0013%	0	1.3E-05	0	3.5E-06	1.7E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	4.2E-03	6.0E-03	1.1E-03	0.011
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	8.2E-04	1.7E-03	2.2E-04	2.7E-03
Total volatile organic HAPs					1.50%	1.30%	**0.015**	**0.039**	**0.004**	**0.058**

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

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

Appendix A.2: Limited Emissions Summary
Material Storage Piles

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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

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

Ef = 1.7*(s/1.5)*(365-p)/235*(f/15)
where Ef = emission factor (lb/acre/day)
s = silt content (wt %)
p = 125 days of rain greater than or equal to 0.01 inches
f = 15 % of wind greater than or equal to 12 mph

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10/PM2.5 (tons/yr)
Sand	2.6	3.01	0	0	0
Limestone	1.6	1.85	0	0	0
RAP	0.5	0.58	1.28	0.135	0.047
Gravel	1.6	1.85	0	0	0
Slag	3.8	4.40	0	0	0
Shingles	3.8	4.40	0	0	0
			Totals	**0.14**	**0.05**

Notes
This stationary, hot-mix asphalt plant is located on the same property as a quarry. Since the potential to emit particulatesfrom the Sand, Limestone and Gravel storage piles are included in the emissions calculations for the quarry, they are not included here.
*Silt content values obtained from AP-42 Table 13.2.4-1 (dated 1/95)
**Maximum anticipated pile size (acres) provided by the source.
PM2.5 = PM10

Methodology
PTE of PM (tons/yr) = (Emission Factor (lb/acre/day)) * (Maximum Pile Size (acres)) * (ton/2000 lbs) * (8760 hours/yr)
PTE of PM10/PM2.5 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PTE = Potential to Emit
RAP = recycled asphalt pavement

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

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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

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

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

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

Annual Asphalt Production Limitation =	492,792	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	468,153	tons/yr

Type of Activity	Limited PTE of PM (tons/yr)	Limited PTE of PM10 (tons/yr)	Limited PTE of PM2.5 (tons/yr)
Truck unloading of materials into storage piles	0.53	0.25	0.04
Front-end loader dumping of materials into feeder bins	0.53	0.25	0.04
Conveyor dropping material into dryer/mixer or batch tower	0.53	0.25	0.04
Total (tons/yr)	**1.59**	**0.75**	**0.11**

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

Material Screening and Conveying (AP-42 Section 19.2.2)

To estimate potential fugitive dust emissions from raw material crushing, screening, and conveying, AP-42 emission factors for Crushed Stone Processing Operations, Section 19.2.2 (dated 8/04) are utilized.

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM10 (lbs/ton)*	Limited PTE of PM (tons/yr)	Limited PTE of PM10/PM2.5 (tons/yr)**
Crushing	0.0054	0.0024	1.26	0.56
Screening	0.025	0.0087	5.85	2.04
Conveying	0.003	0.0011	0.70	0.26
Limited Potential to Emit (tons/yr) =			**7.82**	**2.86**

Methodology

Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
Limited Potential to Emit (tons/yr) = [Maximum Material Handling Throughput (tons/yr)] * [Emission Factor (lb/ton)] * [ton/2000 lbs]
Raw materials may include stone/gravel, slag, and recycled asphalt pavement (RAP)
Emission Factors from AP-42 Chapter 11.19.2 (dated 8/04), Table 11.19.2-2
*Uncontrolled emissions factors for PM/PM10 represent tertiary crushing of stone with moisture content ranging from 0.21 to 1.3 percent by weight (Table 11.19.2-2). The bulk moisture content of aggregate in the storage piles at a hot mix asphalt production plant typically stabilizes between 3 to 5 percent by weight (Source: AP-42 Section 11.1.1.1).
**Assumes PM10 = PM2.5

Abbreviations

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

Appendix A.2: Limited Emissions Summary
Unpaved Roads

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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 =	492,792	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	468,153	tons/yr
Maximum Asphalt Cement/Binder Throughput =	24,640	tons/yr
No. 2 Fuel Oil Limitation =	2,713,647	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	13.5	20.0	33.5	2.3E+04	7.8E+05	275	0.052	1219.1
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	13.5	0	13.5	2.3E+04	3.2E+05	275	0.052	1219.1
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	6.8E+02	3.3E+04	300	0.057	38.9
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	6.8E+02	8.2E+03	300	0.057	38.9
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	2.9E+02	1.3E+04	300	0.057	16.3
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	2.9E+02	3.4E+03	300	0.057	16.3
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	1.1E+05	2.1E+06	360	0.068	7599.9
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	1.1E+05	1.7E+06	360	0.068	7599.9
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	13.5	20.0	33.5	2.5E+04	8.3E+05	300	0.057	1400.0
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	13.5	0	13.5	2.5E+04	3.3E+05	300	0.057	1400.0
	Total				**3.2E+05**	**6.1E+06**			**2.1E+04**

Average Vehicle Weight Per Trip =	19.1	tons/trip
Average Miles Per Trip =	0.064	miles/trip

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

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-3 Sand/Gravel Processing Plant Roac
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
W =	19.1	19.1	19.1	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, Eext = E * [(365 - P)/365]
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	5.93	1.51	0.15	lb/mile
Mitigated Emission Factor, Eext =	3.90	0.99	0.10	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	3.62	0.92	0.09	2.38	0.61	0.06	1.19	0.30	0.03
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	3.62	0.92	0.09	2.38	0.61	0.06	1.19	0.30	0.03
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.115	0.029	2.9E-03	0.076	0.019	1.9E-03	0.038	9.7E-03	9.7E-04
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.115	0.029	2.9E-03	0.076	0.019	1.9E-03	0.038	9.7E-03	9.7E-04
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.048	0.012	1.2E-03	0.032	8.1E-03	8.1E-04	0.016	4.0E-03	4.0E-04
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.048	0.012	1.2E-03	0.032	8.1E-03	8.1E-04	0.016	4.0E-03	4.0E-04
Aggregate/RAP Loader Full	Front-end loader (3 CY)	22.55	5.75	0.57	14.83	3.78	0.38	7.41	1.89	0.19
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	22.55	5.75	0.57	14.83	3.78	0.38	7.41	1.89	0.19
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	4.15	1.06	0.11	2.73	0.70	0.07	1.37	0.35	0.03
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	4.15	1.06	0.11	2.73	0.70	0.07	1.37	0.35	0.03
	Totals	**60.96**	**15.54**	**1.55**	**40.08**	**10.22**	**1.02**	**20.04**	**5.11**	**0.51**

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)
PM2.5 = PM10

Abbreviations

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

Appendix A.2: Limited Emissions Summary
Paved Roads

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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 =	492,792	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	468,153	tons/yr
Maximum Asphalt Cement/Binder Throughput =	24,640	tons/yr
No. 2 Fuel Oil Limitation =	2,713,647	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per day (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	13.5	20.0	33.50	2.3E+04	7.8E+05	300	0.057	1,330.0
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	13.5	0	13.50	2.3E+04	3.2E+05	300	0.057	1,330.0
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.00	6.8E+02	3.3E+04	300	0.057	38.9
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	6.8E+02	8.2E+03	300	0.057	38.9
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.00	2.9E+02	1.3E+04	300	0.057	16.3
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	2.9E+02	3.4E+03	300	0.057	16.3
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.20	1.1E+05	2.1E+06	300	0.057	6,333.2
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	1.1E+05	1.7E+06	300	0.057	6,333.2
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	13.5	20.0	33.50	2.5E+04	8.3E+05	600	0.114	2,800.0
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	13.5	0	13.50	2.5E+04	3.3E+05	600	0.114	2800.0
	Total				**3.2E+05**	**6.1E+06**			**2.1E+04**

Average Vehicle Weight Per Trip =	19.1	tons/trip
Average Miles Per Trip =	0.066	miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	19.1	19.1	19.1	tons = average vehicle weight (provided by source)
sL =	0.6	0.6	0.6	g/m^2 = Ubitiguous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months)

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

where p =	125	days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N =	365	days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.140	0.028	0.0069	lb/mile
Mitigated Emission Factor, Eext =	0.13	0.03	0.01	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	0.09	0.02	4.6E-03	0.09	0.02	4.2E-03	0.04	8.5E-03	2.1E-03
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.09	0.02	4.6E-03	0.09	0.02	4.2E-03	0.04	8.5E-03	2.1E-03
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	2.7E-03	5.4E-04	1.3E-04	2.5E-03	5.0E-04	1.2E-04	1.2E-03	2.5E-04	6.1E-05
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	2.7E-03	5.4E-04	1.3E-04	2.5E-03	5.0E-04	1.2E-04	1.2E-03	2.5E-04	6.1E-05
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	1.1E-03	2.3E-04	5.6E-05	1.0E-03	2.1E-04	5.1E-05	5.2E-04	1.0E-04	2.6E-05
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	1.1E-03	2.3E-04	5.6E-05	1.0E-03	2.1E-04	5.1E-05	5.2E-04	1.0E-04	2.6E-05
Aggregate/RAP Loader Full	Front-end loader (3 CY)	0.44	0.09	0.02	0.41	0.08	0.02	0.20	0.04	0.01
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	0.44	0.09	0.02	0.41	0.08	0.02	0.20	0.04	0.01
Asphalt Concrete Truck Leave Full	Dump truck (16 CY)	0.20	0.04	0.01	0.18	0.04	0.01	0.09	0.02	4.4E-03
Asphalt Concrete Truck Enter Empty	Dump truck (16 CY)	0.20	0.04	0.01	0.18	0.04	0.01	0.09	0.02	4.4E-03
	Totals	**1.47**	**0.29**	**0.07**	**1.35**	**0.27**	**0.07**	**0.67**	**0.13**	**0.03**

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)
PM2.5 = PM10

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

Appendix A.2: Limited Emissions Summary
Cold Mix Asphalt Production and Stockpiles

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

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 = 54.97 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%	57.86	54.97	1.053
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	78.53	54.97	1.429
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	219.88	54.97	4.000
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	118.47	54.97	2.155
Other asphalt with solvent binder	25.9%	2.5%	2,198.78	54.97	40.0
Worst Case Limited PTE of VOC =				**54.97**	

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) =	**14.34**	
Limited PTE of Single HAP (tons/yr) =	**4.95**	**Xylenes**

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

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

Methodology

Limited PTE of VOC (tons/yr) = [Weight % VOC solvent in binder that evaporates] * [VOC Solvent Usage Limitation (tons/yr)]

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

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

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

Company Name: Meshberger Brothers Stone Corporation
Source Address: 1972 West State Road 28, Ridgeville, Indiana 47380
Permit Number: F135-29992-03158
Reviewer: Hannah L. Desrosiers
Date Submitted: 12/13/10

Note: Since the emissions from the gasoline fuel transfer and dispensing operation are minimal, the limited emissions are equal to the unlimited emissions.

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

Gasoline Throughput =	0	gallons/day
=	0	kgal/yr

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**	
Limited PTE of Single HAP (tons/yr) =	**0**	**Xylenes**

Methodology
The gasoline throughput was provided by the source.
Gasoline Throughput (kgal/yr) = [Gasoline Throughput (lbs/day)] * [365 days/yr] * [kgal/1000 gal]
PTE of VOC (tons/yr) = [Gasoline Throughput (kgal/yr)] * [Emission Factor (lb/kgal)] * [ton/2000 lb]
PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]
PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]
*Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Composition of Petroleum Mixtures. The Association for Environmental Health and Science. Available on the Internet at: http://www.aehs.com/publications/catalog/contents/tph.htm

Abbreviations
VOC = Volatile Organic Compounds PTE = Potential to Emit

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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: W. Craig Coshow
Meshberger Brothers Stone Corporation
P.O. Box 345
Berne, IN 46711

DATE: August 24, 2011

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

SUBJECT: Final Decision
FESOP - Renewal
135-29992-03158

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

August 24, 2011

TO: Ridgeville Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Meshberger Brothers Stone Corporation
Permit Number: 135-29992-03158

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 8/24/2011 Meshberger Brothers Stone Corporation 135-29992-03158 (final)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
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2		Mr. Charles L. Berger Attorney Berger & Berger, Attorneys at Law 313 Main Street Evansville IN 47700 *(Affected Party)*									
3		Ridgeville Public Library Walnut and Camden Rd, P.O. Box 63 Ridgeville IN 47380-0063 *(Library)*									
4		Randolph County Commissioners 100 South Main Street Winchester IN 47394 *(Local Official)*									
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6		Randolph County Health Department 325 S. Oak St Winchester IN 47394 *(Health Department)*									
7		Ridgeville Town Council P.O. Box 43 Ridgeville IN 47380 *(Local Official)*									
8		Mark Zeltwanger 26545 CR 52 Nappanee IN 46550 *(Affected Party)*									
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